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IES INDOOR REPORT PHOTOMETRIC FILENAME : PNA 4 LIGHT.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 18097-C
 [TESTLAB] LightLab International (www.LightLabInternational.com)
 [MANUFAC] Justice Design Group, Los Angeles, CA 90071
 [LUMCAT] Porcelina (PNA) 4-Light Bath Bar
 [LUMINAIRE] Justice Design Group - Wall mount bathroom luminaire. Product ID: PNA 4-Light
 [MORE] Steel formed housing and four frosted resin lenses with white interior.
 [MORE] 40 LEDs mounted in four circular arrays with white plastic dome lenses.
 [MORE] No driver.
 [MORE] Operating at 120 VAC and 60 Hz.
 [MORE] Simulated data from test of one and six lamp fixtures.
 [ISSUE DATE] April 18, 2018

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1871
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	62
Total Luminaire Watts	29.99
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.56
Spacing Criterion (90-270)	1.74
Spacing Criterion (Diagonal)	1.54
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.08 m
Luminous Width (90-270)	0.66 m
Luminous Height	0.14 m

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2504	2850	6286
55	2111	2255	4543
65	1888	1960	3875
75	1753	1779	4053
85	1687	1692	4885

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0.0	293.249	293.249	293.249	293.249	293.249	293.249	293.249	293.249	293.249
0.5	290.410	291.255	292.370	292.505	293.452	294.635	295.547	295.615	295.649
1.0	291.153	292.133	292.607	292.809	293.823	295.716	297.170	297.744	298.184
1.5	293.485	294.060	294.060	293.553	294.804	297.271	299.400	300.752	301.293
2.0	296.088	296.325	296.156	294.702	295.953	298.961	302.003	304.099	304.775
2.5	299.265	299.468	298.589	296.426	297.406	300.989	304.944	307.783	308.560
3.0	303.051	302.409	301.293	298.454	298.893	303.085	308.256	311.433	312.481
3.5	306.870	305.958	304.301	300.516	300.617	305.248	311.332	315.253	316.909
4.0	310.825	309.878	307.107	302.814	302.341	307.783	314.746	319.140	320.762
4.5	314.813	313.427	310.352	304.977	304.200	310.318	318.058	323.196	325.088
5.0	318.565	317.483	313.495	307.310	305.958	312.819	321.168	326.914	329.178
5.5	322.351	321.032	316.638	309.912	307.884	315.320	324.581	331.037	333.234
6.0	326.711	324.953	319.849	312.413	309.811	318.024	328.164	335.127	337.966
6.5	330.632	328.739	323.297	314.847	311.602	320.593	331.510	339.082	341.718
7.0	334.552	332.389	326.542	317.450	313.664	323.196	335.093	343.205	346.044
7.5	338.439	336.479	329.854	320.018	315.692	325.900	338.676	347.227	350.236
8.0	342.124	340.231	333.268	322.486	317.720	328.570	342.056	351.148	354.258
8.5	345.909	344.118	336.547	325.088	319.579	331.274	345.605	355.069	358.280
9.0	350.168	347.734	339.893	327.691	321.742	333.944	349.255	358.855	362.302
9.5	354.156	351.486	343.307	330.226	323.939	336.682	352.399	362.539	366.324
10.0	357.976	355.407	346.551	332.862	325.832	339.217	355.779	366.629	370.279
10.5	361.761	359.531	349.965	335.600	327.860	341.955	359.294	370.380	374.267
11.0	366.088	363.080	353.244	338.203	329.888	344.659	362.539	374.132	378.222
11.5	370.144	366.865	356.455	341.042	331.950	347.363	365.953	377.749	381.906
12.0	373.896	370.752	359.869	343.645	334.012	350.067	369.265	381.636	385.726
12.5	376.971	374.234	363.418	346.180	336.006	352.872	372.510	385.016	389.477
13.0	379.135	377.647	366.561	348.816	337.932	355.475	375.788	388.734	392.824
13.5	380.487	380.351	370.042	351.385	340.028	358.212	378.966	392.148	395.629
14.0	380.926	382.075	373.152	353.751	342.056	360.747	382.075	395.257	397.488
14.5	381.974	383.495	376.431	356.421	343.847	363.350	385.151	397.792	398.502
15.0	382.751	384.407	379.506	358.990	346.078	365.919	388.396	399.617	398.941
15.5	383.529	385.117	382.447	361.592	348.106	368.352	391.336	400.327	398.806
16.0	383.799	386.030	384.948	364.161	349.830	370.955	394.277	400.767	398.603
16.5	384.137	386.131	387.213	366.561	351.689	373.456	397.285	400.699	398.130
17.0	384.171	386.368	389.173	368.995	353.886	375.788	399.955	400.361	397.420
17.5	384.610	386.875	390.728	371.530	355.644	378.121	402.254	399.989	397.150
18.0	384.374	386.807	391.708	373.862	357.503	380.622	404.316	399.347	396.237
18.5	384.610	386.773	392.553	376.228	359.463	382.886	405.600	398.739	395.325
19.0	384.543	386.942	392.925	378.594	361.356	385.286	406.310	398.063	394.446
19.5	384.036	386.435	393.195	380.994	363.249	387.483	406.580	397.319	393.432
20.0	383.393	386.300	393.297	383.123	365.040	389.883	406.445	396.305	392.621
20.5	382.853	385.996	393.263	385.489	367.034	392.046	406.073	395.426	391.438
21.0	381.602	385.151	393.128	387.618	368.859	394.311	405.532	394.412	390.322
21.5	380.926	384.306	392.857	389.849	370.752	396.542	404.823	393.162	389.207
22.0	380.250	383.664	392.418	391.877	372.645	398.570	404.079	392.012	387.754
22.5	379.135	382.548	391.979	393.804	374.572	400.733	403.335	390.593	386.030
23.0	378.053	381.230	391.505	395.494	376.363	402.626	402.288	389.106	384.610
23.5	376.498	379.675	390.559	396.677	377.952	404.620	401.105	387.686	382.684
24.0	375.011	378.053	389.714	397.691	379.844	406.479	399.955	385.759	380.723
24.5	373.727	376.735	388.734	398.570	381.501	408.304	398.671	383.630	378.966
25.0	372.172	374.943	387.382	399.279	383.191	409.893	397.218	381.839	376.971
25.5	370.448	373.253	386.097	399.820	384.881	411.109	395.832	379.675	374.707
26.0	368.555	371.327	384.509	399.955	386.334	412.191	394.007	377.343	372.544
26.5	366.764	369.333	382.853	400.361	387.889	412.867	392.350	375.112	369.975

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CANDELA TABULATION - (Cont.)

27.0	364.296	367.136	380.994	400.226	389.308	413.171	390.491	372.510	367.541
27.5	362.606	365.277	379.067	399.955	390.694	413.239	388.294	370.110	365.040
28.0	360.105	363.012	376.802	399.313	391.979	412.968	386.097	367.440	362.336
28.5	357.705	360.376	374.504	398.603	393.432	412.157	383.698	364.702	359.429
29.0	355.407	357.874	372.239	397.319	394.852	411.109	381.095	361.761	356.522
29.5	352.872	355.508	369.671	396.001	396.136	409.690	378.459	358.821	353.548
30.0	350.337	352.906	366.933	394.378	397.184	407.898	375.619	355.813	350.269
30.5	347.160	350.202	364.127	392.384	398.536	405.972	372.442	352.568	346.856
31.0	344.659	347.701	361.187	390.627	399.584	403.809	369.366	349.255	343.645
31.5	341.955	344.828	358.348	388.531	400.767	401.443	366.122	346.011	340.028
32.0	338.744	341.819	355.508	386.097	401.916	398.705	362.809	342.597	336.648
32.5	335.837	338.980	352.162	383.731	402.592	395.697	359.328	338.946	332.660
33.0	332.693	335.803	349.053	380.926	403.437	392.418	355.948	335.228	328.975
33.5	329.077	332.896	345.909	377.952	404.079	389.207	352.433	331.409	324.581
34.0	326.136	329.550	342.428	375.146	403.876	385.354	348.647	327.725	320.863
34.5	322.993	326.305	339.183	371.665	403.369	381.670	344.963	323.804	316.774
35.0	319.275	322.891	335.668	368.183	401.679	377.816	340.941	319.816	312.413
35.5	315.962	319.748	332.288	364.601	399.381	373.828	337.155	315.793	308.121
36.0	312.447	316.064	328.637	360.849	396.406	369.603	333.200	311.433	304.031
36.5	308.729	312.616	325.224	356.793	392.891	365.581	329.178	307.445	299.536
37.0	305.451	309.169	321.573	352.635	388.463	361.052	325.055	303.254	295.243
37.5	301.935	305.552	317.720	348.410	382.920	356.624	320.863	298.792	290.680
38.0	298.217	301.834	314.205	344.185	376.802	352.162	316.740	294.398	286.185
38.5	294.635	298.150	310.352	339.656	370.448	347.464	312.244	289.767	281.824
39.0	291.018	294.635	306.667	335.161	363.891	342.969	307.986	285.373	277.397
39.5	287.570	290.849	302.848	330.496	357.334	338.237	303.558	280.743	272.732
40.0	284.596	287.232	298.927	325.866	350.743	333.572	299.198	276.214	268.372
40.5	281.148	283.548	295.006	321.303	344.490	328.773	294.567	271.651	263.843
41.0	277.667	279.999	291.187	316.503	338.237	324.074	290.072	267.088	259.483
41.5	275.064	276.518	287.097	312.042	332.186	319.275	285.407	262.457	255.291
42.0	272.225	273.036	283.109	307.343	326.576	314.475	280.810	257.928	251.066
42.5	269.859	269.589	279.019	302.611	320.796	309.574	276.011	253.466	247.010
43.0	267.831	266.378	275.031	297.947	315.354	304.775	271.211	249.106	242.785
43.5	266.074	263.606	270.907	293.046	310.250	299.738	266.513	244.915	239.270
44.0	264.620	260.801	266.919	288.246	305.146	294.668	261.511	240.487	235.856
44.5	262.457	258.638	262.896	283.717	300.212	289.700	256.677	236.600	232.645
45.0	260.666	256.542	258.773	278.613	295.277	284.427	251.776	232.848	230.043
45.5	258.976	254.548	254.987	273.915	290.680	279.425	247.146	229.434	227.474
46.0	257.117	252.892	251.033	269.116	285.813	274.084	242.346	226.257	225.040
46.5	255.156	250.999	247.179	264.316	281.250	268.744	237.580	223.486	222.472
47.0	253.162	249.005	243.597	259.246	276.349	263.437	232.645	220.917	219.869
47.5	251.404	247.247	239.879	254.379	271.380	257.962	228.150	218.348	217.266
48.0	249.613	245.456	236.701	249.512	266.412	252.520	223.655	215.914	214.562
48.5	247.653	243.394	233.592	244.374	261.274	246.909	219.159	213.346	212.298
49.0	246.064	241.569	230.922	239.574	256.035	241.569	215.036	210.878	209.864
49.5	244.239	239.676	228.184	234.504	250.661	235.992	211.047	208.343	207.329
50.0	242.447	237.884	225.784	229.603	245.185	230.685	207.532	206.011	205.065
50.5	240.656	235.958	223.317	224.905	239.439	225.176	204.220	203.476	202.699
51.0	239.034	234.234	221.221	220.308	233.693	219.632	201.211	201.178	200.197
51.5	237.546	232.274	219.328	215.171	227.913	214.258	198.541	198.710	198.068
52.0	235.586	230.685	217.638	210.675	221.796	208.918	196.006	196.581	195.871
52.5	234.234	228.927	215.745	206.146	215.543	203.645	193.843	194.249	193.640
53.0	232.544	227.102	213.954	201.482	209.628	198.440	191.409	191.849	191.443
53.5	231.124	225.446	212.095	197.460	203.510	193.505	189.145	190.091	189.212
54.0	229.671	223.959	210.371	193.302	197.527	188.604	186.982	187.658	187.218
54.5	227.744	222.201	208.546	189.517	191.849	184.109	184.785	185.596	185.393

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CANDELA TABULATION - (Cont.)

55.0	226.223	220.849	206.788	186.103	186.069	179.546	182.621	183.433	183.230
55.5	225.209	219.328	204.997	183.264	180.627	175.287	180.458	181.472	181.438
56.0	223.824	217.773	203.341	180.357	175.152	171.704	178.295	179.478	179.410
56.5	222.438	216.219	201.482	178.025	170.048	168.290	176.199	177.551	177.450
57.0	221.255	214.968	199.826	175.523	165.282	165.688	174.239	175.557	175.625
57.5	219.835	213.278	198.169	173.157	160.550	163.626	172.211	173.631	173.800
58.0	218.720	211.926	196.412	171.434	156.156	161.936	170.048	171.805	171.941
58.5	217.165	210.675	194.925	170.115	152.303	160.144	168.121	169.913	169.980
59.0	216.117	209.256	193.370	168.527	149.024	158.488	166.228	167.986	168.256
59.5	214.799	207.904	191.747	167.141	146.320	156.866	164.200	166.330	166.702
60.0	213.379	206.653	190.260	165.688	144.292	155.176	162.443	164.505	164.741
60.5	212.129	205.369	188.807	164.200	142.602	153.384	160.550	162.612	163.220
61.0	211.013	204.051	187.286	162.646	141.216	151.627	158.623	160.956	161.260
61.5	210.101	202.901	185.562	161.260	139.966	149.971	156.933	159.198	159.806
62.0	208.749	201.549	184.278	159.536	138.783	148.348	155.074	157.508	157.947
62.5	207.498	200.265	182.824	158.150	137.397	146.591	153.418	155.852	156.190
63.0	206.417	199.014	181.303	156.629	136.079	144.901	151.728	153.959	154.736
63.5	204.997	197.764	179.951	155.142	134.727	143.211	150.004	152.506	152.945
64.0	203.882	196.682	178.701	153.722	133.341	141.690	148.213	150.883	151.424
64.5	203.070	195.465	177.213	152.134	131.921	139.966	146.658	149.328	149.768
65.0	201.921	194.249	176.098	150.714	130.569	138.411	145.002	147.638	148.213
65.5	200.637	193.066	174.577	149.362	129.150	136.620	143.177	146.253	146.624
66.0	199.521	192.018	173.360	147.875	127.764	135.099	141.656	144.630	145.103
66.5	198.541	190.733	172.008	146.320	126.412	133.544	139.966	143.042	143.684
67.0	197.493	189.753	170.690	145.171	124.790	131.854	138.242	141.453	142.095
67.5	196.243	188.570	169.338	143.751	123.539	130.198	136.856	139.966	140.540
68.0	195.161	187.353	168.155	142.129	122.221	128.879	135.335	138.411	139.155
68.5	194.215	186.238	166.938	140.878	120.734	127.122	133.747	137.059	137.836
69.0	193.235	185.258	165.620	139.493	119.280	125.770	132.361	135.538	136.079
69.5	192.153	184.109	164.437	138.005	117.928	124.316	130.806	134.085	134.727
70.0	191.207	183.128	163.119	136.789	116.475	122.660	129.420	132.665	133.442
70.5	189.956	181.979	161.801	135.470	115.055	121.207	127.933	131.313	131.685
71.0	188.874	180.898	160.854	133.949	113.669	119.753	126.446	129.758	130.502
71.5	188.029	180.053	159.671	132.766	112.317	118.300	124.992	128.440	129.116
72.0	187.049	178.937	158.421	131.381	110.999	116.745	123.640	126.987	127.764
72.5	186.137	177.889	157.373	129.961	109.613	115.393	122.221	125.702	126.344
73.0	185.021	176.875	156.224	128.846	108.261	113.940	120.903	124.249	125.026
73.5	183.973	175.929	155.041	127.460	106.909	112.486	119.449	122.998	123.640
74.0	183.264	174.814	153.959	126.108	105.625	111.101	118.165	121.646	122.390
74.5	182.486	173.766	152.742	124.992	104.172	109.681	116.813	120.328	121.004
75.0	181.371	172.921	151.694	123.809	102.989	108.430	115.562	119.111	119.618
75.5	180.255	171.873	150.748	122.457	101.704	107.146	114.210	117.658	118.368
76.0	179.343	170.927	149.700	121.308	100.318	105.693	112.858	116.407	117.016
76.5	178.261	169.980	148.517	120.159	99.000	104.510	111.574	115.123	115.833
77.0	177.180	168.966	147.672	118.942	97.851	103.225	110.222	113.940	114.616
77.5	176.639	168.155	146.557	117.692	96.499	101.806	109.005	112.588	113.500
78.0	175.625	167.141	145.374	116.610	95.384	100.656	107.788	111.337	112.148
78.5	174.476	166.127	144.529	115.258	94.065	99.406	106.571	110.120	110.965
79.0	173.867	165.181	143.515	114.278	92.849	98.054	105.287	108.937	109.512
79.5	172.684	164.268	142.366	113.264	91.632	96.803	104.070	107.653	108.397
80.0	172.143	163.322	141.521	111.946	90.483	95.586	102.853	106.470	107.214
80.5	171.163	162.510	140.439	110.932	89.401	94.403	101.569	105.388	106.166
81.0	170.183	161.632	139.459	109.850	88.218	93.187	100.555	104.138	104.780
81.5	169.541	160.584	138.580	108.768	87.238	92.173	99.406	103.022	103.665
82.0	168.425	159.705	137.532	107.822	86.122	90.956	98.121	102.008	102.617
82.5	167.682	158.995	136.484	106.842	84.973	89.705	97.040	100.859	101.501

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CANDELA TABULATION - (Cont.)

83.0	166.566	157.947	135.673	105.726	83.858	88.691	95.958	99.710	100.318
83.5	165.755	157.204	134.761	104.712	82.844	87.643	94.809	98.527	99.135
84.0	165.045	156.393	133.747	103.867	81.796	86.494	93.795	97.547	98.020
84.5	164.167	155.412	133.003	102.786	80.816	85.413	92.646	96.330	96.871
85.0	163.457	154.534	132.124	101.907	79.903	84.331	91.666	95.350	96.060
85.5	162.679	153.722	131.144	100.994	78.822	83.182	90.719	94.268	94.877
86.0	161.868	152.877	130.299	100.014	77.943	82.269	89.502	92.984	94.032
86.5	161.023	152.201	129.623	99.169	76.963	81.221	88.488	92.037	92.646
87.0	160.111	151.356	128.643	98.527	76.084	80.241	87.576	91.159	91.699
87.5	159.367	150.478	127.933	97.513	75.408	79.329	86.562	90.043	90.821
88.0	158.657	149.971	127.223	96.871	74.394	78.416	85.683	89.131	89.705
88.5	157.880	149.193	126.446	96.161	73.785	77.503	84.737	88.218	88.725
89.0	157.745	148.754	125.871	95.384	73.076	76.861	83.824	87.170	87.610
89.5	157.812	148.720	125.871	95.316	72.569	76.185	82.979	86.325	86.765
90.0	157.508	148.923	126.108	95.451	72.839	76.016	82.641	85.818	86.190
90.5	158.015	149.126	126.142	95.553	72.839	76.084	82.438	85.548	86.021
91.0	158.454	149.261	126.344	95.755	72.771	76.084	82.269	85.413	85.852
91.5	158.590	149.666	126.513	95.958	73.008	76.118	82.235	85.345	85.548
92.0	158.860	149.633	126.851	95.891	73.042	76.118	82.066	85.075	85.446
92.5	159.063	149.903	126.987	96.161	73.245	76.016	81.931	84.804	85.210
93.0	159.333	150.140	126.987	96.398	73.177	75.813	81.931	84.703	85.075
93.5	159.739	150.309	127.460	96.499	73.515	75.847	81.931	84.568	84.838
94.0	159.908	150.647	127.595	96.769	73.447	75.780	81.627	84.432	84.568
94.5	160.144	150.748	127.798	96.837	73.616	75.611	81.728	84.196	84.162
95.0	160.651	150.985	127.933	97.006	73.616	75.611	81.492	83.723	83.925
95.5	160.584	151.356	128.102	97.209	73.718	75.577	81.323	83.587	83.824
96.0	160.989	151.525	128.339	97.344	73.785	75.509	81.154	83.418	83.385
96.5	161.192	151.694	128.744	97.445	73.988	75.408	80.951	83.047	83.182
97.0	161.429	151.931	128.677	97.682	73.954	75.340	80.850	82.810	82.742
97.5	161.598	152.134	128.879	97.952	73.988	75.171	80.748	82.742	82.573
98.0	161.970	152.168	129.116	97.919	74.259	75.239	80.444	82.404	82.303
98.5	162.003	152.472	129.285	98.223	74.292	75.036	80.343	82.168	81.965
99.0	162.206	152.675	129.285	98.493	74.394	74.833	80.275	81.897	81.695
99.5	162.443	152.742	129.522	98.392	74.461	74.833	79.903	81.627	81.221
100.0	162.510	152.911	129.623	98.595	74.630	74.698	79.836	81.390	81.019
100.5	162.781	152.945	129.657	98.764	74.664	74.597	79.734	81.052	80.681
101.0	162.747	153.046	129.792	98.966	74.833	74.461	79.531	80.681	80.343
101.5	163.119	153.114	129.927	99.034	74.901	74.225	79.295	80.478	79.869
102.0	162.984	153.215	129.893	99.203	75.171	74.157	79.058	80.106	79.734
102.5	163.085	153.215	129.927	99.237	75.171	74.056	78.754	79.768	79.396
103.0	163.119	153.317	129.995	99.372	75.374	73.785	78.484	79.498	79.092
103.5	163.119	153.351	129.927	99.575	75.306	73.684	78.281	79.295	78.484
104.0	163.389	153.384	129.792	99.372	75.374	73.515	77.977	78.957	78.348
104.5	163.457	153.520	129.826	99.575	75.442	73.312	77.571	78.551	77.808
105.0	163.153	153.553	129.758	99.676	75.644	73.109	77.199	78.315	77.436
105.5	163.322	153.351	129.724	99.473	75.712	72.940	76.827	77.875	76.996
106.0	163.457	153.384	129.826	99.541	75.611	72.805	76.456	77.402	76.726
106.5	163.389	153.452	129.758	99.541	75.712	72.636	76.118	77.064	76.287
107.0	163.491	153.452	129.657	99.507	75.611	72.501	75.712	76.557	75.949
107.5	163.389	153.351	129.623	99.473	75.611	72.298	75.374	76.151	75.374
108.0	163.389	153.317	129.555	99.642	75.712	71.893	75.002	75.475	74.799
108.5	163.457	153.283	129.623	99.473	75.577	71.825	74.664	75.070	74.191
109.0	163.153	153.249	129.454	99.473	75.644	71.453	74.292	74.495	73.819
109.5	163.254	153.013	129.285	99.338	75.475	71.352	73.921	74.056	72.974
110.0	163.085	153.046	129.184	99.338	75.577	71.183	73.549	73.380	72.704
110.5	163.119	152.776	129.184	99.304	75.442	70.980	73.076	73.042	71.859

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CANDELA TABULATION - (Cont.)

111.0	162.916	152.810	129.048	99.406	75.475	70.777	72.771	72.467	71.250
111.5	162.815	152.708	129.048	99.271	75.306	70.608	72.231	71.994	70.946
112.0	162.409	152.641	128.913	99.237	75.273	70.270	71.893	71.386	70.203
112.5	162.510	152.506	128.643	99.135	75.340	70.169	71.588	70.912	69.527
113.0	162.443	152.303	128.643	99.034	75.306	69.865	71.217	70.405	68.918
113.5	162.240	152.134	128.474	98.899	75.205	69.729	70.676	69.696	68.445
114.0	161.970	152.032	128.237	98.899	75.171	69.560	70.338	69.324	67.904
114.5	162.037	151.830	128.136	98.730	75.137	69.222	70.000	68.546	67.228
115.0	161.632	151.593	127.832	98.595	74.968	69.020	69.290	67.803	66.451
115.5	161.496	151.627	127.696	98.493	75.002	68.749	69.121	67.127	65.842
116.0	161.158	151.154	127.426	98.257	74.732	68.715	68.546	66.214	65.133
116.5	161.192	151.018	127.257	98.223	74.833	68.310	67.972	65.504	64.423
117.0	160.753	150.782	126.987	98.054	74.664	68.175	67.735	64.862	63.206
117.5	160.381	150.444	126.885	97.885	74.495	67.938	67.363	63.950	62.564
118.0	160.178	150.207	126.480	97.614	74.360	67.634	66.823	63.274	61.482
118.5	159.874	150.072	126.277	97.479	74.157	67.397	66.349	62.530	60.705
119.0	159.468	149.633	126.040	97.412	74.056	67.194	66.079	61.753	59.758
119.5	159.130	149.430	125.804	97.243	74.056	66.992	65.471	60.874	58.744
120.0	158.826	149.227	125.601	96.972	73.819	66.755	65.200	59.961	57.832
120.5	158.590	148.686	125.330	96.634	73.650	66.417	64.693	59.150	56.953
121.0	158.252	148.450	124.925	96.634	73.380	66.180	64.152	58.406	56.040
121.5	157.643	148.213	124.587	96.465	73.380	65.842	63.916	57.663	55.094
122.0	157.373	147.706	124.350	96.060	73.278	65.572	63.443	56.818	54.114
122.5	156.900	147.368	124.114	95.823	73.008	65.471	63.003	56.108	53.303
123.0	156.528	147.064	123.674	95.722	72.839	65.065	62.631	55.331	52.390
123.5	156.021	146.422	123.302	95.282	72.704	64.862	62.260	54.655	51.275
124.0	155.953	145.948	123.066	95.147	72.636	64.659	61.651	53.843	50.531
124.5	155.108	145.610	122.694	94.910	72.366	64.321	61.347	53.167	49.720
125.0	154.534	145.070	122.356	94.640	72.129	64.254	61.043	52.424	48.875
125.5	153.959	144.630	121.849	94.268	71.960	63.950	60.671	51.782	48.233
126.0	153.283	144.022	121.477	94.065	71.893	63.814	60.434	51.207	47.523
126.5	153.013	143.447	121.038	93.727	71.724	63.645	59.995	50.531	46.813
127.0	151.999	143.008	120.666	93.558	71.622	63.476	59.488	49.990	46.103
127.5	151.323	142.332	120.159	93.254	71.487	63.206	59.218	49.517	45.562
128.0	150.849	141.723	119.720	92.882	71.250	63.138	58.913	48.773	44.954
128.5	150.106	141.047	119.246	92.680	71.250	63.071	58.474	48.165	44.379
129.0	149.362	140.676	118.841	92.308	70.946	62.767	58.136	47.489	43.805
129.5	148.855	139.932	118.266	92.071	70.811	62.564	57.899	46.914	43.433
130.0	147.875	139.459	117.793	91.598	70.676	62.192	57.291	46.374	42.892
130.5	147.300	138.783	117.252	91.361	70.676	62.091	57.054	45.867	42.182
131.0	146.624	138.107	116.745	91.159	70.338	61.888	56.716	45.393	41.878
131.5	146.050	137.532	116.306	90.719	70.203	61.753	56.311	44.751	41.574
132.0	145.070	136.856	115.664	90.618	70.101	61.617	55.973	44.278	40.999
132.5	144.191	135.977	115.190	90.111	69.898	61.415	55.736	43.771	40.492
133.0	143.582	135.335	114.650	89.705	69.594	61.212	55.331	43.332	40.391
133.5	142.670	134.659	114.075	89.435	69.560	61.043	55.026	42.994	39.884
134.0	141.926	133.848	113.534	89.029	69.256	60.975	54.655	42.520	39.715
134.5	141.216	133.104	112.960	88.590	69.222	60.772	54.418	42.013	39.276
135.0	140.371	132.395	112.250	88.184	68.952	60.502	54.080	41.709	38.938
135.5	139.560	131.482	111.810	87.846	68.749	60.536	53.742	41.337	38.600
136.0	138.648	131.009	111.134	87.441	68.513	60.164	53.336	40.729	38.160
136.5	137.803	130.231	110.560	87.170	68.344	59.995	52.965	40.459	37.721
137.0	136.856	129.319	109.951	86.663	68.175	59.792	52.829	40.053	37.248
137.5	135.910	128.541	109.343	86.291	67.837	59.623	52.322	39.580	37.079
138.0	134.896	127.730	108.701	85.953	67.769	59.319	52.153	39.377	36.977
138.5	134.118	126.851	108.160	85.514	67.566	59.319	52.018	39.039	36.538

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CANDELA TABULATION - (Cont.)

139.0	133.104	126.142	107.450	85.007	67.194	59.218	51.545	38.566	36.267
139.5	132.226	125.229	106.774	84.601	67.025	58.981	51.308	38.295	35.929
140.0	131.550	124.418	105.862	84.263	66.924	58.913	51.072	37.924	35.591
140.5	130.603	123.438	105.388	83.621	66.518	58.609	50.632	37.653	35.287
141.0	129.657	122.795	104.645	83.385	66.383	58.373	50.497	37.180	34.882
141.5	128.846	121.714	104.036	82.844	66.113	58.339	50.159	36.842	34.544
142.0	127.865	120.903	103.259	82.303	65.775	58.136	49.889	36.436	34.138
142.5	126.682	120.058	102.617	81.897	65.572	57.899	49.720	36.267	33.732
143.0	125.736	119.077	101.873	81.357	65.335	57.832	49.483	35.727	33.631
143.5	124.722	118.097	101.062	80.816	65.065	57.528	49.078	35.422	33.327
144.0	123.776	117.185	100.352	80.410	64.693	57.291	49.010	35.152	33.124
144.5	122.762	116.238	99.642	79.971	64.457	57.359	48.942	34.949	32.887
145.0	121.680	115.427	99.000	79.295	64.152	57.088	48.571	34.510	32.718
145.5	120.700	114.481	98.257	78.923	63.950	56.852	48.334	34.341	32.685
146.0	119.584	113.467	97.445	78.416	63.612	56.581	48.233	34.104	32.887
146.5	118.604	112.419	96.600	77.875	63.240	56.480	47.928	33.597	32.854
147.0	117.624	111.506	95.958	77.334	62.902	56.277	47.962	33.361	32.752
147.5	116.610	110.357	95.181	76.794	62.800	56.108	47.658	33.158	32.854
148.0	115.393	109.411	94.336	76.287	62.361	55.871	47.455	32.887	32.921
148.5	114.244	108.498	93.626	75.712	62.192	55.669	47.286	32.583	32.989
149.0	113.027	107.585	92.781	75.239	61.786	55.533	47.219	32.279	33.158
149.5	112.182	106.538	91.970	74.563	61.415	55.432	47.016	32.144	33.327
150.0	111.033	105.388	91.159	74.090	61.009	55.094	46.847	31.907	33.293
150.5	109.918	104.510	90.314	73.549	60.806	55.026	46.745	31.772	33.496
151.0	108.836	103.293	89.570	72.873	60.434	54.756	46.543	31.738	33.732
151.5	107.856	102.313	88.793	72.400	60.096	54.621	46.374	31.468	33.597
152.0	106.436	101.400	87.880	71.926	59.792	54.350	46.238	31.164	33.530
152.5	105.287	100.217	87.136	71.217	59.387	54.215	45.968	31.130	33.665
153.0	104.408	99.102	86.122	70.507	59.116	54.046	46.002	30.995	33.631
153.5	103.056	98.121	85.413	69.966	58.711	53.776	45.934	30.961	33.766
154.0	101.907	97.040	84.500	69.425	58.373	53.539	45.664	30.893	33.665
154.5	100.656	95.891	83.554	68.749	58.068	53.303	45.664	30.893	33.597
155.0	99.406	94.708	82.742	68.107	57.764	53.032	45.461	30.859	33.597
155.5	98.290	93.558	81.897	67.431	57.359	52.829	45.191	30.927	33.800
156.0	97.209	92.544	80.985	66.958	56.953	52.694	45.191	30.961	33.800
156.5	95.722	91.429	80.005	66.214	56.716	52.390	45.191	30.826	34.003
157.0	94.809	90.381	79.227	65.504	56.176	52.187	44.988	30.555	33.935
157.5	93.491	89.232	78.247	64.862	55.736	51.849	44.920	30.420	33.766
158.0	92.308	87.981	77.470	64.321	55.432	51.680	44.886	30.183	33.766
158.5	91.260	87.001	76.658	63.578	54.925	51.410	44.717	29.744	33.732
159.0	89.942	85.920	75.611	62.902	54.519	51.038	44.650	29.575	33.766
159.5	88.725	84.703	74.732	62.327	54.114	50.937	44.582	29.169	33.800
160.0	87.474	83.486	73.785	61.482	53.674	50.565	44.346	29.136	33.766
160.5	86.359	82.371	72.907	60.840	53.303	50.430	44.143	28.967	33.732
161.0	85.041	81.154	71.893	60.232	52.931	50.092	43.940	28.899	34.003
161.5	83.621	80.005	71.048	59.353	52.424	49.821	43.636	28.493	34.138
162.0	82.303	78.855	69.898	58.609	52.018	49.483	43.332	28.223	34.307
162.5	81.052	77.672	69.020	58.035	51.782	49.247	42.858	27.919	34.307
163.0	79.802	76.422	68.073	57.257	51.139	48.909	41.811	27.716	34.375
163.5	78.450	75.306	67.025	56.581	50.869	48.571	40.695	27.209	34.577
164.0	77.334	74.056	66.113	55.939	50.463	48.469	39.309	26.364	34.476
164.5	75.949	72.771	65.133	55.026	49.956	48.064	37.586	25.620	33.834
165.0	74.630	71.487	64.152	54.317	49.483	47.421	35.997	25.249	32.820
165.5	73.211	70.338	63.138	53.505	49.044	46.678	34.307	25.080	31.468
166.0	71.994	69.087	62.091	52.863	48.469	45.495	32.279	24.944	29.913
166.5	70.541	67.769	60.908	52.153	47.827	43.872	30.589	24.606	27.716

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CANDELA TABULATION - (Cont.)

167.0	69.053	66.518	59.961	51.477	46.813	42.149	29.237	24.437	25.113
167.5	67.735	65.268	58.981	50.632	45.360	40.087	27.885	23.728	22.849
168.0	66.214	63.781	57.629	49.990	43.332	37.856	27.040	23.254	20.145
168.5	64.828	62.462	56.615	49.179	41.540	35.760	26.499	22.680	17.644
169.0	63.409	61.246	55.669	47.962	39.107	33.530	25.891	21.564	14.669
169.5	61.922	59.961	54.418	46.475	36.943	31.366	25.654	20.348	11.492
170.0	60.367	58.575	53.167	44.481	34.510	29.710	25.181	18.590	8.551
170.5	58.880	56.818	51.849	42.419	32.448	28.629	24.505	16.427	6.185
171.0	57.359	55.195	49.923	40.256	30.724	27.547	23.964	14.534	3.786
171.5	55.973	53.810	48.266	37.991	29.541	26.939	23.018	12.912	2.501
172.0	54.350	52.255	46.644	35.828	28.493	26.499	21.395	10.985	2.231
172.5	52.965	50.125	44.379	34.239	27.581	25.722	19.503	9.092	2.197
173.0	50.531	48.199	42.216	32.752	26.803	24.843	17.576	7.267	2.096
173.5	47.624	46.002	39.783	30.995	25.823	23.052	15.041	6.152	1.791
174.0	46.069	43.163	36.977	29.575	25.012	20.449	12.438	5.678	1.555
174.5	43.534	40.425	34.442	27.953	23.491	17.846	9.937	5.104	1.318
175.0	40.492	37.484	32.009	25.925	21.294	14.872	7.943	4.664	1.014
175.5	36.538	34.070	29.136	23.863	18.590	11.627	6.794	3.853	0.744
176.0	32.583	30.285	26.296	21.395	15.717	8.822	6.016	3.211	0.980
176.5	28.324	26.026	22.950	17.914	12.371	6.794	5.138	2.265	0.777
177.0	23.356	21.700	19.198	14.365	9.363	5.712	4.326	1.487	0.642
177.5	18.218	16.832	15.649	11.188	6.895	5.036	3.650	0.980	0.642
178.0	12.743	11.796	11.931	7.605	5.070	4.191	2.873	0.811	1.082
178.5	8.112	7.537	7.875	4.833	4.090	3.448	2.163	0.879	0.744
179.0	4.766	4.529	4.225	3.008	3.177	2.738	1.690	0.811	0.845
179.5	1.690	2.569	1.622	1.622	2.197	2.197	1.048	0.845	1.183
180.0	1.217	1.217	1.217	1.217	1.217	1.217	1.217	1.217	1.217

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	137.78	N.A.	7.40
0-30	316.39	N.A.	16.90
0-40	532.39	N.A.	28.50
0-60	910.99	N.A.	48.70
0-80	1205.25	N.A.	64.40
0-90	1324.15	N.A.	70.80
10-90	1292.93	N.A.	69.10
20-40	394.61	N.A.	21.10
20-50	598.20	N.A.	32.00
40-70	534.61	N.A.	28.60
60-80	294.26	N.A.	15.70
70-80	138.25	N.A.	7.40
80-90	118.90	N.A.	6.40
90-110	217.39	N.A.	11.60
90-120	313.22	N.A.	16.70
90-130	393.33	N.A.	21.00
90-150	501.40	N.A.	26.80
90-180	547.14	N.A.	29.20
110-180	329.75	N.A.	17.60
0-180	1871.29	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	31.22
10-20	106.56
20-30	178.61
30-40	216.00
40-50	203.59
50-60	175.01
60-70	156.01
70-80	138.25
80-90	118.90
90-100	110.79
100-110	106.60
110-120	95.83
120-130	80.10
130-140	62.78
140-150	45.30
150-160	29.01
160-170	14.25
170-180	2.48

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 4 LIGHT.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0	
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	71	71
1	100	94	89	85	94	89	85	81	80	76	73	71	68	66	63	61	59	54	54
2	90	81	74	68	85	77	70	65	69	64	59	61	57	53	54	51	48	44	44
3	82	71	63	56	77	67	60	54	60	54	49	54	49	44	47	44	40	37	37
4	75	63	54	47	70	60	51	45	53	47	41	48	42	38	42	38	34	31	31
5	69	56	47	40	65	53	45	39	48	41	36	43	37	33	38	33	30	27	27
6	63	50	41	35	60	48	40	34	43	36	31	38	33	28	34	30	26	23	23
7	59	45	37	31	55	43	35	29	39	32	27	35	29	25	31	27	23	21	21
8	54	41	33	27	51	39	31	26	36	29	24	32	26	22	29	24	21	18	18
9	51	38	30	24	48	36	28	23	33	26	22	29	24	20	27	22	19	16	16
10	47	35	27	22	45	33	26	21	30	24	20	27	22	18	25	20	17	15	15

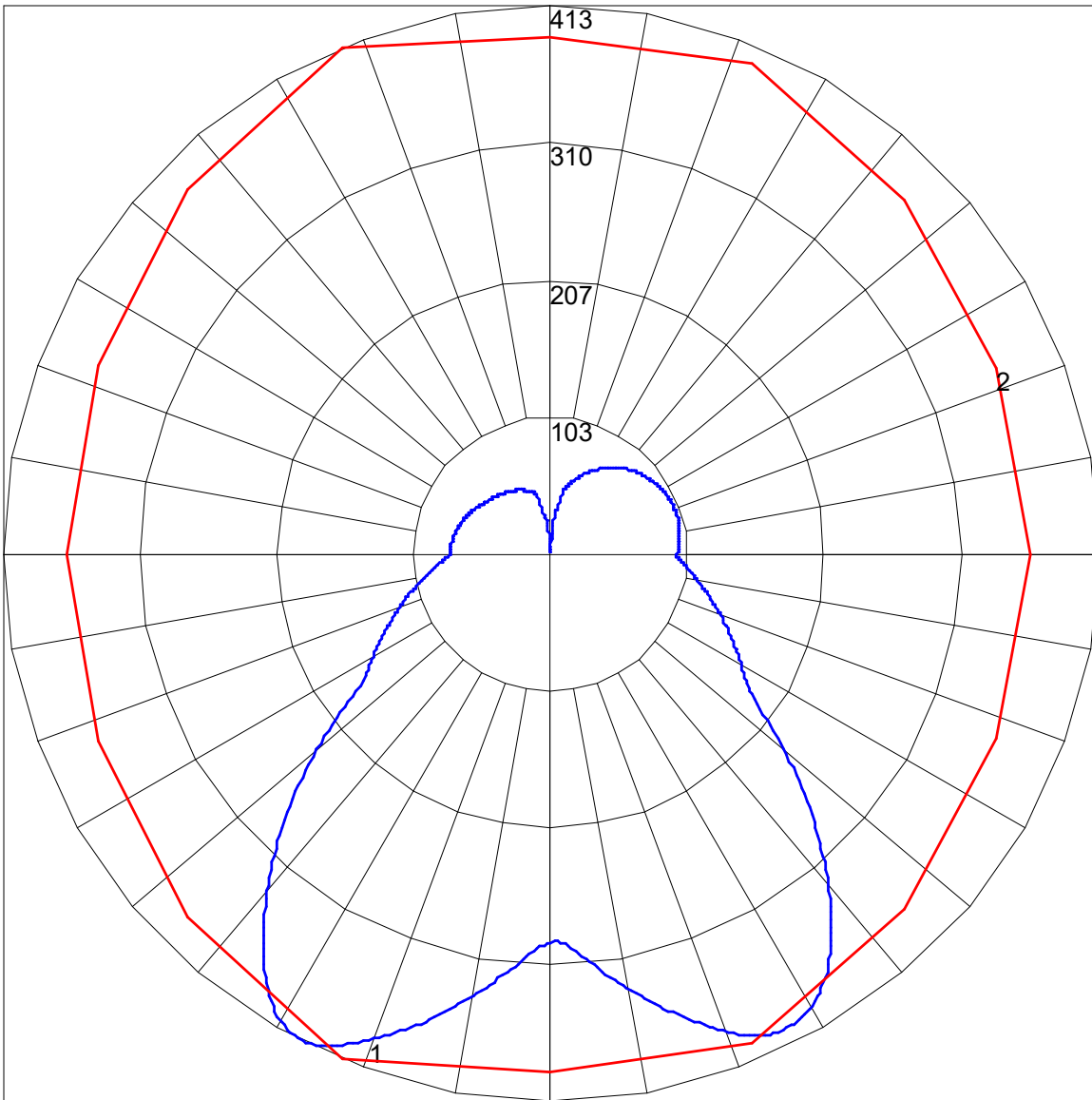
IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 4 LIGHT.IES

UGR TABLE - CORRECTED

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	12.4	13.6	13.2	14.4	15.3	10.7	11.8	11.4	12.6	13.5
	3H	14.7	15.8	15.5	16.6	17.5	12.5	13.5	13.2	14.3	15.3
	4H	15.8	16.8	16.6	17.6	18.6	13.3	14.3	14.1	15.1	16.0
	6H	16.9	17.8	17.7	18.6	19.6	14.0	14.9	14.8	15.7	16.7
	8H	17.4	18.3	18.2	19.1	20.1	14.3	15.2	15.1	16.0	17.0
	12H	17.9	18.8	18.7	19.6	20.6	14.6	15.5	15.4	16.3	17.3
4H	2H	13.1	14.1	13.9	14.9	15.9	11.6	12.6	12.4	13.4	14.4
	3H	15.6	16.5	16.4	17.3	18.3	13.7	14.5	14.5	15.4	16.4
	4H	16.9	17.7	17.7	18.5	19.5	14.6	15.4	15.4	16.2	17.2
	6H	18.2	18.9	19.0	19.7	20.7	15.5	16.2	16.3	17.0	18.0
	8H	18.8	19.4	19.6	20.3	21.3	15.9	16.5	16.7	17.4	18.4
	12H	19.4	20.0	20.2	20.8	21.9	16.2	16.9	17.1	17.7	18.8
8H	4H	17.3	18.0	18.1	18.8	19.9	15.3	16.0	16.1	16.8	17.9
	6H	18.8	19.4	19.7	20.3	21.3	16.4	17.0	17.3	17.9	18.9
	8H	19.6	20.1	20.4	21.0	22.0	16.9	17.4	17.8	18.3	19.4
	12H	20.3	20.8	21.2	21.7	22.8	17.4	17.9	18.3	18.8	19.9
12H	4H	17.4	18.0	18.2	18.9	19.9	15.5	16.1	16.4	17.0	18.0
	6H	19.0	19.5	19.8	20.3	21.4	16.7	17.2	17.6	18.1	19.2
	8H	19.8	20.3	20.7	21.1	22.2	17.3	17.8	18.2	18.6	19.7

Maximum UGR = 22.8

POLAR GRAPH



Maximum Candela = 413.239 Located At Horizontal Angle = 112.5, Vertical Angle = 27.5
1 - Vertical Plane Through Horizontal Angles (112.5 - 292.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (27.5) (Through Max. Cd.)