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IES INDOOR REPORT
PHOTOMETRIC FILENAME : CNDL 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] CandleAria (CNDL) 4-Light Bath Bar
[LUMINAIRE] Justice Design Group - Wall mount bathroom luminaire. Product ID: CNDL 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	1629
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	54
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	2180	2482	5473
55	1838	1963	3956
65	1644	1706	3374
75	1526	1549	3529
85	1469	1473	4253

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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	255.335	255.335	255.335	255.335	255.335	255.335	255.335	255.335	255.335
0.5	252.863	253.598	254.570	254.687	255.511	256.541	257.336	257.395	257.424
1.0	253.510	254.363	254.776	254.952	255.835	257.483	258.749	259.249	259.631
1.5	255.541	256.041	256.041	255.600	256.688	258.837	260.691	261.868	262.339
2.0	257.807	258.013	257.866	256.600	257.689	260.308	262.957	264.782	265.370
2.5	260.573	260.750	259.985	258.101	258.955	262.074	265.517	267.990	268.666
3.0	263.869	263.310	262.339	259.867	260.249	263.899	268.402	271.168	272.080
3.5	267.195	266.400	264.958	261.662	261.750	265.782	271.080	274.494	275.936
4.0	270.638	269.814	267.401	263.663	263.251	267.990	274.052	277.878	279.291
4.5	274.111	272.904	270.226	265.547	264.870	270.197	276.936	281.410	283.058
5.0	277.378	276.436	272.963	267.578	266.400	272.375	279.644	284.647	286.619
5.5	280.674	279.526	275.700	269.844	268.078	274.552	282.616	288.237	290.150
6.0	284.470	282.940	278.496	272.021	269.755	276.907	285.736	291.798	294.271
6.5	287.884	286.236	281.498	274.140	271.315	279.144	288.649	295.242	297.537
7.0	291.298	289.415	284.323	276.407	273.110	281.410	291.769	298.832	301.304
7.5	294.683	292.976	287.207	278.643	274.876	283.764	294.889	302.334	304.954
8.0	297.890	296.242	290.180	280.792	276.642	286.089	297.832	305.748	308.456
8.5	301.187	299.627	293.035	283.058	278.261	288.443	300.922	309.162	311.958
9.0	304.895	302.776	295.948	285.324	280.144	290.768	304.100	312.458	315.460
9.5	308.368	306.043	298.921	287.531	282.057	293.152	306.837	315.666	318.962
10.0	311.693	309.456	301.746	289.827	283.705	295.359	309.780	319.227	322.406
10.5	314.989	313.047	304.718	292.210	285.471	297.743	312.841	322.494	325.878
11.0	318.756	316.137	307.573	294.477	287.237	300.098	315.666	325.761	329.322
11.5	322.288	319.433	310.369	296.949	289.032	302.452	318.639	328.910	332.530
12.0	325.555	322.818	313.341	299.215	290.827	304.807	321.523	332.294	335.855
12.5	328.233	325.849	316.431	301.422	292.564	307.249	324.348	335.237	339.122
13.0	330.116	328.821	319.168	303.718	294.241	309.515	327.203	338.474	342.035
13.5	331.294	331.176	322.200	305.954	296.066	311.899	329.969	341.447	344.478
14.0	331.676	332.677	324.907	308.014	297.832	314.106	332.677	344.154	346.097
14.5	332.588	333.913	327.762	310.339	299.391	316.373	335.355	346.362	346.980
15.0	333.265	334.707	330.440	312.576	301.334	318.609	338.180	347.951	347.362
15.5	333.942	335.325	333.000	314.842	303.100	320.728	340.741	348.569	347.245
16.0	334.178	336.120	335.178	317.079	304.601	322.994	343.301	348.952	347.068
16.5	334.472	336.208	337.150	319.168	306.219	325.172	345.920	348.893	346.656
17.0	334.501	336.414	338.857	321.287	308.132	327.203	348.245	348.598	346.038
17.5	334.884	336.856	340.211	323.495	309.662	329.233	350.246	348.275	345.803
18.0	334.678	336.797	341.064	325.525	311.281	331.411	352.042	347.715	345.008
18.5	334.884	336.767	341.800	327.585	312.988	333.383	353.160	347.186	344.213
19.0	334.825	336.915	342.124	329.645	314.636	335.473	353.778	346.597	343.448
19.5	334.384	336.473	342.359	331.735	316.284	337.386	354.013	345.950	342.565
20.0	333.824	336.355	342.447	333.589	317.844	339.475	353.896	345.067	341.859
20.5	333.354	336.091	342.418	335.649	319.580	341.359	353.572	344.302	340.829
21.0	332.265	335.355	342.300	337.503	321.170	343.330	353.101	343.419	339.858
21.5	331.676	334.619	342.065	339.446	322.818	345.273	352.483	342.330	338.886
22.0	331.088	334.060	341.682	341.211	324.466	347.039	351.836	341.329	337.621
22.5	330.116	333.089	341.300	342.889	326.143	348.922	351.188	340.093	336.120
23.0	329.175	331.941	340.888	344.360	327.703	350.570	350.276	338.798	334.884
23.5	327.821	330.587	340.064	345.390	329.086	352.307	349.246	337.562	333.206
24.0	326.526	329.175	339.328	346.273	330.734	353.925	348.245	335.885	331.500
24.5	325.408	328.027	338.474	347.039	332.176	355.514	347.127	334.031	329.969
25.0	324.054	326.467	337.297	347.657	333.648	356.898	345.861	332.471	328.233
25.5	322.553	324.995	336.179	348.127	335.119	357.957	344.655	330.587	326.261
26.0	320.905	323.318	334.796	348.245	336.385	358.899	343.066	328.557	324.377
26.5	319.345	321.582	333.354	348.598	337.739	359.487	341.623	326.614	322.141

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CANDELA TABULATION - (Cont.)

27.0	317.197	319.669	331.735	348.481	338.975	359.752	340.005	324.348	320.022
27.5	315.725	318.050	330.057	348.245	340.181	359.811	338.092	322.259	317.844
28.0	313.547	316.078	328.086	347.686	341.300	359.576	336.179	319.934	315.490
28.5	311.458	313.783	326.084	347.068	342.565	358.869	334.089	317.550	312.959
29.0	309.456	311.605	324.113	345.950	343.801	357.957	331.823	314.989	310.428
29.5	307.249	309.545	321.876	344.802	344.920	356.721	329.528	312.429	307.838
30.0	305.042	307.279	319.492	343.389	345.832	355.161	327.056	309.810	304.983
30.5	302.276	304.924	317.049	341.653	347.009	353.484	324.289	306.984	302.011
31.0	300.098	302.746	314.489	340.123	347.921	351.600	321.611	304.100	299.215
31.5	297.743	300.245	312.017	338.298	348.952	349.540	318.786	301.275	296.066
32.0	294.947	297.626	309.545	336.179	349.952	347.156	315.902	298.302	293.123
32.5	292.416	295.153	306.631	334.119	350.541	344.537	312.870	295.124	289.650
33.0	289.679	292.387	303.924	331.676	351.276	341.682	309.927	291.887	286.442
33.5	286.530	289.856	301.187	329.086	351.836	338.886	306.867	288.561	282.616
34.0	283.970	286.943	298.155	326.644	351.659	335.531	303.570	285.353	279.379
34.5	281.233	284.117	295.330	323.612	351.218	332.324	300.363	281.939	275.818
35.0	277.996	281.145	292.269	320.581	349.746	328.969	296.860	278.467	272.021
35.5	275.112	278.408	289.326	317.461	347.745	325.496	293.564	274.964	268.284
36.0	272.051	275.200	286.148	314.195	345.155	321.817	290.121	271.168	264.723
36.5	268.814	272.198	283.175	310.663	342.094	318.315	286.619	267.695	260.809
37.0	265.959	269.196	279.997	307.043	338.239	314.371	283.028	264.046	257.071
37.5	262.898	266.047	276.642	303.364	333.412	310.516	279.379	260.161	253.098
38.0	259.661	262.810	273.581	299.686	328.086	306.631	275.789	256.335	249.184
38.5	256.541	259.602	270.226	295.742	322.553	302.540	271.874	252.303	245.387
39.0	253.392	256.541	267.018	291.828	316.843	298.626	268.166	248.477	241.532
39.5	250.390	253.245	263.693	287.767	311.134	294.506	264.311	244.446	237.471
40.0	247.801	250.096	260.279	283.735	305.395	290.445	260.514	240.502	233.674
40.5	244.799	246.888	256.865	279.762	299.951	286.266	256.482	236.529	229.731
41.0	241.767	243.798	253.539	275.583	294.506	282.175	252.568	232.556	225.934
41.5	239.501	240.767	249.978	271.698	289.238	277.996	248.507	228.524	222.285
42.0	237.029	237.736	246.506	267.607	284.353	273.817	244.504	224.580	218.606
42.5	234.969	234.734	242.945	263.487	279.320	269.549	240.325	220.696	215.074
43.0	233.203	231.938	239.472	259.425	274.582	265.370	236.146	216.899	211.396
43.5	231.673	229.525	235.881	255.158	270.138	260.985	232.056	213.250	208.335
44.0	230.407	227.082	232.409	250.979	265.694	256.571	227.700	209.394	205.363
44.5	228.524	225.198	228.907	247.035	261.397	252.245	223.491	206.010	202.567
45.0	226.964	223.374	225.316	242.591	257.100	247.653	219.224	202.743	200.301
45.5	225.493	221.637	222.020	238.501	253.098	243.298	215.192	199.771	198.064
46.0	223.874	220.195	218.577	234.322	248.860	238.648	211.013	197.004	195.945
46.5	222.167	218.547	215.222	230.143	244.887	233.998	206.863	194.591	193.708
47.0	220.431	216.811	212.102	225.728	240.620	229.377	202.567	192.354	191.442
47.5	218.900	215.280	208.865	221.490	236.293	224.610	198.653	190.118	189.176
48.0	217.341	213.721	206.098	217.252	231.967	219.872	194.738	187.999	186.822
48.5	215.634	211.925	203.391	212.779	227.494	214.986	190.824	185.762	184.850
49.0	214.250	210.336	201.066	208.600	222.932	210.336	187.234	183.614	182.731
49.5	212.661	208.688	198.682	204.185	218.253	205.480	183.761	181.407	180.524
50.0	211.101	207.128	196.592	199.918	213.485	200.860	180.700	179.376	178.552
50.5	209.542	205.451	194.444	195.827	208.482	196.063	177.816	177.169	176.492
51.0	208.129	203.950	192.619	191.825	203.479	191.236	175.197	175.167	174.314
51.5	206.834	202.243	190.971	187.351	198.446	186.557	172.872	173.019	172.460
52.0	205.127	200.860	189.500	183.437	193.120	181.907	170.665	171.165	170.547
52.5	203.950	199.329	187.852	179.494	187.675	177.316	168.781	169.134	168.604
53.0	202.478	197.740	186.292	175.432	182.525	172.784	166.662	167.045	166.692
53.5	201.242	196.298	184.673	171.930	177.198	168.487	164.690	165.514	164.749
54.0	199.977	195.003	183.172	168.310	171.989	164.219	162.807	163.395	163.013
54.5	198.299	193.473	181.583	165.014	167.045	160.305	160.894	161.600	161.424

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CANDELA TABULATION - (Cont.)

55.0	196.975	192.296	180.053	162.042	162.012	156.332	159.010	159.717	159.540
55.5	196.092	190.971	178.493	159.569	157.274	152.624	157.127	158.010	157.980
56.0	194.885	189.617	177.051	157.038	152.506	149.504	155.243	156.273	156.214
56.5	193.679	188.264	175.432	155.008	148.062	146.532	153.419	154.596	154.508
57.0	192.649	187.175	173.990	152.830	143.913	144.266	151.712	152.859	152.918
57.5	191.413	185.703	172.548	150.770	139.793	142.471	149.946	151.182	151.329
58.0	190.442	184.526	171.018	149.269	135.967	140.999	148.062	149.593	149.710
58.5	189.088	183.437	169.723	148.121	132.612	139.439	146.385	147.945	148.003
59.0	188.175	182.201	168.369	146.738	129.757	137.997	144.737	146.267	146.503
59.5	187.028	181.024	166.956	145.531	127.402	136.585	142.971	144.825	145.149
60.0	185.792	179.935	165.661	144.266	125.637	135.113	141.441	143.236	143.442
60.5	184.703	178.817	164.396	142.971	124.165	133.553	139.793	141.588	142.117
61.0	183.731	177.669	163.072	141.617	122.959	132.023	138.115	140.146	140.411
61.5	182.937	176.668	161.571	140.411	121.870	130.581	136.643	138.615	139.145
62.0	181.760	175.491	160.452	138.910	120.840	129.168	135.025	137.144	137.526
62.5	180.671	174.373	159.187	137.703	119.633	127.638	133.583	135.702	135.996
63.0	179.729	173.284	157.863	136.379	118.485	126.166	132.111	134.054	134.731
63.5	178.493	172.195	156.685	135.084	117.308	124.695	130.610	132.788	133.171
64.0	177.522	171.253	155.596	133.848	116.101	123.371	129.051	131.376	131.846
64.5	176.815	170.194	154.301	132.464	114.865	121.870	127.697	130.022	130.404
65.0	175.815	169.134	153.330	131.228	113.688	120.516	126.255	128.550	129.051
65.5	174.696	168.104	152.006	130.051	112.452	118.956	124.665	127.344	127.667
66.0	173.725	167.192	150.946	128.756	111.245	117.632	123.341	125.931	126.343
66.5	172.872	166.073	149.769	127.402	110.068	116.278	121.870	124.548	125.107
67.0	171.959	165.220	148.622	126.402	108.656	114.806	120.369	123.165	123.724
67.5	170.871	164.190	147.444	125.166	107.567	113.364	119.162	121.870	122.370
68.0	169.929	163.130	146.414	123.753	106.419	112.217	117.838	120.516	121.163
68.5	169.105	162.159	145.355	122.664	105.124	110.686	116.455	119.339	120.016
69.0	168.251	161.306	144.207	121.458	103.858	109.509	115.248	118.014	118.485
69.5	167.310	160.305	143.177	120.163	102.681	108.244	113.894	116.749	117.308
70.0	166.486	159.452	142.029	119.103	101.416	106.801	112.687	115.513	116.190
70.5	165.397	158.451	140.881	117.955	100.180	105.536	111.393	114.336	114.659
71.0	164.455	157.509	140.057	116.631	98.973	104.270	110.098	112.982	113.629
71.5	163.719	156.774	139.027	115.601	97.796	103.005	108.832	111.834	112.423
72.0	162.866	155.802	137.938	114.394	96.648	101.651	107.655	110.569	111.245
72.5	162.071	154.890	137.026	113.158	95.441	100.474	106.419	109.450	110.009
73.0	161.100	154.007	136.025	112.187	94.264	99.209	105.271	108.185	108.862
73.5	160.187	153.183	134.995	110.981	93.087	97.943	104.006	107.096	107.655
74.0	159.569	152.212	134.054	109.803	91.969	96.736	102.887	105.919	106.566
74.5	158.893	151.300	132.994	108.832	90.703	95.500	101.710	104.771	105.359
75.0	157.921	150.564	132.082	107.802	89.673	94.411	100.621	103.711	104.153
75.5	156.950	149.652	131.258	106.625	88.555	93.293	99.444	102.446	103.064
76.0	156.156	148.828	130.345	105.624	87.348	92.028	98.267	101.357	101.887
76.5	155.214	148.003	129.315	104.624	86.200	90.998	97.148	100.239	100.857
77.0	154.272	147.121	128.580	103.564	85.200	89.879	95.971	99.209	99.797
77.5	153.801	146.414	127.608	102.475	84.023	88.643	94.912	98.031	98.826
78.0	152.918	145.531	126.578	101.534	83.051	87.643	93.852	96.942	97.649
78.5	151.918	144.648	125.843	100.356	81.904	86.554	92.793	95.883	96.619
79.0	151.388	143.824	124.960	99.503	80.844	85.376	91.674	94.853	95.353
79.5	150.358	143.030	123.959	98.620	79.785	84.288	90.615	93.735	94.382
80.0	149.887	142.206	123.223	97.472	78.784	83.228	89.555	92.705	93.352
80.5	149.034	141.499	122.282	96.589	77.842	82.198	88.437	91.763	92.440
81.0	148.180	140.734	121.428	95.648	76.812	81.139	87.554	90.674	91.233
81.5	147.621	139.822	120.663	94.706	75.959	80.256	86.554	89.703	90.262
82.0	146.650	139.057	119.751	93.882	74.988	79.196	85.435	88.820	89.349
82.5	146.002	138.439	118.838	93.028	73.987	78.107	84.494	87.819	88.378

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CANDELA TABULATION - (Cont.)

83.0	145.031	137.526	118.132	92.057	73.016	77.224	83.552	86.819	87.348
83.5	144.325	136.879	117.337	91.174	72.133	76.312	82.551	85.788	86.318
84.0	143.707	136.173	116.455	90.438	71.221	75.311	81.668	84.935	85.347
84.5	142.942	135.319	115.807	89.497	70.367	74.370	80.668	83.876	84.346
85.0	142.323	134.554	115.042	88.731	69.573	73.428	79.814	83.022	83.640
85.5	141.647	133.848	114.188	87.937	68.631	72.427	78.990	82.080	82.610
86.0	140.940	133.112	113.453	87.083	67.866	71.633	77.931	80.962	81.874
86.5	140.205	132.523	112.864	86.348	67.012	70.720	77.048	80.138	80.668
87.0	139.410	131.788	112.011	85.788	66.247	69.867	76.253	79.373	79.844
87.5	138.762	131.022	111.393	84.906	65.658	69.072	75.370	78.402	79.078
88.0	138.144	130.581	110.775	84.346	64.775	68.278	74.605	77.607	78.107
88.5	137.468	129.904	110.098	83.728	64.246	67.483	73.781	76.812	77.254
89.0	137.350	129.521	109.597	83.051	63.628	66.924	72.986	75.900	76.283
89.5	137.409	129.492	109.597	82.993	63.186	66.335	72.251	75.164	75.547
90.0	137.144	129.669	109.803	83.110	63.422	66.188	71.956	74.723	75.047
90.5	137.585	129.845	109.833	83.199	63.422	66.247	71.780	74.487	74.899
91.0	137.968	129.963	110.009	83.375	63.363	66.247	71.633	74.370	74.752
91.5	138.086	130.316	110.156	83.552	63.569	66.276	71.603	74.311	74.487
92.0	138.321	130.287	110.451	83.493	63.598	66.276	71.456	74.075	74.399
92.5	138.498	130.522	110.569	83.728	63.775	66.188	71.338	73.840	74.193
93.0	138.733	130.728	110.569	83.934	63.716	66.011	71.338	73.752	74.075
93.5	139.086	130.875	110.981	84.023	64.010	66.041	71.338	73.634	73.869
94.0	139.233	131.170	111.098	84.258	63.951	65.982	71.073	73.516	73.634
94.5	139.439	131.258	111.275	84.317	64.099	65.835	71.162	73.310	73.281
95.0	139.881	131.464	111.393	84.464	64.099	65.835	70.956	72.898	73.075
95.5	139.822	131.788	111.540	84.641	64.187	65.805	70.809	72.780	72.986
96.0	140.175	131.935	111.746	84.758	64.246	65.747	70.661	72.633	72.604
96.5	140.352	132.082	112.099	84.847	64.422	65.658	70.485	72.310	72.427
97.0	140.558	132.288	112.040	85.053	64.393	65.599	70.397	72.104	72.045
97.5	140.705	132.464	112.217	85.288	64.422	65.452	70.308	72.045	71.897
98.0	141.029	132.494	112.423	85.259	64.658	65.511	70.043	71.750	71.662
98.5	141.058	132.759	112.570	85.524	64.687	65.335	69.955	71.544	71.368
99.0	141.235	132.935	112.570	85.759	64.775	65.158	69.896	71.309	71.132
99.5	141.441	132.994	112.776	85.671	64.834	65.158	69.573	71.073	70.720
100.0	141.499	133.141	112.864	85.847	64.981	65.040	69.514	70.867	70.544
100.5	141.735	133.171	112.893	85.994	65.011	64.952	69.425	70.573	70.249
101.0	141.705	133.259	113.011	86.171	65.158	64.834	69.249	70.249	69.955
101.5	142.029	133.318	113.129	86.230	65.217	64.628	69.043	70.073	69.543
102.0	141.911	133.406	113.099	86.377	65.452	64.569	68.837	69.749	69.425
102.5	142.000	133.406	113.129	86.406	65.452	64.481	68.572	69.455	69.131
103.0	142.029	133.494	113.188	86.524	65.629	64.246	68.336	69.219	68.866
103.5	142.029	133.524	113.129	86.701	65.570	64.157	68.160	69.043	68.336
104.0	142.265	133.553	113.011	86.524	65.629	64.010	67.895	68.748	68.219
104.5	142.323	133.671	113.041	86.701	65.688	63.834	67.542	68.395	67.748
105.0	142.059	133.700	112.982	86.789	65.864	63.657	67.218	68.189	67.424
105.5	142.206	133.524	112.952	86.612	65.923	63.510	66.894	67.807	67.042
106.0	142.323	133.553	113.041	86.671	65.835	63.392	66.571	67.395	66.806
106.5	142.265	133.612	112.982	86.671	65.923	63.245	66.276	67.100	66.424
107.0	142.353	133.612	112.893	86.642	65.835	63.127	65.923	66.659	66.129
107.5	142.265	133.524	112.864	86.612	65.835	62.951	65.629	66.306	65.629
108.0	142.265	133.494	112.805	86.760	65.923	62.598	65.305	65.717	65.129
108.5	142.323	133.465	112.864	86.612	65.805	62.539	65.011	65.364	64.599
109.0	142.059	133.436	112.717	86.612	65.864	62.215	64.687	64.864	64.275
109.5	142.147	133.230	112.570	86.495	65.717	62.127	64.363	64.481	63.539
110.0	142.000	133.259	112.481	86.495	65.805	61.980	64.040	63.893	63.304
110.5	142.029	133.024	112.481	86.465	65.688	61.803	63.628	63.598	62.568

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CANDELA TABULATION - (Cont.)

111.0	141.853	133.053	112.364	86.554	65.717	61.626	63.363	63.098	62.038
111.5	141.764	132.965	112.364	86.436	65.570	61.479	62.892	62.686	61.774
112.0	141.411	132.906	112.246	86.406	65.541	61.185	62.598	62.156	61.126
112.5	141.499	132.788	112.011	86.318	65.599	61.097	62.333	61.744	60.538
113.0	141.441	132.612	112.011	86.230	65.570	60.832	62.009	61.303	60.008
113.5	141.264	132.464	111.863	86.112	65.482	60.714	61.538	60.685	59.596
114.0	141.029	132.376	111.657	86.112	65.452	60.567	61.244	60.361	59.125
114.5	141.087	132.200	111.569	85.965	65.423	60.273	60.950	59.684	58.536
115.0	140.734	131.994	111.304	85.847	65.276	60.096	60.332	59.037	57.859
115.5	140.617	132.023	111.187	85.759	65.305	59.861	60.184	58.448	57.330
116.0	140.322	131.611	110.951	85.553	65.070	59.831	59.684	57.653	56.712
116.5	140.352	131.493	110.804	85.524	65.158	59.478	59.184	57.035	56.094
117.0	139.969	131.287	110.569	85.376	65.011	59.360	58.978	56.476	55.034
117.5	139.645	130.993	110.480	85.229	64.864	59.154	58.654	55.682	54.475
118.0	139.469	130.787	110.127	84.994	64.746	58.889	58.183	55.093	53.533
118.5	139.204	130.669	109.950	84.876	64.569	58.683	57.771	54.446	52.856
119.0	138.851	130.287	109.744	84.817	64.481	58.507	57.536	53.769	52.032
119.5	138.556	130.110	109.538	84.670	64.481	58.330	57.006	53.003	51.149
120.0	138.292	129.933	109.362	84.435	64.275	58.124	56.770	52.209	50.355
120.5	138.086	129.463	109.126	84.140	64.128	57.830	56.329	51.503	49.590
121.0	137.791	129.257	108.773	84.140	63.893	57.624	55.858	50.855	48.795
121.5	137.262	129.051	108.479	83.993	63.893	57.330	55.652	50.208	47.971
122.0	137.026	128.609	108.273	83.640	63.804	57.094	55.240	49.472	47.117
122.5	136.614	128.315	108.067	83.434	63.569	57.006	54.858	48.854	46.411
123.0	136.290	128.050	107.684	83.346	63.422	56.653	54.534	48.177	45.617
123.5	135.849	127.491	107.361	82.963	63.304	56.476	54.210	47.588	44.645
124.0	135.790	127.079	107.155	82.845	63.245	56.300	53.680	46.882	43.998
124.5	135.054	126.784	106.831	82.639	63.010	56.005	53.415	46.293	43.292
125.0	134.554	126.314	106.537	82.404	62.804	55.946	53.151	45.646	42.556
125.5	134.054	125.931	106.095	82.080	62.656	55.682	52.827	45.087	41.997
126.0	133.465	125.401	105.771	81.904	62.598	55.564	52.621	44.586	41.379
126.5	133.230	124.901	105.389	81.609	62.450	55.417	52.238	43.998	40.761
127.0	132.347	124.518	105.065	81.462	62.362	55.270	51.797	43.527	40.143
127.5	131.758	123.930	104.624	81.197	62.244	55.034	51.561	43.115	39.672
128.0	131.346	123.400	104.241	80.874	62.038	54.975	51.296	42.467	39.142
128.5	130.699	122.811	103.829	80.697	62.038	54.916	50.914	41.938	38.642
129.0	130.051	122.488	103.476	80.373	61.774	54.652	50.620	41.349	38.141
129.5	129.610	121.840	102.976	80.167	61.656	54.475	50.414	40.849	37.818
130.0	128.756	121.428	102.564	79.755	61.538	54.151	49.884	40.378	37.347
130.5	128.256	120.840	102.093	79.549	61.538	54.063	49.678	39.937	36.729
131.0	127.667	120.251	101.651	79.373	61.244	53.886	49.384	39.524	36.464
131.5	127.167	119.751	101.269	78.990	61.126	53.769	49.030	38.965	36.199
132.0	126.314	119.162	100.709	78.902	61.038	53.651	48.736	38.553	35.699
132.5	125.548	118.397	100.297	78.460	60.861	53.474	48.530	38.112	35.257
133.0	125.019	117.838	99.827	78.107	60.596	53.298	48.177	37.729	35.169
133.5	124.224	117.249	99.326	77.872	60.567	53.151	47.912	37.435	34.727
134.0	123.577	116.543	98.855	77.519	60.302	53.092	47.588	37.023	34.580
134.5	122.959	115.895	98.355	77.136	60.273	52.915	47.382	36.581	34.198
135.0	122.223	115.277	97.737	76.783	60.037	52.680	47.088	36.317	33.903
135.5	121.516	114.483	97.354	76.489	59.861	52.709	46.794	35.993	33.609
136.0	120.722	114.071	96.766	76.135	59.655	52.385	46.441	35.463	33.226
136.5	119.986	113.394	96.266	75.900	59.507	52.238	46.117	35.228	32.844
137.0	119.162	112.599	95.736	75.459	59.360	52.062	45.999	34.875	32.432
137.5	118.338	111.922	95.206	75.135	59.066	51.915	45.558	34.463	32.285
138.0	117.455	111.216	94.647	74.840	59.007	51.650	45.410	34.286	32.196
138.5	116.778	110.451	94.176	74.458	58.831	51.650	45.293	33.992	31.814

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CANDELA TABULATION - (Cont.)

139.0	115.895	109.833	93.558	74.016	58.507	51.561	44.881	33.580	31.578
139.5	115.130	109.038	92.969	73.663	58.360	51.355	44.675	33.344	31.284
140.0	114.542	108.332	92.175	73.369	58.271	51.296	44.469	33.020	30.990
140.5	113.718	107.478	91.763	72.810	57.918	51.032	44.086	32.785	30.725
141.0	112.893	106.919	91.115	72.604	57.801	50.826	43.968	32.373	30.372
141.5	112.187	105.977	90.586	72.133	57.565	50.796	43.674	32.079	30.077
142.0	111.334	105.271	89.909	71.662	57.271	50.620	43.439	31.726	29.724
142.5	110.304	104.535	89.349	71.309	57.094	50.414	43.292	31.578	29.371
143.0	109.480	103.682	88.702	70.838	56.888	50.355	43.086	31.108	29.283
143.5	108.597	102.828	87.996	70.367	56.653	50.090	42.732	30.843	29.018
144.0	107.773	102.034	87.378	70.014	56.329	49.884	42.674	30.607	28.841
144.5	106.890	101.210	86.760	69.631	56.123	49.943	42.615	30.431	28.635
145.0	105.948	100.503	86.200	69.043	55.858	49.707	42.291	30.048	28.488
145.5	105.095	99.679	85.553	68.719	55.682	49.501	42.085	29.901	28.459
146.0	104.123	98.797	84.847	68.278	55.387	49.266	41.997	29.695	28.635
146.5	103.270	97.884	84.111	67.807	55.064	49.178	41.732	29.253	28.606
147.0	102.416	97.090	83.552	67.336	54.769	49.001	41.761	29.047	28.518
147.5	101.534	96.089	82.875	66.865	54.681	48.854	41.496	28.871	28.606
148.0	100.474	95.265	82.139	66.424	54.298	48.648	41.320	28.635	28.665
148.5	99.473	94.470	81.521	65.923	54.151	48.471	41.173	28.371	28.724
149.0	98.414	93.676	80.785	65.511	53.798	48.353	41.114	28.106	28.871
149.5	97.678	92.763	80.079	64.923	53.474	48.265	40.937	27.988	29.018
150.0	96.678	91.763	79.373	64.511	53.121	47.971	40.790	27.782	28.989
150.5	95.706	90.998	78.637	64.040	52.945	47.912	40.702	27.664	29.165
151.0	94.765	89.938	77.990	63.451	52.621	47.677	40.525	27.635	29.371
151.5	93.911	89.085	77.313	63.039	52.327	47.559	40.378	27.399	29.253
152.0	92.675	88.290	76.518	62.627	52.062	47.323	40.260	27.134	29.195
152.5	91.674	87.260	75.871	62.009	51.709	47.206	40.025	27.105	29.312
153.0	90.909	86.289	74.988	61.391	51.473	47.059	40.054	26.987	29.283
153.5	89.732	85.435	74.370	60.920	51.120	46.823	39.995	26.958	29.401
154.0	88.731	84.494	73.575	60.449	50.826	46.617	39.760	26.899	29.312
154.5	87.643	83.493	72.751	59.861	50.561	46.411	39.760	26.899	29.253
155.0	86.554	82.463	72.045	59.301	50.296	46.176	39.583	26.870	29.253
155.5	85.582	81.462	71.309	58.713	49.943	45.999	39.348	26.928	29.430
156.0	84.641	80.579	70.514	58.301	49.590	45.881	39.348	26.958	29.430
156.5	83.346	79.608	69.661	57.653	49.384	45.617	39.348	26.840	29.607
157.0	82.551	78.696	68.984	57.035	48.913	45.440	39.171	26.605	29.548
157.5	81.403	77.695	68.130	56.476	48.530	45.146	39.112	26.487	29.401
158.0	80.373	76.606	67.454	56.005	48.265	44.998	39.083	26.281	29.401
158.5	79.461	75.753	66.747	55.358	47.824	44.763	38.936	25.898	29.371
159.0	78.313	74.811	65.835	54.769	47.471	44.439	38.877	25.751	29.401
159.5	77.254	73.752	65.070	54.269	47.117	44.351	38.818	25.398	29.430
160.0	76.165	72.692	64.246	53.533	46.735	44.027	38.612	25.369	29.401
160.5	75.194	71.721	63.481	52.974	46.411	43.910	38.436	25.222	29.371
161.0	74.046	70.661	62.598	52.444	46.087	43.615	38.259	25.163	29.607
161.5	72.810	69.661	61.862	51.679	45.646	43.380	37.994	24.809	29.724
162.0	71.662	68.660	60.861	51.032	45.293	43.086	37.729	24.574	29.871
162.5	70.573	67.630	60.096	50.531	45.087	42.880	37.317	24.309	29.871
163.0	69.484	66.541	59.272	49.854	44.528	42.585	36.405	24.133	29.930
163.5	68.307	65.570	58.360	49.266	44.292	42.291	35.434	23.691	30.107
164.0	67.336	64.481	57.565	48.707	43.939	42.203	34.227	22.955	30.019
164.5	66.129	63.363	56.712	47.912	43.498	41.849	32.726	22.308	29.459
165.0	64.981	62.244	55.858	47.294	43.086	41.290	31.343	21.984	28.577
165.5	63.745	61.244	54.975	46.588	42.703	40.643	29.871	21.837	27.399
166.0	62.686	60.155	54.063	46.029	42.203	39.613	28.106	21.719	26.046
166.5	61.420	59.007	53.033	45.410	41.643	38.200	26.634	21.425	24.133

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CANDELA TABULATION - (Cont.)

167.0	60.125	57.918	52.209	44.822	40.761	36.699	25.457	21.278	21.866
167.5	58.978	56.829	51.355	44.086	39.495	34.904	24.280	20.660	19.895
168.0	57.653	55.534	50.178	43.527	37.729	32.962	23.544	20.248	17.540
168.5	56.447	54.387	49.295	42.821	36.169	31.137	23.073	19.748	15.362
169.0	55.211	53.327	48.471	41.761	34.051	29.195	22.543	18.776	12.773
169.5	53.916	52.209	47.382	40.466	32.167	27.311	22.337	17.717	10.006
170.0	52.562	51.002	46.293	38.730	30.048	25.869	21.925	16.187	7.446
170.5	51.267	49.472	45.146	36.935	28.253	24.927	21.337	14.303	5.386
171.0	49.943	48.059	43.468	35.051	26.752	23.985	20.866	12.655	3.296
171.5	48.736	46.853	42.026	33.079	25.722	23.456	20.042	11.242	2.178
172.0	47.323	45.499	40.613	31.196	24.809	23.073	18.629	9.565	1.942
172.5	46.117	43.645	38.642	29.813	24.015	22.396	16.981	7.917	1.913
173.0	43.998	41.967	36.758	28.518	23.338	21.631	15.304	6.327	1.825
173.5	41.467	40.054	34.639	26.987	22.485	20.071	13.096	5.356	1.560
174.0	40.113	37.582	32.196	25.751	21.778	17.805	10.830	4.944	1.354
174.5	37.906	35.198	29.989	24.339	20.454	15.539	8.652	4.444	1.148
175.0	35.257	32.638	27.870	22.573	18.541	12.949	6.916	4.061	0.883
175.5	31.814	29.665	25.369	20.778	16.187	10.124	5.915	3.355	0.647
176.0	28.371	26.369	22.897	18.629	13.685	7.681	5.239	2.796	0.853
176.5	24.662	22.661	19.983	15.598	10.771	5.915	4.473	1.972	0.677
177.0	20.336	18.894	16.716	12.508	8.152	4.974	3.767	1.295	0.559
177.5	15.863	14.656	13.626	9.741	6.004	4.385	3.178	0.853	0.559
178.0	11.095	10.271	10.389	6.622	4.415	3.649	2.502	0.706	0.942
178.5	7.063	6.563	6.857	4.208	3.561	3.002	1.884	0.765	0.647
179.0	4.150	3.944	3.679	2.619	2.766	2.384	1.472	0.706	0.736
179.5	1.472	2.237	1.413	1.413	1.913	1.913	0.912	0.736	1.030
180.0	1.059	1.059	1.059	1.059	1.059	1.059	1.059	1.059	1.059

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	119.97	N.A.	7.40
0-30	275.49	N.A.	16.90
0-40	463.56	N.A.	28.50
0-60	793.21	N.A.	48.70
0-80	1049.42	N.A.	64.40
0-90	1152.95	N.A.	70.80
10-90	1125.77	N.A.	69.10
20-40	343.59	N.A.	21.10
20-50	520.86	N.A.	32.00
40-70	465.49	N.A.	28.60
60-80	256.22	N.A.	15.70
70-80	120.37	N.A.	7.40
80-90	103.53	N.A.	6.40
90-110	189.28	N.A.	11.60
90-120	272.73	N.A.	16.70
90-130	342.47	N.A.	21.00
90-150	436.58	N.A.	26.80
90-180	476.40	N.A.	29.20
110-180	287.12	N.A.	17.60
0-180	1629.35	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	27.18
10-20	92.78
20-30	155.52
30-40	188.07
40-50	177.27
50-60	152.38
60-70	135.84
70-80	120.37
80-90	103.53
90-100	96.47
100-110	92.81
110-120	83.44
120-130	69.75
130-140	54.66
140-150	39.45
150-160	25.26
160-170	12.41
170-180	2.16

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

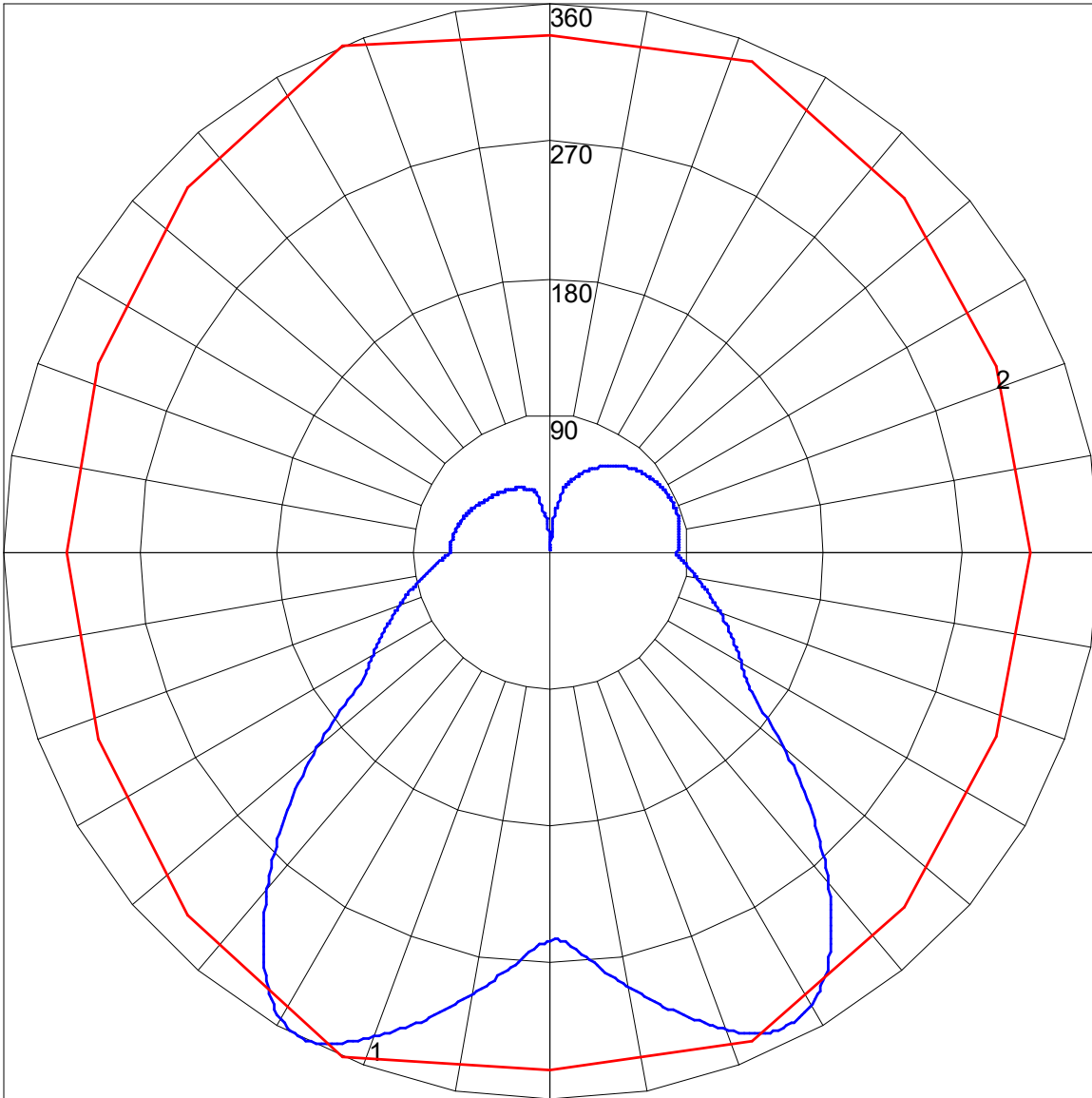
IES INDOOR REPORT
PHOTOMETRIC FILENAME : CNDL 4 LIGHT.IES

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	11.9	13.1	12.7	13.9	14.8	10.2	11.3	10.9	12.1	13.0
	3H	14.2	15.3	15.0	16.1	17.0	12.0	13.0	12.7	13.8	14.8
	4H	15.3	16.3	16.1	17.1	18.1	12.8	13.8	13.6	14.6	15.5
	6H	16.4	17.3	17.2	18.1	19.1	13.5	14.4	14.3	15.2	16.2
	8H	16.9	17.8	17.7	18.6	19.6	13.8	14.7	14.6	15.5	16.5
	12H	17.4	18.3	18.2	19.1	20.1	14.1	15.0	14.9	15.8	16.8
4H	2H	12.6	13.6	13.4	14.4	15.4	11.1	12.1	11.9	12.9	13.9
	3H	15.1	16.0	15.9	16.8	17.8	13.2	14.0	14.0	14.9	15.9
	4H	16.4	17.2	17.2	18.0	19.0	14.1	14.9	14.9	15.7	16.7
	6H	17.7	18.4	18.5	19.2	20.2	15.0	15.7	15.8	16.5	17.5
	8H	18.3	18.9	19.1	19.8	20.8	15.4	16.0	16.2	16.9	17.9
	12H	18.9	19.5	19.7	20.3	21.4	15.7	16.4	16.6	17.2	18.3
8H	4H	16.8	17.5	17.6	18.3	19.4	14.8	15.5	15.6	16.3	17.4
	6H	18.3	18.9	19.2	19.8	20.8	15.9	16.5	16.8	17.4	18.4
	8H	19.1	19.6	19.9	20.5	21.5	16.4	16.9	17.3	17.8	18.9
	12H	19.9	20.3	20.7	21.2	22.3	16.9	17.4	17.8	18.3	19.4
12H	4H	16.9	17.5	17.7	18.4	19.4	15.0	15.6	15.9	16.5	17.5
	6H	18.5	19.0	19.3	19.8	20.9	16.2	16.7	17.1	17.6	18.7
	8H	19.3	19.8	20.2	20.6	21.7	16.8	17.3	17.7	18.1	19.2

Maximum UGR = 22.3

POLAR GRAPH



Maximum Candela = 359.811 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.)