

IES INDOOR REPORT

PHOTOMETRIC FILENAME : PNA 24 BOWL.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]BALLABS TEST NO. 15395.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] APR-2010

[MANUFAC] Justice Design Group, Los Angeles, CA 90071

[LUMCAT] Porcelina (PNA) 24" Bowl

[LUMINAIRE] Justice Design Group - Pendant mount luminaire. Product ID: PNA 24" Bowl

[MORE] Extruded base plate with resin bowl lens.

[LAMP CAT] 5-13W LED 1000L EACH 5000 TOTAL LUMENS,

[MORE] 65W AT 120.0 VOLTS SCALED FROM 3-LED LAMP

CHARACTERISTICS

Lumens Per Lamp	1000 (5 lamps)
Total Lamp Lumens	5000
Luminaire Lumens	2685
Total Luminaire Efficiency	54 %
Luminaire Efficacy Rating (LER)	41
Total Luminaire Watts	65
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.32
Spacing Criterion (90-270)	1.34
Spacing Criterion (Diagonal)	1.48
Basic Luminous Shape	Sphere
Luminous Length (0-180)	0.00 ft
Luminous Width (90-270)	1.13 ft (Diameter)
Luminous Height	0.42 ft (Diameter)

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4684	4769	4884
55	4055	4198	4341
65	3370	3570	3741
75	2742	2942	3113
85	2113	2313	2485

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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>
0.0	580.756	580.756	580.756	580.756	580.756
2.5	580.756	578.116	580.756	578.116	580.756
5.0	578.116	575.476	578.116	578.116	580.756
7.5	575.476	572.837	575.476	575.476	575.476
10.0	572.837	570.197	572.837	572.837	575.476
12.5	567.557	567.557	567.557	570.197	570.197
15.0	562.277	562.277	562.277	564.917	564.917
17.5	554.358	556.998	556.998	559.638	556.998
20.0	546.439	549.078	549.078	551.718	549.078
22.5	538.519	541.159	538.519	543.799	541.159
25.0	530.600	533.240	530.600	535.879	533.240
27.5	520.041	522.680	522.680	527.960	525.320
30.0	509.481	512.121	512.121	520.041	514.761
32.5	498.922	501.562	501.562	509.481	506.842
35.0	488.363	491.003	491.003	498.922	496.282
37.5	475.164	480.444	480.444	488.363	485.723
40.0	461.965	467.245	467.245	477.804	475.164
42.5	448.766	454.046	454.046	464.605	461.965
45.0	432.927	440.847	440.847	454.046	451.406
47.5	419.728	427.648	427.648	440.847	438.207
50.0	406.529	414.449	417.088	430.287	427.648
52.5	390.690	398.610	401.250	417.088	414.449
55.0	374.852	385.411	388.051	401.250	401.250
57.5	359.013	369.572	372.212	388.051	385.411
60.0	343.174	356.373	359.013	374.852	372.212
62.5	327.335	337.894	343.174	359.013	359.013
65.0	311.496	324.695	329.975	345.814	345.814
67.5	295.658	308.857	314.136	329.975	329.975
70.0	282.459	295.658	300.937	316.776	316.776
72.5	266.620	279.819	285.098	303.577	300.937
75.0	253.421	266.620	271.899	290.378	287.738
77.5	237.582	250.781	256.061	274.539	271.899
80.0	221.743	237.582	242.862	261.340	258.700
82.5	208.544	221.743	227.023	245.501	242.862
85.0	195.345	208.544	213.824	232.302	229.663
87.5	179.506	195.345	197.985	216.464	213.824
90.0	168.947	176.867	184.786	197.985	203.265
92.5	158.388	155.748	171.587	179.506	190.066
95.0	145.189	142.549	161.028	163.668	176.867
97.5	131.990	129.350	145.189	147.829	158.388
100.0	118.791	116.151	131.990	134.630	145.189
102.5	105.592	102.952	118.791	121.431	131.990
105.0	95.033	92.393	105.592	108.232	118.791
107.5	81.834	81.834	92.393	95.033	105.592
110.0	73.914	71.275	81.834	84.474	92.393
112.5	60.715	60.715	71.275	71.275	79.194
115.0	52.796	50.156	60.715	60.715	68.635
117.5	44.877	42.237	50.156	50.156	58.076
120.0	36.957	34.317	42.237	42.237	47.516
122.5	29.038	29.038	34.317	34.317	39.597
125.0	23.758	21.118	26.398	26.398	31.678
127.5	18.479	15.839	21.118	18.479	23.758
130.0	13.199	10.559	15.839	13.199	15.839
132.5	7.919	7.919	10.559	7.919	10.559

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CANDELA TABULATION - (Cont.)

135.0	5.280	5.280	7.919	5.280	5.280
137.5	2.640	2.640	2.640	2.640	2.640
140.0	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	214.09	4.30	8.00
0-30	460.04	9.20	17.10
0-40	769.17	15.40	28.60
0-60	1462.66	29.30	54.50
0-80	2081.36	41.60	77.50
0-90	2317.06	46.30	86.30
10-90	2262.09	45.20	84.30
20-40	555.08	11.10	20.70
20-50	898.73	18.00	33.50
40-70	1022.45	20.40	38.10
60-80	618.70	12.40	23.00
70-80	289.73	5.80	10.80
80-90	235.70	4.70	8.80
90-110	280.71	5.60	10.50
90-120	339.31	6.80	12.60
90-130	362.96	7.30	13.50
90-150	367.80	7.40	13.70
90-180	367.80	7.40	13.70
110-180	87.08	1.70	3.20
0-180	2684.85	53.70	100.00

Total Luminaire Efficiency = 53.70%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	54.97
10-20	159.13
20-30	245.95
30-40	309.13
40-50	343.65
50-60	349.83
60-70	328.97
70-80	289.73
80-90	235.70
90-100	171.04
100-110	109.67
110-120	58.59
120-130	23.66
130-140	4.83
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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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	
0	62	62	62	62	60	60	60	60	56	56	56	52	52	52	48	48	48	46
1	55	51	48	46	52	49	47	44	46	43	41	42	40	39	39	38	36	35
2	49	44	39	36	47	42	38	35	39	35	33	36	33	31	33	31	29	27
3	44	38	33	29	42	36	32	28	34	30	27	31	28	25	29	26	24	22
4	40	33	28	24	38	32	27	23	30	25	22	27	24	21	25	22	20	18
5	37	29	24	20	35	28	23	20	26	22	19	24	21	18	23	20	17	16
6	34	26	21	17	32	25	21	17	24	19	16	22	18	16	20	17	15	14
7	31	24	19	15	30	23	18	15	21	17	14	20	16	14	19	15	13	12
8	29	21	17	13	28	21	16	13	19	15	13	18	15	12	17	14	12	10
9	27	20	15	12	26	19	15	12	18	14	11	17	13	11	16	13	10	9
10	25	18	14	11	24	18	13	11	16	13	10	15	12	10	15	12	9	8

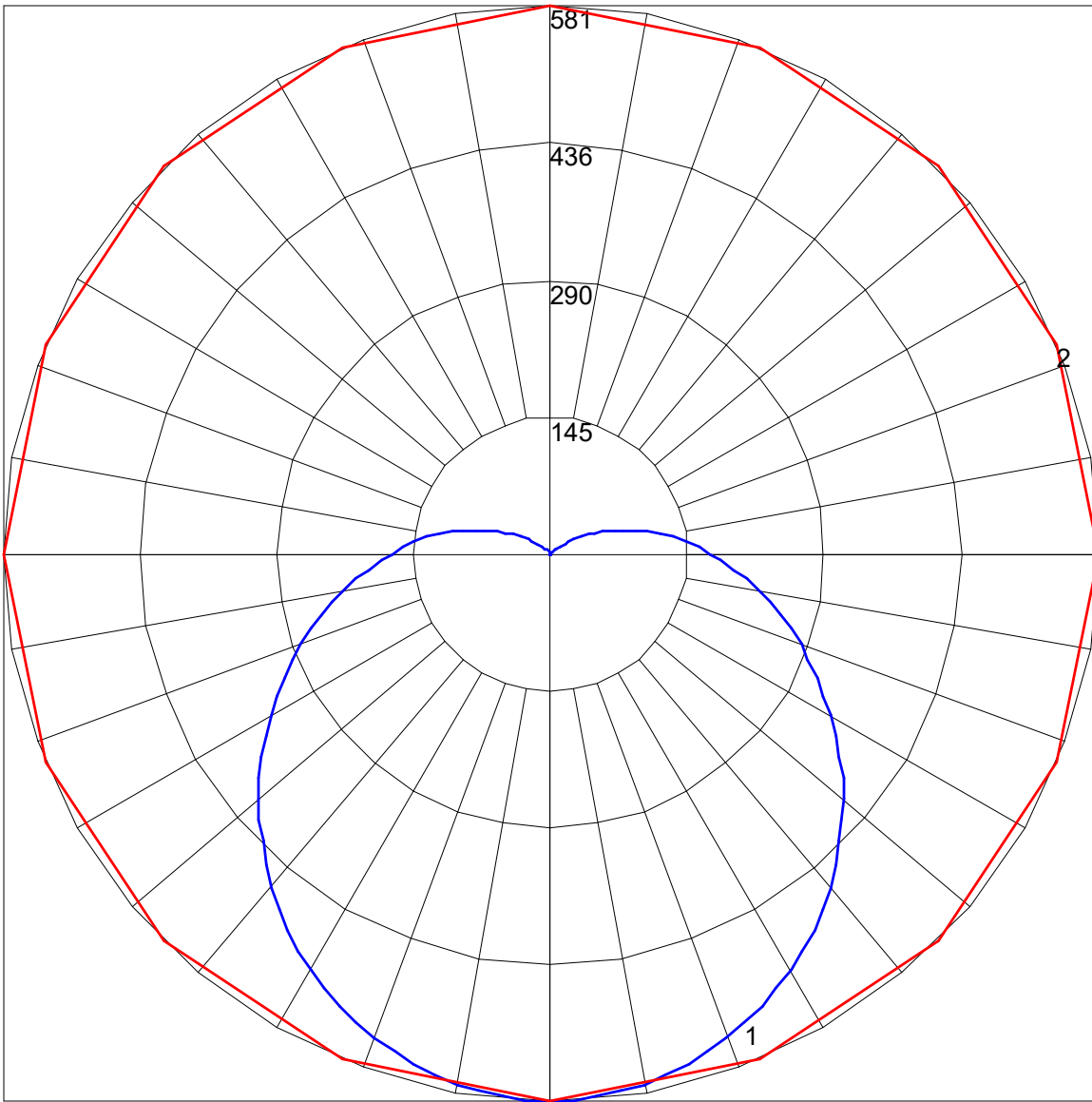
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UGR TABLE - CORRECTED

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	13.2	14.6	13.8	15.2	15.9	13.6	15.0	14.1	15.6	16.3
	3H	15.3	16.7	15.9	17.3	18.0	15.8	17.2	16.4	17.8	18.5
	4H	16.3	17.6	16.9	18.2	18.9	16.9	18.2	17.5	18.8	19.5
	6H	17.2	18.4	17.8	19.0	19.8	17.9	19.1	18.5	19.7	20.4
	8H	17.7	18.8	18.3	19.4	20.2	18.3	19.5	19.0	20.1	20.9
	12H	18.1	19.2	18.7	19.8	20.5	18.8	19.9	19.4	20.5	21.3
4H	2H	13.8	15.1	14.4	15.7	16.4	14.1	15.4	14.7	16.0	16.7
	3H	16.2	17.3	16.8	18.0	18.7	16.6	17.7	17.3	18.4	19.1
	4H	17.4	18.4	18.0	19.0	19.8	17.9	18.9	18.5	19.5	20.3
	6H	18.5	19.4	19.1	20.0	20.8	19.1	20.0	19.7	20.6	21.4
	8H	19.0	19.8	19.6	20.5	21.3	19.6	20.5	20.3	21.1	21.9
	12H	19.4	20.2	20.1	20.9	21.7	20.1	20.9	20.8	21.6	22.4
8H	4H	17.8	18.7	18.5	19.3	20.1	18.2	19.1	18.9	19.8	20.5
	6H	19.1	19.8	19.8	20.5	21.3	19.6	20.3	20.3	21.1	21.8
	8H	19.7	20.4	20.4	21.1	21.9	20.3	21.0	21.0	21.7	22.5
	12H	20.4	21.0	21.1	21.7	22.5	21.0	21.6	21.7	22.3	23.2
12H	4H	17.9	18.7	18.6	19.4	20.2	18.3	19.1	19.0	19.8	20.6
	6H	19.2	19.9	19.9	20.6	21.4	19.7	20.4	20.4	21.1	21.9
	8H	20.0	20.5	20.7	21.3	22.1	20.5	21.1	21.2	21.8	22.7

Maximum UGR = 23.2

POLAR GRAPH



Maximum Candela = 580.756 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)