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IES INDOOR REPORT PHOTOMETRIC FILENAME : PNA 18 BOWL.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] LLI-18210-3
 [TESTLAB] LightLab International (www.LightLabInternational.com)
 [MANUFAC] Justice Design Group, Los Angeles, CA 90071
 [LUMCAT] Porcelina (PNA) 18" Bowl
 [LUMINAIRE] Justice Design Group - Pendant mount luminaire. Product ID: PNA 18" Bowl
 [MORE] Extruded base plate with resin bowl lens.
 [MORE] 63 LEDs with 21 in each of three arrays with white plastic lenses.
 [MORE] No driver.
 [MORE] Operating at 120 VAC and 60 Hz.
 [OTHER] Absolute test - lamp lumens value set to -1
 [MORE] NA conventions used for C0 plane alignment and C-plane rotation direction.
 [MORE] The sample was tested at a distance of 8m.
 [MORE] This IES file created by LightLab/LSA Report program version 3.820a.
 [ISSUEDATE] August, 2018

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1847
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	47
Total Luminaire Watts	39
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	0.53 m (Diameter)
Luminous Width (90-270)	0.53 m (Diameter)
Luminous Height	0.13 m

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	946	946	946
55	861	861	861
65	772	772	772
75	686	686	686
85	620	620	620

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CANDELA TABULATION

	<u>0</u>
0.0	287.809
0.5	287.795
1.0	287.768
1.5	287.700
2.0	287.605
2.5	287.468
3.0	287.346
3.5	287.183
4.0	286.978
4.5	286.788
5.0	286.543
5.5	286.297
6.0	285.971
6.5	285.671
7.0	285.317
7.5	284.949
8.0	284.554
8.5	284.132
9.0	283.683
9.5	283.234
10.0	282.743
10.5	282.267
11.0	281.736
11.5	281.150
12.0	280.578
12.5	279.979
13.0	279.339
13.5	278.686
14.0	278.018
14.5	277.310
15.0	276.589
15.5	275.840
16.0	275.036
16.5	274.233
17.0	273.416
17.5	272.572
18.0	271.673
18.5	270.815
19.0	269.862
19.5	268.922
20.0	267.969
20.5	266.975
21.0	265.967
21.5	264.919
22.0	263.870
22.5	262.781
23.0	261.705
23.5	260.561
24.0	259.404
24.5	258.260
25.0	257.103
25.5	255.877
26.0	254.638
26.5	253.426

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 18 BOWL.IES

CANDELA TABULATION - (Cont.)

27.0	252.132
27.5	250.893
28.0	249.586
28.5	248.265
29.0	246.944
29.5	245.596
30.0	244.235
30.5	242.818
31.0	241.429
31.5	239.986
32.0	238.597
32.5	237.126
33.0	235.642
33.5	234.172
34.0	232.674
34.5	231.149
35.0	229.596
35.5	228.058
36.0	226.505
36.5	224.939
37.0	223.360
37.5	221.753
38.0	220.160
38.5	218.512
39.0	216.892
39.5	215.244
40.0	213.569
40.5	211.881
41.0	210.246
41.5	208.517
42.0	206.788
42.5	205.086
43.0	203.356
43.5	201.627
44.0	199.857
44.5	198.114
45.0	196.357
45.5	194.614
46.0	192.858
46.5	191.047
47.0	189.263
47.5	187.438
48.0	185.668
48.5	183.816
49.0	182.018
49.5	180.167
50.0	178.424
50.5	176.558
51.0	174.693
51.5	172.868
52.0	170.975
52.5	169.150
53.0	167.258
53.5	165.406
54.0	163.513
54.5	161.688

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 18 BOWL.IES

CANDELA TABULATION - (Cont.)

55.0	159.796
55.5	157.916
56.0	156.037
56.5	154.131
57.0	152.238
57.5	150.345
58.0	148.453
58.5	146.546
59.0	144.735
59.5	142.815
60.0	140.909
60.5	139.043
61.0	137.123
61.5	135.217
62.0	133.310
62.5	131.445
63.0	129.525
63.5	127.700
64.0	125.794
64.5	123.928
65.0	122.063
65.5	120.156
66.0	118.332
66.5	116.480
67.0	114.614
67.5	112.762
68.0	110.979
68.5	109.127
69.0	107.316
69.5	105.518
70.0	103.693
70.5	101.910
71.0	100.099
71.5	98.315
72.0	96.531
72.5	94.829
73.0	93.045
73.5	91.329
74.0	89.613
74.5	87.871
75.0	86.209
75.5	84.507
76.0	82.832
76.5	81.157
77.0	79.551
77.5	77.903
78.0	76.269
78.5	74.689
79.0	73.096
79.5	71.530
80.0	69.978
80.5	68.453
81.0	66.928
81.5	65.457
82.0	63.959
82.5	62.516

**IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 18 BOWL.IES**

CANDELA TABULATION - (Cont.)

83.0	61.113
83.5	59.656
84.0	58.294
84.5	56.892
85.0	55.557
85.5	54.223
86.0	52.957
86.5	51.649
87.0	50.397
87.5	49.171
88.0	47.932
88.5	46.788
89.0	45.617
89.5	44.514
90.0	43.588
90.5	42.853
91.0	42.254
91.5	41.736
92.0	41.314
92.5	40.865
93.0	40.497
93.5	40.157
94.0	39.843
94.5	39.625
95.0	39.666
95.5	40.075
96.0	40.946
96.5	42.254
97.0	43.888
97.5	45.821
98.0	47.700
98.5	49.511
99.0	51.418
99.5	53.188
100.0	55.013
100.5	57.001
101.0	59.043
101.5	61.222
102.0	63.360
102.5	65.566
103.0	67.649
103.5	69.774
104.0	71.816
104.5	73.899
105.0	75.983
105.5	78.039
106.0	80.122
106.5	82.179
107.0	84.262
107.5	86.264
108.0	88.347
108.5	90.322
109.0	92.337
109.5	94.311
110.0	96.313
110.5	98.356

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 18 BOWL.IES

CANDELA TABULATION - (Cont.)

111.0	100.453
111.5	102.604
112.0	104.728
112.5	106.989
113.0	109.181
113.5	111.510
114.0	113.920
114.5	116.344
115.0	118.836
115.5	121.327
116.0	123.887
116.5	126.447
117.0	129.157
117.5	131.772
118.0	134.468
118.5	137.246
119.0	140.024
119.5	142.815
120.0	145.593
120.5	148.439
121.0	151.244
121.5	154.117
122.0	156.909
122.5	159.782
123.0	162.614
123.5	165.378
124.0	168.184
124.5	170.948
125.0	173.685
125.5	176.340
126.0	178.968
126.5	181.460
127.0	183.952
127.5	186.417
128.0	188.800
128.5	191.087
129.0	193.389
129.5	195.595
130.0	197.732
130.5	199.802
131.0	201.749
131.5	203.738
132.0	205.630
132.5	207.414
133.0	209.171
133.5	210.832
134.0	212.466
134.5	214.018
135.0	215.475
135.5	216.892
136.0	218.226
136.5	219.547
137.0	220.772
137.5	221.943
138.0	223.060
138.5	224.163

**IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 18 BOWL.IES**

CANDELA TABULATION - (Cont.)

139.0	225.157
139.5	226.083
140.0	227.023
140.5	227.840
141.0	228.657
141.5	229.406
142.0	230.100
142.5	230.795
143.0	231.407
143.5	231.993
144.0	232.592
144.5	233.082
145.0	233.600
145.5	234.022
146.0	234.498
146.5	234.907
147.0	235.302
147.5	235.656
148.0	235.996
148.5	236.337
149.0	236.704
149.5	237.045
150.0	237.372
150.5	237.698
151.0	238.052
151.5	238.366
152.0	238.706
152.5	239.046
153.0	239.360
153.5	239.646
154.0	239.945
154.5	240.231
155.0	240.490
155.5	240.789
156.0	241.075
156.5	241.361
157.0	241.647
157.5	241.892
158.0	242.206
158.5	242.478
159.0	242.764
159.5	243.077
160.0	243.377
160.5	243.690
161.0	243.976
161.5	244.262
162.0	244.548
162.5	244.888
163.0	245.188
163.5	245.555
164.0	245.937
164.5	246.127
165.0	246.086
165.5	245.855
166.0	245.256
166.5	244.235

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 18 BOWL.IES

CANDELA TABULATION - (Cont.)

167.0	242.941
167.5	241.062
168.0	238.829
168.5	236.391
169.0	233.477
169.5	230.304
170.0	226.859
170.5	223.169
171.0	219.206
171.5	215.271
172.0	211.118
172.5	206.910
173.0	202.648
173.5	198.005
174.0	192.939
174.5	187.247
175.0	181.215
175.5	174.529
176.0	167.448
176.5	159.441
177.0	150.454
177.5	141.031
178.0	130.056
178.5	118.100
179.0	106.090
179.5	95.101
180.0	85.964

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	105.29	N.A.	5.70
0-30	223.79	N.A.	12.10
0-40	367.48	N.A.	19.90
0-60	662.03	N.A.	35.80
0-80	874.28	N.A.	47.30
0-90	935.28	N.A.	50.60
10-90	908.05	N.A.	49.20
20-40	262.19	N.A.	14.20
20-50	413.77	N.A.	22.40
40-70	415.53	N.A.	22.50
60-80	212.26	N.A.	11.50
70-80	91.27	N.A.	4.90
80-90	61.00	N.A.	3.30
90-110	127.68	N.A.	6.90
90-120	246.02	N.A.	13.30
90-130	400.70	N.A.	21.70
90-150	712.74	N.A.	38.60
90-180	911.39	N.A.	49.40
110-180	783.71	N.A.	42.40
0-180	1846.68	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	27.23
10-20	78.06
20-30	118.50
30-40	143.69
40-50	151.58
50-60	142.97
60-70	120.98
70-80	91.27
80-90	61.00
90-100	47.60
100-110	80.08
110-120	118.33
120-130	154.68
130-140	165.73
140-150	146.31
150-160	111.22
160-170	68.84
170-180	18.60

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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	10	0
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51	0
1	97	92	87	83	89	85	81	77	71	69	66	59	57	55	48	47	45	40	0
2	87	79	73	67	80	73	67	62	62	57	54	51	48	45	42	39	37	32	0
3	79	69	61	55	73	64	57	52	54	49	44	45	41	38	36	34	31	27	0
4	72	61	53	46	66	56	49	43	48	42	38	40	35	32	32	29	26	23	0
5	66	54	46	39	61	50	43	37	43	37	32	36	31	27	29	26	23	20	0
6	61	49	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20	17	0
7	56	44	36	30	52	41	33	28	35	29	24	29	24	21	24	20	18	15	0
8	52	40	32	26	48	37	30	25	32	26	22	27	22	19	22	18	16	13	0
9	49	36	28	23	45	34	27	22	29	23	19	24	20	17	20	17	14	12	0
10	45	33	26	21	42	31	24	20	27	21	17	23	18	15	19	15	13	11	0

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UGR TABLE - CORRECTED

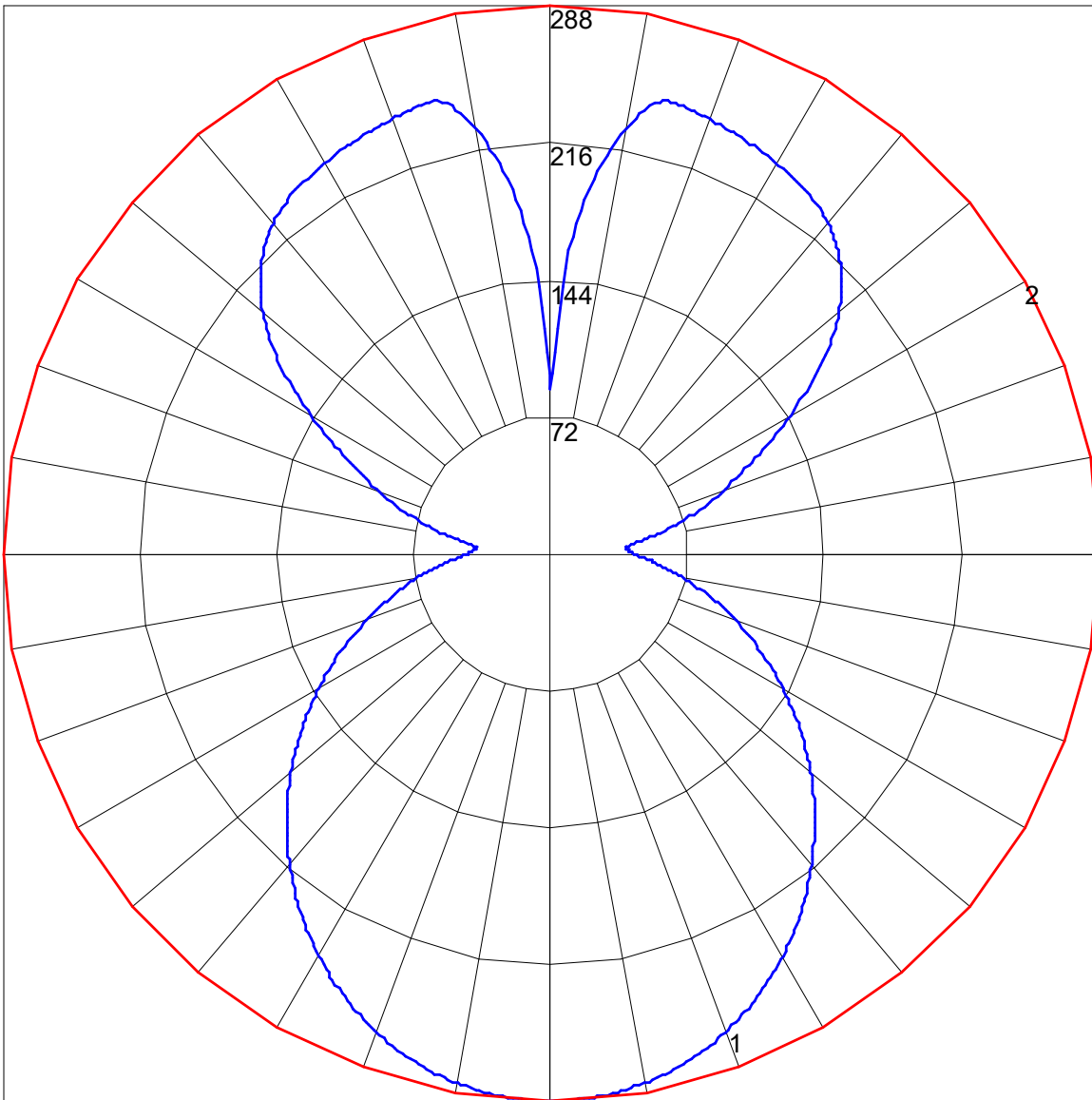
Reflectances

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	6.8	7.7	7.8	8.7	10.0	6.8	7.7	7.8	8.7	10.0
	3H	8.8	9.7	9.8	10.6	11.9	8.8	9.7	9.8	10.6	11.9
	4H	9.7	10.5	10.7	11.5	12.7	9.7	10.5	10.7	11.5	12.7
	6H	10.5	11.2	11.5	12.2	13.5	10.5	11.2	11.5	12.2	13.5
	8H	10.8	11.5	11.8	12.5	13.8	10.8	11.5	11.8	12.5	13.8
	12H	11.2	11.8	12.2	12.8	14.1	11.2	11.8	12.2	12.8	14.1
4H	2H	7.4	8.2	8.4	9.2	10.4	7.4	8.2	8.4	9.2	10.4
	3H	9.6	10.3	10.6	11.3	12.6	9.6	10.3	10.6	11.3	12.6
	4H	10.6	11.2	11.6	12.2	13.6	10.6	11.2	11.6	12.2	13.6
	6H	11.6	12.1	12.6	13.1	14.4	11.6	12.1	12.6	13.1	14.4
	8H	12.0	12.5	13.0	13.5	14.9	12.0	12.5	13.0	13.5	14.9
	12H	12.4	12.9	13.4	13.9	15.2	12.4	12.9	13.4	13.9	15.2
8H	4H	11.0	11.5	12.0	12.5	13.8	11.0	11.5	12.0	12.5	13.8
	6H	12.1	12.5	13.1	13.6	14.9	12.1	12.5	13.1	13.6	14.9
	8H	12.7	13.0	13.7	14.1	15.4	12.7	13.0	13.7	14.1	15.4
	12H	13.2	13.5	14.2	14.6	16.0	13.2	13.5	14.2	14.6	16.0
12H	4H	11.0	11.5	12.0	12.5	13.8	11.0	11.5	12.0	12.5	13.8
	6H	12.2	12.6	13.2	13.6	15.0	12.2	12.6	13.2	13.6	15.0
	8H	12.8	13.1	13.8	14.2	15.6	12.8	13.1	13.8	14.2	15.6

Maximum UGR = 16.0

POLAR GRAPH



Maximum Candela = 287.809 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.)