

IES INDOOR REPORT

PHOTOMETRIC FILENAME : PNA 14 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) 14" Bowl

[LUMINAIRE] Justice Design Group - Pendant mount luminaire. Product ID: PNA 14" Bowl

[MORE] Extruded base plate with resin bowl lens.

[MORE] 42 LEDs with 21 in each of two 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.

[DATE] This file created: Monday, August 6, 2018 2:20:59 PM

[ISSUE DATE] Monday, August 6, 2018 2:20:59 PM

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1231
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	54
Total Luminaire Watts	22.7
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)	0.36 m (Diameter)
Luminous Width (90-270)	0.36 m (Diameter)
Luminous Height	0.10 m

IES INDOOR REPORT
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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1362	1362	1362
55	1227	1227	1227
65	1085	1085	1085
75	944	944	944
85	826	826	826

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 14 BOWL.IES

CANDELA TABULATION

	<u>0</u>
0.0	191.915
0.5	191.906
1.0	191.888
1.5	191.842
2.0	191.779
2.5	191.688
3.0	191.606
3.5	191.497
4.0	191.361
4.5	191.234
5.0	191.070
5.5	190.907
6.0	190.689
6.5	190.489
7.0	190.253
7.5	190.008
8.0	189.745
8.5	189.463
9.0	189.164
9.5	188.864
10.0	188.537
10.5	188.219
11.0	187.865
11.5	187.475
12.0	187.093
12.5	186.694
13.0	186.267
13.5	185.831
14.0	185.386
14.5	184.914
15.0	184.433
15.5	183.934
16.0	183.398
16.5	182.862
17.0	182.317
17.5	181.754
18.0	181.155
18.5	180.583
19.0	179.947
19.5	179.321
20.0	178.685
20.5	178.022
21.0	177.351
21.5	176.651
22.0	175.952
22.5	175.226
23.0	174.509
23.5	173.746
24.0	172.974
24.5	172.211
25.0	171.439
25.5	170.622
26.0	169.796
26.5	168.988

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 14 BOWL.IES

CANDELA TABULATION - (Cont.)

27.0	168.125
27.5	167.299
28.0	166.427
28.5	165.547
29.0	164.666
29.5	163.767
30.0	162.859
30.5	161.915
31.0	160.988
31.5	160.026
32.0	159.100
32.5	158.119
33.0	157.129
33.5	156.149
34.0	155.150
34.5	154.133
35.0	153.098
35.5	152.072
36.0	151.037
36.5	149.993
37.0	148.939
37.5	147.868
38.0	146.805
38.5	145.707
39.0	144.626
39.5	143.528
40.0	142.411
40.5	141.285
41.0	140.195
41.5	139.042
42.0	137.889
42.5	136.754
43.0	135.601
43.5	134.448
44.0	133.267
44.5	132.105
45.0	130.934
45.5	129.771
46.0	128.600
46.5	127.392
47.0	126.203
47.5	124.986
48.0	123.806
48.5	122.571
49.0	121.372
49.5	120.137
50.0	118.975
50.5	117.731
51.0	116.487
51.5	115.271
52.0	114.008
52.5	112.792
53.0	111.530
53.5	110.295
54.0	109.033
54.5	107.816

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 14 BOWL.IES

CANDELA TABULATION - (Cont.)

55.0	106.554
55.5	105.301
56.0	104.048
56.5	102.777
57.0	101.514
57.5	100.252
58.0	98.990
58.5	97.719
59.0	96.511
59.5	95.231
60.0	93.960
60.5	92.716
61.0	91.436
61.5	90.164
62.0	88.893
62.5	87.649
63.0	86.369
63.5	85.152
64.0	83.881
64.5	82.637
65.0	81.393
65.5	80.122
66.0	78.905
66.5	77.670
67.0	76.426
67.5	75.191
68.0	74.002
68.5	72.767
69.0	71.559
69.5	70.361
70.0	69.144
70.5	67.955
71.0	66.747
71.5	65.558
72.0	64.368
72.5	63.233
73.0	62.044
73.5	60.900
74.0	59.755
74.5	58.593
75.0	57.485
75.5	56.350
76.0	55.234
76.5	54.117
77.0	53.045
77.5	51.947
78.0	50.857
78.5	49.804
79.0	48.741
79.5	47.697
80.0	46.662
80.5	45.645
81.0	44.628
81.5	43.648
82.0	42.649
82.5	41.686

**IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 14 BOWL.IES**

CANDELA TABULATION - (Cont.)

83.0	40.751
83.5	39.779
84.0	38.871
84.5	37.936
85.0	37.046
85.5	36.157
86.0	35.312
86.5	34.440
87.0	33.605
87.5	32.788
88.0	31.962
88.5	31.199
89.0	30.418
89.5	29.683
90.0	29.065
90.5	28.575
91.0	28.175
91.5	27.830
92.0	27.549
92.5	27.249
93.0	27.004
93.5	26.777
94.0	26.568
94.5	26.423
95.0	26.450
95.5	26.722
96.0	27.304
96.5	28.175
97.0	29.265
97.5	30.554
98.0	31.807
98.5	33.015
99.0	34.286
99.5	35.466
100.0	36.683
100.5	38.009
101.0	39.371
101.5	40.824
102.0	42.249
102.5	43.720
103.0	45.109
103.5	46.526
104.0	47.888
104.5	49.277
105.0	50.666
105.5	52.037
106.0	53.427
106.5	54.798
107.0	56.187
107.5	57.522
108.0	58.911
108.5	60.228
109.0	61.571
109.5	62.888
110.0	64.223
110.5	65.585

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 14 BOWL.IES

CANDELA TABULATION - (Cont.)

111.0	66.983
111.5	68.418
112.0	69.834
112.5	71.342
113.0	72.803
113.5	74.356
114.0	75.963
114.5	77.580
115.0	79.241
115.5	80.903
116.0	82.610
116.5	84.317
117.0	86.124
117.5	87.867
118.0	89.665
118.5	91.517
119.0	93.370
119.5	95.231
120.0	97.083
120.5	98.981
121.0	100.852
121.5	102.767
122.0	104.629
122.5	106.545
123.0	108.433
123.5	110.277
124.0	112.147
124.5	113.990
125.0	115.815
125.5	117.586
126.0	119.338
126.5	121.000
127.0	122.662
127.5	124.305
128.0	125.894
128.5	127.420
129.0	128.954
129.5	130.425
130.0	131.851
130.5	133.231
131.0	134.529
131.5	135.855
132.0	137.117
132.5	138.307
133.0	139.478
133.5	140.586
134.0	141.675
134.5	142.710
135.0	143.682
135.5	144.626
136.0	145.516
136.5	146.397
137.0	147.214
137.5	147.995
138.0	148.739
138.5	149.475

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PNA 14 BOWL.IES

CANDELA TABULATION - (Cont.)

139.0	150.138
139.5	150.755
140.0	151.382
140.5	151.927
141.0	152.471
141.5	152.971
142.0	153.434
142.5	153.897
143.0	154.306
143.5	154.696
144.0	155.095
144.5	155.422
145.0	155.767
145.5	156.049
146.0	156.367
146.5	156.639
147.0	156.902
147.5	157.138
148.0	157.365
148.5	157.592
149.0	157.838
149.5	158.065
150.0	158.283
150.5	158.500
151.0	158.737
151.5	158.945
152.0	159.172
152.5	159.399
153.0	159.608
153.5	159.799
154.0	159.999
154.5	160.189
155.0	160.362
155.5	160.562
156.0	160.752
156.5	160.943
157.0	161.134
157.5	161.297
158.0	161.506
158.5	161.688
159.0	161.878
159.5	162.087
160.0	162.287
160.5	162.496
161.0	162.686
161.5	162.877
162.0	163.068
162.5	163.295
163.0	163.494
163.5	163.740
164.0	163.994
164.5	164.121
165.0	164.094
165.5	163.939
166.0	163.540
166.5	162.859

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PHOTOMETRIC FILENAME : PNA 14 BOWL.IES**

CANDELA TABULATION - (Cont.)

167.0	161.996
167.5	160.743
168.0	159.254
168.5	157.629
169.0	155.686
169.5	153.570
170.0	151.273
170.5	148.812
171.0	146.170
171.5	143.546
172.0	140.776
172.5	137.971
173.0	135.129
173.5	132.032
174.0	128.655
174.5	124.859
175.0	120.837
175.5	116.378
176.0	111.657
176.5	106.318
177.0	100.325
177.5	94.042
178.0	86.723
178.5	78.751
179.0	70.742
179.5	63.415
180.0	57.322

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	70.21	N.A.	5.70
0-30	149.22	N.A.	12.10
0-40	245.04	N.A.	19.90
0-60	441.45	N.A.	35.80
0-80	582.98	N.A.	47.30
0-90	623.66	N.A.	50.60
10-90	605.50	N.A.	49.20
20-40	174.83	N.A.	14.20
20-50	275.91	N.A.	22.40
40-70	277.08	N.A.	22.50
60-80	141.53	N.A.	11.50
70-80	60.86	N.A.	4.90
80-90	40.68	N.A.	3.30
90-110	85.14	N.A.	6.90
90-120	164.05	N.A.	13.30
90-130	267.19	N.A.	21.70
90-150	475.26	N.A.	38.60
90-180	607.73	N.A.	49.40
110-180	522.59	N.A.	42.40
0-180	1231.39	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	18.16
10-20	52.05
20-30	79.02
30-40	95.82
40-50	101.07
50-60	95.33
60-70	80.67
70-80	60.86
80-90	40.68
90-100	31.74
100-110	53.40
110-120	78.91
120-130	103.14
130-140	110.51
140-150	97.56
150-160	74.16
160-170	45.90
170-180	12.40

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

IES INDOOR REPORT
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UGR TABLE - CORRECTED

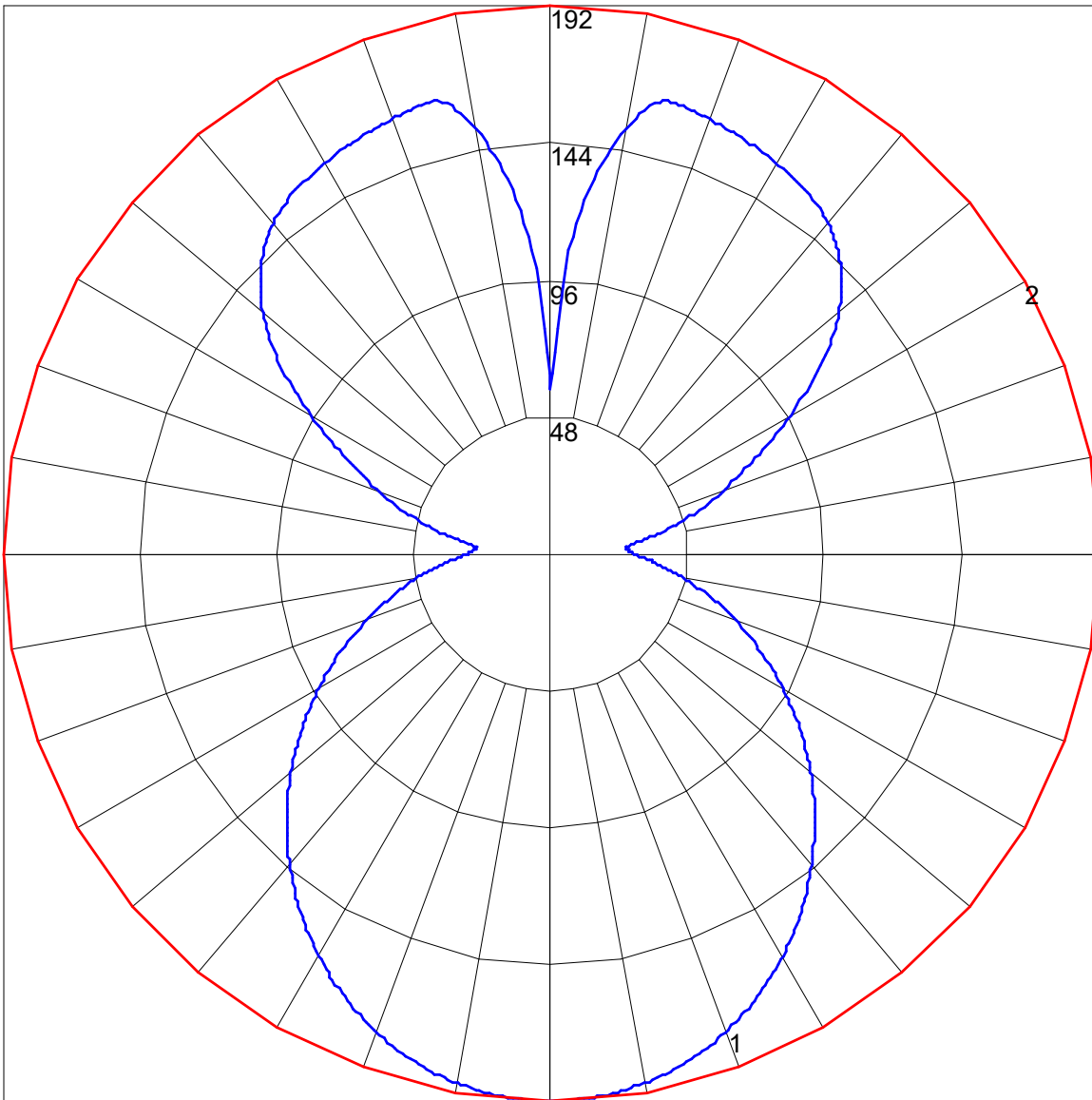
Reflectances

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	8.0	9.0	9.0	9.9	11.2	8.0	9.0	9.0	9.9	11.2
	3H	10.0	10.9	11.0	11.8	13.1	10.0	10.9	11.0	11.8	13.1
	4H	10.9	11.7	11.9	12.6	13.9	10.9	11.7	11.9	12.6	13.9
	6H	11.7	12.4	12.6	13.4	14.7	11.7	12.4	12.6	13.4	14.7
	8H	12.0	12.7	13.0	13.7	15.0	12.0	12.7	13.0	13.7	15.0
	12H	12.3	13.0	13.3	14.0	15.3	12.3	13.0	13.3	14.0	15.3
4H	2H	8.6	9.4	9.6	10.4	11.7	8.6	9.4	9.6	10.4	11.7
	3H	10.8	11.5	11.8	12.5	13.8	10.8	11.5	11.8	12.5	13.8
	4H	11.8	12.4	12.8	13.4	14.7	11.8	12.4	12.8	13.4	14.7
	6H	12.7	13.3	13.7	14.3	15.6	12.7	13.3	13.7	14.3	15.6
	8H	13.2	13.7	14.2	14.7	16.0	13.2	13.7	14.2	14.7	16.0
	12H	13.6	14.0	14.6	15.0	16.4	13.6	14.0	14.6	15.0	16.4
8H	4H	12.1	12.6	13.1	13.6	15.0	12.1	12.6	13.1	13.6	15.0
	6H	13.2	13.7	14.2	14.7	16.0	13.2	13.7	14.2	14.7	16.0
	8H	13.8	14.2	14.8	15.2	16.5	13.8	14.2	14.8	15.2	16.5
	12H	14.3	14.7	15.3	15.7	17.1	14.3	14.7	15.3	15.7	17.1
12H	4H	12.2	12.6	13.2	13.6	15.0	12.2	12.6	13.2	13.6	15.0
	6H	13.3	13.7	14.4	14.7	16.1	13.3	13.7	14.4	14.7	16.1
	8H	13.9	14.3	15.0	15.3	16.7	13.9	14.3	15.0	15.3	16.7

Maximum UGR = 17.1

POLAR GRAPH



Maximum Candela = 191.915 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.)