

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 11804206_IES INDOOR PHOTOMETRIC REPORT_TRMUNV220AC840A.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 11804206.01
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 6/16/2017
 [MANUFAC] Fulham Co Inc
 [LUMCAT] TRMUNV220AC840A
 [LUMINAIRE] Circular silver aluminum heat sink and clear plastic lens
 [LAMP] 320 White LEDs
 [BALLAST] FULHAM T1M1UNV140P-200L
 [OTHER] 24.3 C, 120.025 V, 1.72662 A, 206.459 W, 0.99624 PF, 59.9982 H
 [OTHER] This test was performed using the calibrated photodetector met
 [MORE] hod of absolute photometry.

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	23837
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	206.459
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.28
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.40
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.96 ft (Diameter)
Luminous Width (90-270)	0.96 ft (Diameter)
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	123723	123723	123723
55	116710	116710	116710
65	97432	97432	97432
75	74014	74014	74014
85	19275	19275	19275

IES INDOOR REPORT

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CANDELA TABULATION

	<u>0</u>
0.0	8608.0
0.5	8608.0
1.0	8608.0
1.5	8607.0
2.0	8606.0
2.5	8604.0
3.0	8602.0
3.5	8599.0
4.0	8596.0
4.5	8593.0
5.0	8588.0
5.5	8582.0
6.0	8575.0
6.5	8567.0
7.0	8558.0
7.5	8549.0
8.0	8539.0
8.5	8528.0
9.0	8517.0
9.5	8505.0
10.0	8493.0
10.5	8480.0
11.0	8466.0
11.5	8451.0
12.0	8437.0
12.5	8421.0
13.0	8405.0
13.5	8387.0
14.0	8369.0
14.5	8350.0
15.0	8330.0
15.5	8309.0
16.0	8286.0
16.5	8263.0
17.0	8238.0
17.5	8212.0
18.0	8185.0
18.5	8158.0
19.0	8128.0
19.5	8100.0
20.0	8069.0
20.5	8040.0
21.0	8008.0
21.5	7977.0
22.0	7945.0
22.5	7913.0
23.0	7880.0
23.5	7847.0
24.0	7812.0
24.5	7778.0
25.0	7743.0
25.5	7708.0
26.0	7671.0
26.5	7635.0

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 11804206_IES INDOOR PHOTOMETRIC REPORT_TRMUNV220AC840A.IES

CANDELA TABULATION - (Cont.)

27.0	7597.0
27.5	7558.0
28.0	7519.0
28.5	7479.0
29.0	7438.0
29.5	7397.0
30.0	7354.0
30.5	7311.0
31.0	7268.0
31.5	7224.0
32.0	7179.0
32.5	7133.0
33.0	7086.0
33.5	7039.0
34.0	6991.0
34.5	6943.0
35.0	6893.0
35.5	6843.0
36.0	6792.0
36.5	6740.0
37.0	6689.0
37.5	6638.0
38.0	6584.0
38.5	6533.0
39.0	6480.0
39.5	6430.0
40.0	6381.0
40.5	6332.0
41.0	6282.0
41.5	6233.0
42.0	6184.0
42.5	6132.0
43.0	6080.0
43.5	6028.0
44.0	5975.0
44.5	5920.0
45.0	5864.0
45.5	5806.0
46.0	5746.0
46.5	5686.0
47.0	5627.0
47.5	5566.0
48.0	5505.0
48.5	5443.0
49.0	5379.0
49.5	5313.0
50.0	5242.0
50.5	5171.0
51.0	5099.0
51.5	5026.0
52.0	4954.0
52.5	4881.0
53.0	4806.0
53.5	4728.0
54.0	4649.0
54.5	4569.0

IES INDOOR REPORT

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CANDELA TABULATION - (Cont.)

55.0	4487.0
55.5	4404.0
56.0	4321.0
56.5	4237.0
57.0	4151.0
57.5	4061.0
58.0	3971.0
58.5	3879.0
59.0	3786.0
59.5	3694.0
60.0	3604.0
60.5	3516.0
61.0	3427.0
61.5	3339.0
62.0	3252.0
62.5	3165.0
63.0	3078.0
63.5	2993.0
64.0	2911.0
64.5	2834.0
65.0	2760.0
65.5	2680.0
66.0	2599.0
66.5	2516.0
67.0	2436.0
67.5	2360.0
68.0	2286.0
68.5	2207.0
69.0	2133.0
69.5	2057.0
70.0	1980.0
70.5	1907.0
71.0	1842.0
71.5	1774.0
72.0	1695.0
72.5	1621.0
73.0	1559.0
73.5	1495.0
74.0	1425.0
74.5	1353.0
75.0	1284.0
75.5	1220.0
76.0	1150.0
76.5	1076.0
77.0	1003.0
77.5	928.0
78.0	856.0
78.5	784.8
79.0	715.1
79.5	644.8
80.0	575.6
80.5	508.7
81.0	447.8
81.5	393.1
82.0	346.0
82.5	303.3

IES INDOOR REPORT

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CANDELA TABULATION - (Cont.)

83.0	261.4
83.5	217.9
84.0	176.1
84.5	139.9
85.0	112.6
85.5	94.0
86.0	79.6
86.5	67.5
87.0	57.9
87.5	50.2
88.0	43.4
88.5	37.1
89.0	31.3
89.5	25.9
90.0	0.0
90.5	0.0
91.0	0.0
91.5	0.0
92.0	0.0
92.5	0.0
93.0	0.0
93.5	0.0
94.0	0.0
94.5	0.0
95.0	0.0
95.5	0.0
96.0	0.0
96.5	0.0
97.0	0.0
97.5	0.0
98.0	0.0
98.5	0.0
99.0	0.0
99.5	0.0
100.0	0.0
100.5	0.0
101.0	0.0
101.5	0.0
102.0	0.0
102.5	0.0
103.0	0.0
103.5	0.0
104.0	0.0
104.5	0.0
105.0	0.0
105.5	0.0
106.0	0.0
106.5	0.0
107.0	0.0
107.5	0.0
108.0	0.0
108.5	0.0
109.0	0.0
109.5	0.0
110.0	0.0
110.5	0.0

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 11804206_IES INDOOR PHOTOMETRIC REPORT_TRMUNV220AC840A.IES

CANDELA TABULATION - (Cont.)

111.0	0.0
111.5	0.0
112.0	0.0
112.5	0.0
113.0	0.0
113.5	0.0
114.0	0.0
114.5	0.0
115.0	0.0
115.5	0.0
116.0	0.0
116.5	0.0
117.0	0.0
117.5	0.0
118.0	0.0
118.5	0.0
119.0	0.0
119.5	0.0
120.0	0.0
120.5	0.0
121.0	0.0
121.5	0.0
122.0	0.0
122.5	0.0
123.0	0.0
123.5	0.0
124.0	0.0
124.5	0.0
125.0	0.0
125.5	0.0
126.0	0.0
126.5	0.0
127.0	0.0
127.5	0.0
128.0	0.0
128.5	0.0
129.0	0.0
129.5	0.0
130.0	0.0
130.5	0.0
131.0	0.0
131.5	0.0
132.0	0.0
132.5	0.0
133.0	0.0
133.5	0.0
134.0	0.0
134.5	0.0
135.0	0.0
135.5	0.0
136.0	0.0
136.5	0.0
137.0	0.0
137.5	0.0
138.0	0.0
138.5	0.0

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 11804206_IES INDOOR PHOTOMETRIC REPORT_TRMUNV220AC840A.IES

CANDELA TABULATION - (Cont.)

139.0	0.0
139.5	0.0
140.0	0.0
140.5	0.0
141.0	0.0
141.5	0.0
142.0	0.0
142.5	0.0
143.0	0.0
143.5	0.0
144.0	0.0
144.5	0.0
145.0	0.0
145.5	0.0
146.0	0.0
146.5	0.0
147.0	0.0
147.5	0.0
148.0	0.0
148.5	0.0
149.0	0.0
149.5	0.0
150.0	0.0
150.5	0.0
151.0	0.0
151.5	0.0
152.0	0.0
152.5	0.0
153.0	0.0
153.5	0.0
154.0	0.0
154.5	0.0
155.0	0.0
155.5	0.0
156.0	0.0
156.5	0.0
157.0	0.0
157.5	0.0
158.0	0.0
158.5	0.0
159.0	0.0
159.5	0.0
160.0	0.0
160.5	0.0
161.0	0.0
161.5	0.0
162.0	0.0
162.5	0.0
163.0	0.0
163.5	0.0
164.0	0.0
164.5	0.0
165.0	0.0
165.5	0.0
166.0	0.0
166.5	0.0

IES INDOOR REPORT

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CANDELA TABULATION - (Cont.)

167.0	0.0
167.5	0.0
168.0	0.0
168.5	0.0
169.0	0.0
169.5	0.0
170.0	0.0
170.5	0.0
171.0	0.0
171.5	0.0
172.0	0.0
172.5	0.0
173.0	0.0
173.5	0.0
174.0	0.0
174.5	0.0
175.0	0.0
175.5	0.0
176.0	0.0
176.5	0.0
177.0	0.0
177.5	0.0
178.0	0.0
178.5	0.0
179.0	0.0
179.5	0.0
180.0	0.0

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	3166.6	N.A.	13.30
0-30	6735.6	N.A.	28.30
0-40	11046.79	N.A.	46.30
0-60	19551.95	N.A.	82.00
0-80	23636.62	N.A.	99.20
0-90	23836.66	N.A.	100.00
10-90	23020.01	N.A.	96.60
20-40	7880.19	N.A.	33.10
20-50	12394.59	N.A.	52.00
40-70	11240.91	N.A.	47.20
60-80	4084.67	N.A.	17.10
70-80	1348.92	N.A.	5.70
80-90	200.04	N.A.	0.80
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	23836.66	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	816.66
10-20	2349.94
20-30	3569.00
30-40	4311.19
40-50	4514.4
50-60	3990.76
60-70	2735.75
70-80	1348.92
80-90	200.04
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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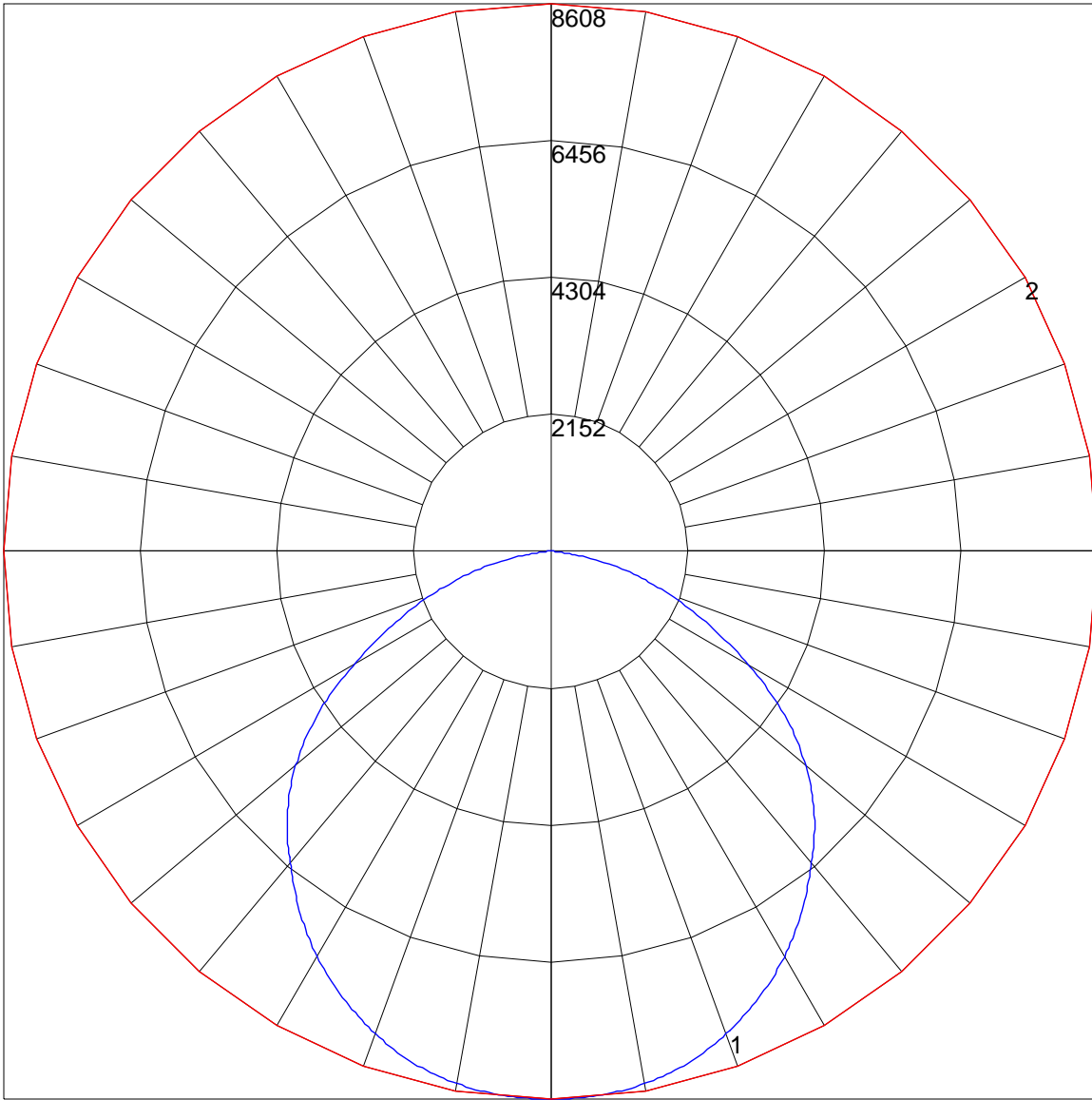
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	35
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

POLAR GRAPH



Maximum Candela = 8608 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.)