



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L60-840-XXX-DIM-UNV-LW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.

[LUMCAT] 8CR-TL-L60-840-xxx-DIM-UNV-LW-WH-xx

[LUMINAIRE] 8" DIA. SURFACE CYLINDER

[LAMP] One white LED

[_SEARCH_SOURCE TYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Healthcare, Office, Downlight

[_SEARCH_MOUNTING] Surface

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4654
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	86
Total Luminaire Watts	54
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.08
Spacing Criterion (Diagonal)	0.98
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.46 ft (Diameter)
Luminous Width (90-270)	0.46 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	77361	77361	77361
55	64406	64406	64406
65	48930	48930	48930
75	35484	35484	35484
85	23123	23123	23123

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CANDELA TABULATION

	<u>0</u>
0.0	2960.244
0.5	2959.648
1.0	2957.263
1.5	2953.687
2.0	2949.217
2.5	2943.256
3.0	2937.296
3.5	2930.441
4.0	2924.183
4.5	2917.925
5.0	2913.454
5.5	2909.282
6.0	2905.408
6.5	2901.533
7.0	2897.361
7.5	2893.487
8.0	2889.613
8.5	2886.036
9.0	2882.460
9.5	2879.480
10.0	2876.500
10.5	2874.116
11.0	2872.029
11.5	2870.837
12.0	2868.751
12.5	2866.665
13.0	2863.685
13.5	2859.810
14.0	2855.042
14.5	2849.678
15.0	2844.015
15.5	2836.863
16.0	2829.114
16.5	2821.366
17.0	2813.617
17.5	2805.571
18.0	2796.928
18.5	2787.093
19.0	2776.067
19.5	2763.848
20.0	2749.841
20.5	2734.642
21.0	2715.866
21.5	2693.515
22.0	2668.183
22.5	2639.573
23.0	2608.281
23.5	2574.306
24.0	2536.756
24.5	2496.225
25.0	2452.416
25.5	2406.818
26.0	2358.241
26.5	2307.577

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CANDELA TABULATION - (Cont.)

27.0	2253.636
27.5	2198.204
28.0	2139.792
28.5	2078.101
29.0	2014.027
29.5	1946.674
30.0	1877.533
30.5	1806.306
31.0	1735.079
31.5	1663.256
32.0	1593.519
32.5	1526.762
33.0	1462.688
33.5	1402.785
34.0	1347.651
34.5	1297.584
35.0	1252.881
35.5	1211.754
36.0	1175.693
36.5	1142.613
37.0	1113.109
37.5	1086.585
38.0	1062.445
38.5	1040.392
39.0	1019.530
39.5	1000.755
40.0	982.576
40.5	965.588
41.0	949.793
41.5	934.296
42.0	919.395
42.5	905.686
43.0	891.679
43.5	877.970
44.0	864.559
44.5	851.446
45.0	838.035
45.5	825.220
46.0	812.108
46.5	798.995
47.0	785.584
47.5	772.471
48.0	759.060
48.5	745.649
49.0	732.238
49.5	718.231
50.0	704.820
50.5	691.111
51.0	677.402
51.5	663.395
52.0	649.388
52.5	635.381
53.0	621.374
53.5	607.367
54.0	593.956
54.5	580.247

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CANDELA TABULATION - (Cont.)

55.0	565.942
55.5	551.935
56.0	537.928
56.5	524.815
57.0	511.702
57.5	497.993
58.0	484.284
58.5	470.873
59.0	457.760
59.5	444.647
60.0	432.131
60.5	419.614
61.0	407.395
61.5	395.176
62.0	383.553
62.5	371.930
63.0	360.606
63.5	349.281
64.0	338.254
64.5	327.525
65.0	316.796
65.5	306.366
66.0	295.965
66.5	285.743
67.0	275.640
67.5	265.745
68.0	256.030
68.5	246.285
69.0	236.837
69.5	227.480
70.0	218.390
70.5	209.598
71.0	200.985
71.5	192.641
72.0	184.594
72.5	176.786
73.0	169.187
73.5	161.736
74.0	154.584
74.5	147.580
75.0	140.696
75.5	134.050
76.0	127.523
76.5	121.116
77.0	114.887
77.5	108.778
78.0	102.847
78.5	97.036
79.0	91.343
79.5	85.860
80.0	80.406
80.5	75.131
81.0	69.916
81.5	64.730
82.0	59.664
82.5	54.627

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CANDELA TABULATION - (Cont.)

83.0	49.710
83.5	44.882
84.0	40.114
84.5	35.435
85.0	30.875
85.5	26.464
86.0	22.203
86.5	18.090
87.0	14.096
87.5	10.759
88.0	8.225
88.5	6.020
89.0	4.172
89.5	2.623
90.0	1.669
90.5	0.000
91.0	0.000
91.5	0.000
92.0	0.000
92.5	0.000
93.0	0.000
93.5	0.000
94.0	0.000
94.5	0.000
95.0	0.000
95.5	0.000
96.0	0.000
96.5	0.000
97.0	0.000
97.5	0.000
98.0	0.000
98.5	0.000
99.0	0.000
99.5	0.000
100.0	0.000
100.5	0.000
101.0	0.000
101.5	0.000
102.0	0.000
102.5	0.000
103.0	0.000
103.5	0.000
104.0	0.000
104.5	0.000
105.0	0.000
105.5	0.000
106.0	0.000
106.5	0.000
107.0	0.000
107.5	0.000
108.0	0.000
108.5	0.000
109.0	0.000
109.5	0.000
110.0	0.000
110.5	0.000

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PHOTOMETRIC FILENAME : 8CR-TL-L60-840-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

111.0	0.000
111.5	0.000
112.0	0.000
112.5	0.000
113.0	0.000
113.5	0.000
114.0	0.000
114.5	0.000
115.0	0.000
115.5	0.000
116.0	0.000
116.5	0.000
117.0	0.000
117.5	0.000
118.0	0.000
118.5	0.000
119.0	0.000
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128.0	0.000
128.5	0.000
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131.5	0.000
132.0	0.000
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133.0	0.000
133.5	0.000
134.0	0.000
134.5	0.000
135.0	0.000
135.5	0.000
136.0	0.000
136.5	0.000
137.0	0.000
137.5	0.000
138.0	0.000
138.5	0.000

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L60-840-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

139.0	0.000
139.5	0.000
140.0	0.000
140.5	0.000
141.0	0.000
141.5	0.000
142.0	0.000
142.5	0.000
143.0	0.000
143.5	0.000
144.0	0.000
144.5	0.000
145.0	0.000
145.5	0.000
146.0	0.000
146.5	0.000
147.0	0.000
147.5	0.000
148.0	0.000
148.5	0.000
149.0	0.000
149.5	0.000
150.0	0.000
150.5	0.000
151.0	0.000
151.5	0.000
152.0	0.000
152.5	0.000
153.0	0.000
153.5	0.000
154.0	0.000
154.5	0.000
155.0	0.000
155.5	0.000
156.0	0.000
156.5	0.000
157.0	0.000
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158.0	0.000
158.5	0.000
159.0	0.000
159.5	0.000
160.0	0.000
160.5	0.000
161.0	0.000
161.5	0.000
162.0	0.000
162.5	0.000
163.0	0.000
163.5	0.000
164.0	0.000
164.5	0.000
165.0	0.000
165.5	0.000
166.0	0.000
166.5	0.000

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L60-840-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

167.0	0.000
167.5	0.000
168.0	0.000
168.5	0.000
169.0	0.000
169.5	0.000
170.0	0.000
170.5	0.000
171.0	0.000
171.5	0.000
172.0	0.000
172.5	0.000
173.0	0.000
173.5	0.000
174.0	0.000
174.5	0.000
175.0	0.000
175.5	0.000
176.0	0.000
176.5	0.000
177.0	0.000
177.5	0.000
178.0	0.000
178.5	0.000
179.0	0.000
179.5	0.000
180.0	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	1078.32	N.A.	23.20
0-30	2179.72	N.A.	46.80
0-40	2996.43	N.A.	64.40
0-60	4149.59	N.A.	89.20
0-80	4616.68	N.A.	99.20
0-90	4653.59	N.A.	100.00
10-90	4376.58	N.A.	94.00
20-40	1918.1	N.A.	41.20
20-50	2565.26	N.A.	55.10
40-70	1468.95	N.A.	31.60
60-80	467.09	N.A.	10.00
70-80	151.31	N.A.	3.30
80-90	36.91	N.A.	0.80
90-110	0.05	N.A.	0.00
90-120	0.05	N.A.	0.00
90-130	0.05	N.A.	0.00
90-150	0.05	N.A.	0.00
90-180	0.05	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	4653.64	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	277.02
10-20	801.30
20-30	1101.4
30-40	816.70
40-50	647.16
50-60	506.01
60-70	315.78
70-80	151.31
80-90	36.91
90-100	0.05
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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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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	78	74	70	69
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	51	50
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38
10	61	49	42	37	60	49	42	37	48	42	37	47	41	37	46	41	37	35

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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

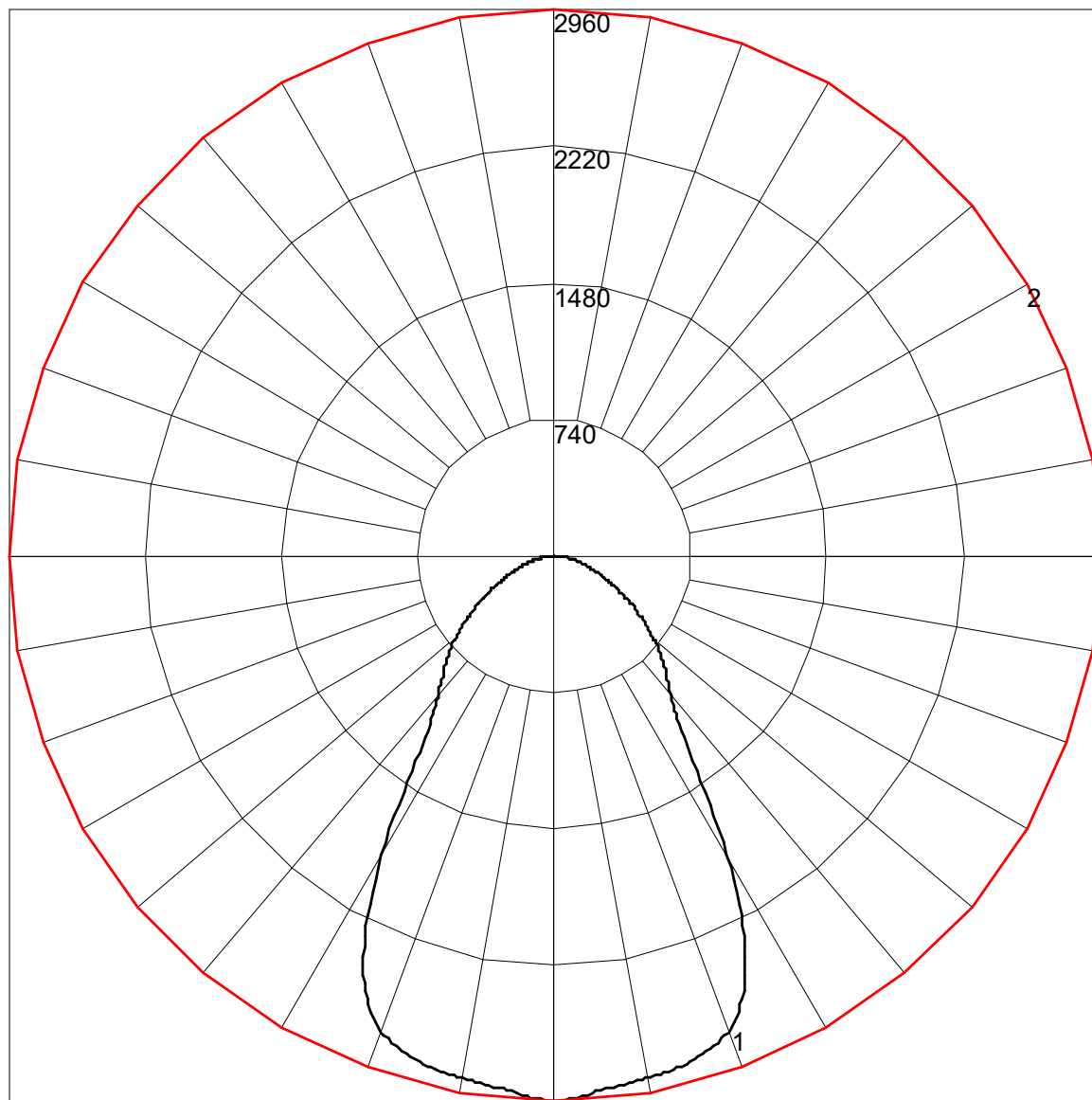
X=2H	Y=2H	24.4	25.8	24.8	26.1	26.4	24.4	25.8	24.8	26.1	26.4
	3H	25.6	26.9	26.0	27.2	27.5	25.6	26.9	26.0	27.2	27.5
	4H	26.0	27.2	26.4	27.5	27.9	26.0	27.2	26.4	27.5	27.9
	6H	26.3	27.3	26.7	27.7	28.1	26.3	27.3	26.7	27.7	28.1
	8H	26.3	27.4	26.8	27.8	28.2	26.3	27.4	26.8	27.8	28.2
	12H	26.4	27.4	26.8	27.7	28.2	26.4	27.4	26.8	27.7	28.2

UGR Viewed Endwise

4H	2H	24.8	26.0	25.2	26.3	26.7	24.8	26.0	25.2	26.3	26.7
	3H	26.2	27.2	26.6	27.6	28.0	26.2	27.2	26.6	27.6	28.0
	4H	26.7	27.6	27.2	28.0	28.4	26.7	27.6	27.2	28.0	28.4
	6H	27.1	27.8	27.6	28.3	28.7	27.1	27.8	27.6	28.3	28.7
	8H	27.2	27.9	27.6	28.3	28.8	27.2	27.9	27.6	28.3	28.8
	12H	27.3	27.9	27.7	28.4	28.8	27.3	27.9	27.7	28.4	28.8
8H	4H	26.9	27.6	27.3	28.0	28.5	26.9	27.6	27.3	28.0	28.5
	6H	27.3	27.9	27.8	28.4	28.9	27.3	27.9	27.8	28.4	28.9
	8H	27.5	28.0	28.0	28.5	29.0	27.5	28.0	28.0	28.5	29.0
	12H	27.6	28.1	28.1	28.6	29.1	27.6	28.1	28.1	28.6	29.1
12H	4H	26.9	27.5	27.4	28.0	28.4	26.9	27.5	27.4	28.0	28.4
	6H	27.4	27.9	27.9	28.3	28.9	27.4	27.9	27.9	28.3	28.9
	8H	27.6	28.0	28.1	28.5	29.1	27.6	28.0	28.1	28.5	29.1

Maximum UGR = 29.1

POLAR GRAPH



Maximum Candela = 2960.244 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)