



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-840-XXX-DIM-UNV-LW-WH-PD-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 29-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L15-840-xxx-DIM-UNV-LW-WH-PD-xx

[LUMINAIRE] 8" DIA. SURFACE CYLINDER

[LAMP] One white LED

[_SEARCH_SOURCETYPE] 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	987
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	71
Total Luminaire Watts	13.8
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	16402	16402	16402
55	13656	13656	13656
65	10374	10374	10374
75	7523	7523	7523
85	4903	4903	4903

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CANDELA TABULATION

	<u>0</u>
0.0	627.649
0.5	627.522
1.0	627.017
1.5	626.258
2.0	625.311
2.5	624.047
3.0	622.783
3.5	621.330
4.0	620.003
4.5	618.676
5.0	617.728
5.5	616.843
6.0	616.022
6.5	615.201
7.0	614.316
7.5	613.494
8.0	612.673
8.5	611.915
9.0	611.156
9.5	610.525
10.0	609.893
10.5	609.387
11.0	608.945
11.5	608.692
12.0	608.250
12.5	607.807
13.0	607.176
13.5	606.354
14.0	605.343
14.5	604.206
15.0	603.005
15.5	601.489
16.0	599.846
16.5	598.203
17.0	596.560
17.5	594.854
18.0	593.021
18.5	590.936
19.0	588.598
19.5	586.008
20.0	583.038
20.5	579.815
21.0	575.834
21.5	571.095
22.0	565.724
22.5	559.658
23.0	553.023
23.5	545.820
24.0	537.858
24.5	529.265
25.0	519.976
25.5	510.308
26.0	500.008
26.5	489.266

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CANDELA TABULATION - (Cont.)

27.0	477.829
27.5	466.076
28.0	453.691
28.5	440.611
29.0	427.026
29.5	412.745
30.0	398.086
30.5	382.984
31.0	367.882
31.5	352.653
32.0	337.867
32.5	323.713
33.0	310.128
33.5	297.427
34.0	285.737
34.5	275.122
35.0	265.643
35.5	256.923
36.0	249.278
36.5	242.264
37.0	236.008
37.5	230.384
38.0	225.266
38.5	220.590
39.0	216.167
39.5	212.186
40.0	208.332
40.5	204.730
41.0	201.381
41.5	198.095
42.0	194.936
42.5	192.029
43.0	189.059
43.5	186.152
44.0	183.309
44.5	180.529
45.0	177.685
45.5	174.968
46.0	172.188
46.5	169.408
47.0	166.564
47.5	163.784
48.0	160.940
48.5	158.097
49.0	155.253
49.5	152.284
50.0	149.440
50.5	146.533
51.0	143.627
51.5	140.657
52.0	137.687
52.5	134.717
53.0	131.747
53.5	128.778
54.0	125.934
54.5	123.027

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L15-840-XXX-DIM-UNV-LW-WH-PD-XX_.IES****CANDELA TABULATION - (Cont.)**

55.0	119.994
55.5	117.025
56.0	114.055
56.5	111.274
57.0	108.494
57.5	105.588
58.0	102.681
58.5	99.837
59.0	97.057
59.5	94.277
60.0	91.623
60.5	88.969
61.0	86.378
61.5	83.788
62.0	81.323
62.5	78.859
63.0	76.458
63.5	74.057
64.0	71.719
64.5	69.444
65.0	67.169
65.5	64.957
66.0	62.752
66.5	60.585
67.0	58.443
67.5	56.345
68.0	54.285
68.5	52.219
69.0	50.216
69.5	48.232
70.0	46.304
70.5	44.440
71.0	42.614
71.5	40.845
72.0	39.139
72.5	37.483
73.0	35.872
73.5	34.292
74.0	32.776
74.5	31.291
75.0	29.831
75.5	28.422
76.0	27.038
76.5	25.680
77.0	24.359
77.5	23.064
78.0	21.806
78.5	20.574
79.0	19.367
79.5	18.205
80.0	17.048
80.5	15.930
81.0	14.824
81.5	13.724
82.0	12.650
82.5	11.582

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CANDELA TABULATION - (Cont.)

83.0	10.540
83.5	9.516
84.0	8.505
84.5	7.513
85.0	6.546
85.5	5.611
86.0	4.708
86.5	3.836
87.0	2.989
87.5	2.281
88.0	1.744
88.5	1.276
89.0	0.885
89.5	0.556
90.0	0.354
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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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
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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

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
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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

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
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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	228.63	N.A.	23.20
0-30	462.16	N.A.	46.80
0-40	635.32	N.A.	64.40
0-60	879.82	N.A.	89.20
0-80	978.86	N.A.	99.20
0-90	986.68	N.A.	100.00
10-90	927.95	N.A.	94.00
20-40	406.69	N.A.	41.20
20-50	543.90	N.A.	55.10
40-70	311.46	N.A.	31.60
60-80	99.04	N.A.	10.00
70-80	32.08	N.A.	3.30
80-90	7.83	N.A.	0.80
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	986.69	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	58.73
10-20	169.90
20-30	233.53
30-40	173.16
40-50	137.21
50-60	107.29
60-70	66.95
70-80	32.08
80-90	7.83
90-100	0.01
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	100	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	77	74	70	69
4	89	79	71	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	19.0	20.4	19.4	20.7	21.0	19.0	20.4	19.4	20.7	21.0
	3H	20.2	21.5	20.6	21.8	22.1	20.2	21.5	20.6	21.8	22.1
	4H	20.6	21.8	21.0	22.1	22.5	20.6	21.8	21.0	22.1	22.5
	6H	20.9	21.9	21.3	22.3	22.7	20.9	21.9	21.3	22.3	22.7
	8H	21.0	22.0	21.4	22.4	22.8	21.0	22.0	21.4	22.4	22.8
	12H	21.0	22.0	21.4	22.3	22.8	21.0	22.0	21.4	22.3	22.8

UGR Viewed Endwise

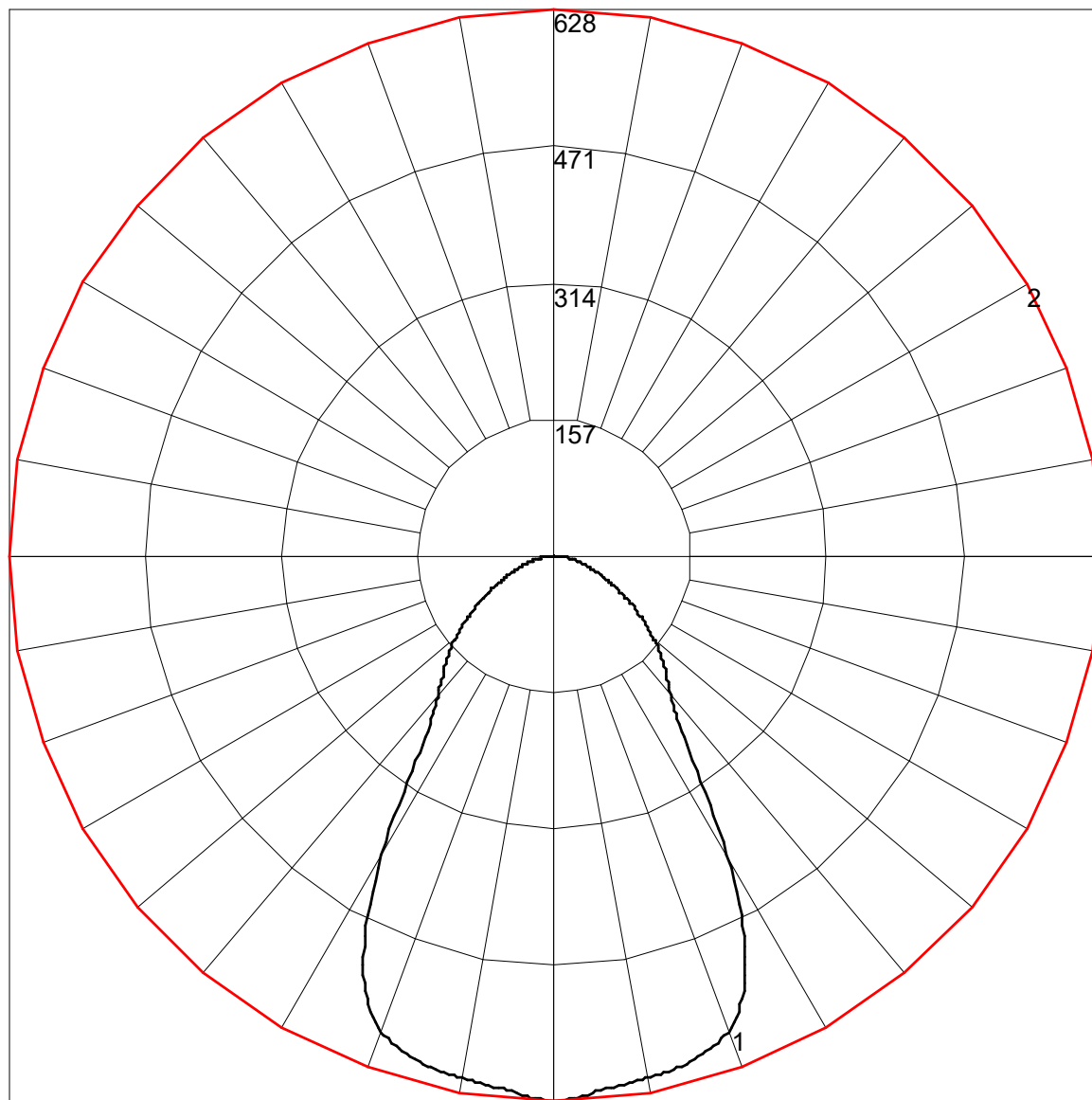
4H	2H	19.4	20.6	19.8	20.9	21.3	19.4	20.6	19.8	20.9	21.3
	3H	20.8	21.8	21.2	22.2	22.6	20.8	21.8	21.2	22.2	22.6
	4H	21.3	22.2	21.8	22.6	23.0	21.3	22.2	21.8	22.6	23.0
	6H	21.7	22.4	22.2	22.9	23.3	21.7	22.4	22.2	22.9	23.3
	8H	21.8	22.5	22.2	22.9	23.4	21.8	22.5	22.2	22.9	23.4
	12H	21.9	22.5	22.3	23.0	23.4	21.9	22.5	22.3	23.0	23.4

8H	4H	21.5	22.2	21.9	22.6	23.1	21.5	22.2	21.9	22.6	23.1
	6H	21.9	22.5	22.4	23.0	23.5	21.9	22.5	22.4	23.0	23.5
	8H	22.1	22.6	22.6	23.1	23.6	22.1	22.6	22.6	23.1	23.6
	12H	22.2	22.7	22.7	23.2	23.7	22.2	22.7	22.7	23.2	23.7

12H	4H	21.5	22.1	22.0	22.6	23.0	21.5	22.1	22.0	22.6	23.0
	6H	22.0	22.5	22.5	22.9	23.5	22.0	22.5	22.5	22.9	23.5
	8H	22.2	22.6	22.7	23.1	23.7	22.2	22.6	22.7	23.1	23.7

Maximum UGR = 23.7

POLAR GRAPH



Maximum Candela = 627.649 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.)