



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-840-XXX-DIM-UNV-LM-CS-AD-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.09

[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-LM-CS-AD-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	1189
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	86
Total Luminaire Watts	13.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.60
Spacing Criterion (90-270)	0.60
Spacing Criterion (Diagonal)	0.56
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	5312	5312	5312
55	3889	3889	3889
65	3169	3169	3169
75	2579	2579	2579
85	1696	1696	1696

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CANDELA TABULATION

	<u>0</u>
0.0	2807.828
0.5	2806.533
1.0	2802.650
1.5	2796.824
2.0	2789.057
2.5	2778.054
3.0	2765.756
3.5	2751.516
4.0	2734.687
4.5	2717.211
5.0	2697.793
5.5	2675.786
6.0	2651.837
6.5	2625.300
7.0	2596.820
7.5	2565.751
8.0	2531.446
8.5	2494.552
9.0	2455.717
9.5	2414.292
10.0	2369.631
10.5	2322.380
11.0	2271.894
11.5	2217.524
12.0	2161.212
12.5	2101.664
13.0	2039.526
13.5	1974.153
14.0	1906.837
14.5	1836.933
15.0	1765.734
15.5	1693.241
16.0	1620.747
16.5	1547.606
17.0	1476.407
17.5	1405.208
18.0	1333.362
18.5	1262.811
19.0	1192.906
19.5	1125.591
20.0	1060.217
20.5	997.433
21.0	938.532
21.5	882.220
22.0	825.908
22.5	772.832
23.0	722.346
23.5	674.448
24.0	629.852
24.5	587.650
25.0	548.232
25.5	511.079
26.0	476.645
26.5	444.411

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CANDELA TABULATION - (Cont.)

27.0	414.443
27.5	386.675
28.0	360.785
28.5	336.836
29.0	314.635
29.5	293.922
30.0	274.763
30.5	256.899
31.0	240.329
31.5	224.924
32.0	210.555
32.5	197.221
33.0	184.794
33.5	173.208
34.0	162.528
34.5	152.625
35.0	143.369
35.5	134.890
36.0	126.993
36.5	119.808
37.0	113.142
37.5	107.057
38.0	101.556
38.5	96.442
39.0	91.782
39.5	87.510
40.0	83.626
40.5	80.002
41.0	76.701
41.5	73.659
42.0	70.811
42.5	68.222
43.0	65.762
43.5	63.497
44.0	61.425
44.5	59.419
45.0	57.542
45.5	55.794
46.0	54.176
46.5	52.623
47.0	51.134
47.5	49.710
48.0	48.415
48.5	47.121
49.0	45.891
49.5	44.726
50.0	43.626
50.5	42.525
51.0	41.490
51.5	40.454
52.0	39.483
52.5	38.577
53.0	37.606
53.5	36.700
54.0	35.858
54.5	35.017

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CANDELA TABULATION - (Cont.)

55.0	34.175
55.5	33.334
56.0	32.557
56.5	31.781
57.0	31.004
57.5	30.227
58.0	29.515
58.5	28.803
59.0	28.091
59.5	27.444
60.0	26.797
60.5	26.085
61.0	25.437
61.5	24.790
62.0	24.143
62.5	23.560
63.0	22.913
63.5	22.331
64.0	21.748
64.5	21.166
65.0	20.518
65.5	19.936
66.0	19.353
66.5	18.835
67.0	18.253
67.5	17.670
68.0	17.152
68.5	16.635
69.0	16.052
69.5	15.534
70.0	15.017
70.5	14.499
71.0	14.046
71.5	13.528
72.0	13.010
72.5	12.557
73.0	12.039
73.5	11.586
74.0	11.133
74.5	10.680
75.0	10.227
75.5	9.774
76.0	9.321
76.5	8.868
77.0	8.414
77.5	8.026
78.0	7.573
78.5	7.185
79.0	6.796
79.5	6.343
80.0	5.955
80.5	5.566
81.0	5.178
81.5	4.790
82.0	4.401
82.5	4.013

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CANDELA TABULATION - (Cont.)

83.0	3.689
83.5	3.301
84.0	2.977
84.5	2.589
85.0	2.265
85.5	1.942
86.0	1.618
86.5	1.359
87.0	1.100
87.5	0.906
88.0	0.712
88.5	0.583
89.0	0.453
89.5	0.324
90.0	0.194
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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134.0	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

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
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	722.13	N.A.	60.70
0-30	983.67	N.A.	82.70
0-40	1078.77	N.A.	90.70
0-60	1155.22	N.A.	97.10
0-80	1186.5	N.A.	99.80
0-90	1189.27	N.A.	100.00
10-90	942.01	N.A.	79.20
20-40	356.64	N.A.	30.00
20-50	402.29	N.A.	33.80
40-70	96.87	N.A.	8.10
60-80	31.28	N.A.	2.60
70-80	10.86	N.A.	0.90
80-90	2.76	N.A.	0.20
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	1189.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	247.26
10-20	474.87
20-30	261.53
30-40	95.10
40-50	45.66
50-60	30.79
60-70	20.42
70-80	10.86
80-90	2.76
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	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	104	100	97	107	103	99	96	99	97	94	96	94	92	94	92	90	89
3	104	98	94	90	102	97	93	89	94	91	88	92	89	86	90	87	85	84
4	100	93	88	84	98	92	87	84	90	86	83	88	84	82	86	83	81	79
5	96	88	83	79	94	87	82	79	85	81	78	84	80	77	82	79	77	75
6	92	84	79	75	90	83	78	75	82	77	74	80	77	74	79	76	73	72
7	88	80	75	71	87	79	74	71	78	74	71	77	73	70	76	73	70	69
8	85	77	71	68	84	76	71	68	75	71	67	74	70	67	73	70	67	66
9	82	74	68	65	81	73	68	65	72	68	65	71	67	64	71	67	64	63
10	79	71	66	62	78	70	65	62	69	65	62	69	65	62	68	64	62	61

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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	10.2	11.2	10.5	11.5	11.8	10.2	11.2	10.5	11.5	11.8
	3H	11.6	12.5	12.0	12.8	13.2	11.6	12.5	12.0	12.8	13.2
	4H	12.1	12.9	12.5	13.3	13.7	12.1	12.9	12.5	13.3	13.7
	6H	12.4	13.2	12.9	13.6	14.0	12.4	13.2	12.9	13.6	14.0
	8H	12.5	13.2	12.9	13.6	14.0	12.5	13.2	12.9	13.6	14.0
	12H	12.6	13.2	13.0	13.6	14.0	12.6	13.2	13.0	13.6	14.0

UGR Viewed Endwise

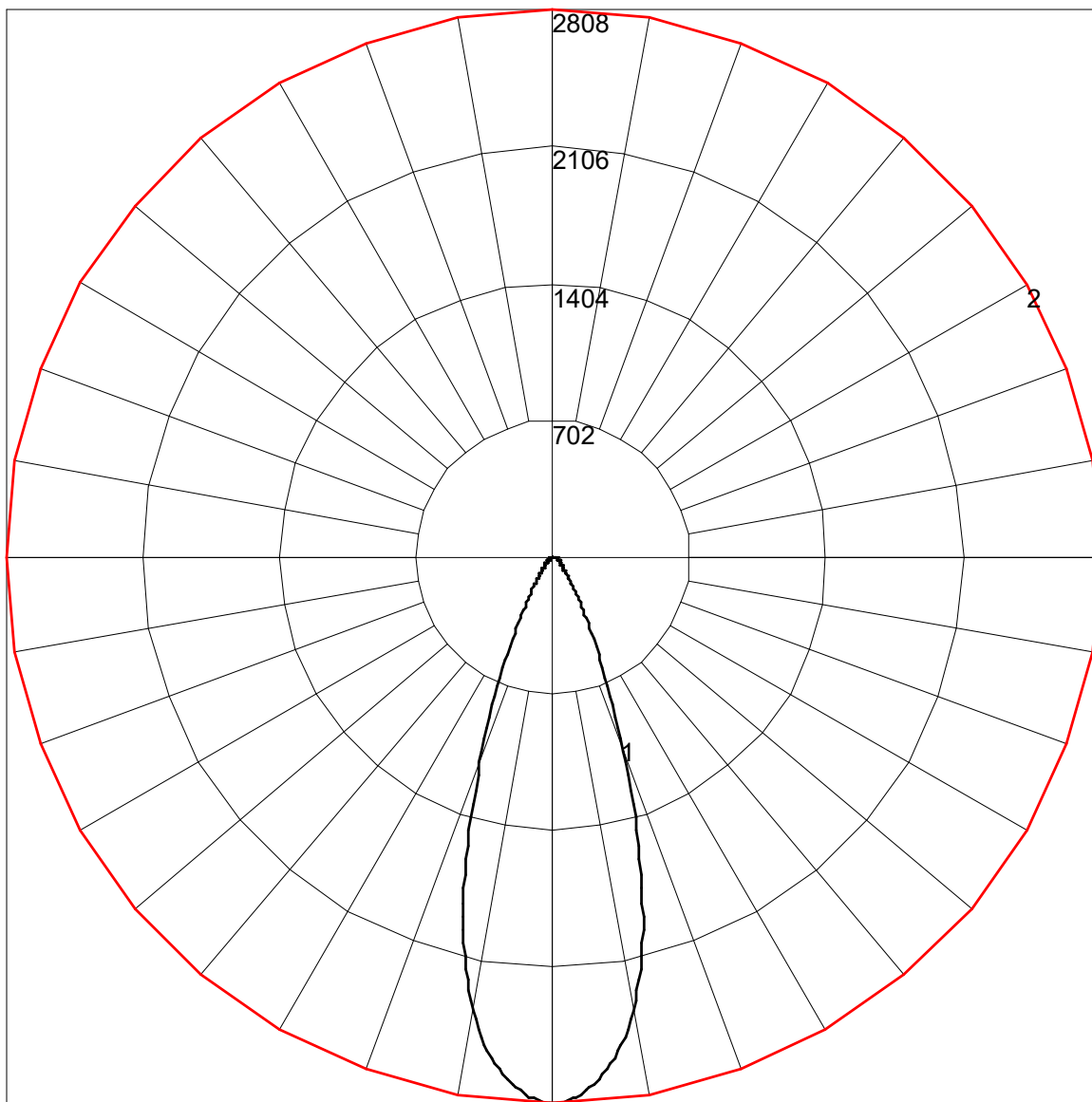
4H	2H	10.6	11.4	11.0	11.8	12.2	10.6	11.4	11.0	11.8	12.2
	3H	12.2	12.9	12.6	13.3	13.7	12.2	12.9	12.6	13.3	13.7
	4H	12.8	13.4	13.2	13.8	14.3	12.8	13.4	13.2	13.8	14.3
	6H	13.3	13.8	13.7	14.2	14.7	13.3	13.8	13.7	14.2	14.7
	8H	13.4	13.9	13.9	14.3	14.8	13.4	13.9	13.9	14.3	14.8
	12H	13.5	13.9	13.9	14.4	14.8	13.5	13.9	13.9	14.4	14.8

8H	4H	13.0	13.5	13.5	13.9	14.4	13.0	13.5	13.5	13.9	14.4
	6H	13.5	13.9	14.1	14.4	14.9	13.5	13.9	14.1	14.4	14.9
	8H	13.7	14.1	14.3	14.6	15.1	13.7	14.1	14.3	14.6	15.1
	12H	13.9	14.2	14.4	14.7	15.2	13.9	14.2	14.4	14.7	15.2

12H	4H	13.0	13.4	13.5	13.9	14.3	13.0	13.4	13.5	13.9	14.3
	6H	13.6	13.9	14.1	14.4	14.9	13.6	13.9	14.1	14.4	14.9
	8H	13.8	14.1	14.3	14.6	15.2	13.8	14.1	14.3	14.6	15.2

Maximum UGR = 15.2

POLAR GRAPH



Maximum Candela = 2807.828 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.)