



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L20-840-XXX-DIM-UNV-RM-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.14

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L20-840-xxx-DIM-UNV-RM-CS-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	1763
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	92
Total Luminaire Watts	19.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.56
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.48 ft (Diameter)
Luminous Width (90-270)	0.48 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	6337	6337	6337
55	4261	4261	4261
65	3171	3171	3171
75	2190	2190	2190
85	1829	1829	1829

CANDELA TABULATION

	<u>0</u>
0.0	4267.014
0.5	4265.035
1.0	4259.099
1.5	4249.206
2.0	4235.355
2.5	4218.536
3.0	4197.760
3.5	4174.016
4.0	4148.293
4.5	4118.613
5.0	4086.954
5.5	4052.328
6.0	4013.743
6.5	3971.202
7.0	3925.692
7.5	3876.226
8.0	3822.801
8.5	3765.420
9.0	3704.081
9.5	3637.795
10.0	3568.541
10.5	3494.341
11.0	3415.194
11.5	3332.090
12.0	3245.028
12.5	3152.030
13.0	3057.054
13.5	2957.131
14.0	2854.240
14.5	2749.370
15.0	2640.543
15.5	2531.715
16.0	2420.910
16.5	2310.104
17.0	2201.277
17.5	2097.396
18.0	1990.548
18.5	1884.689
19.0	1780.808
19.5	1681.874
20.0	1587.887
20.5	1496.868
21.0	1407.828
21.5	1322.745
22.0	1240.630
22.5	1163.461
23.0	1090.250
23.5	1020.997
24.0	955.898
24.5	894.856
25.0	837.376
25.5	783.457
26.0	733.099
26.5	685.809

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CANDELA TABULATION - (Cont.)

27.0	641.783
27.5	600.627
28.0	562.043
28.5	526.229
29.0	492.591
29.5	461.130
30.0	431.549
30.5	403.947
31.0	378.125
31.5	353.886
32.0	331.230
32.5	309.960
33.0	289.975
33.5	271.276
34.0	253.666
34.5	237.342
35.0	222.106
35.5	207.860
36.0	194.603
36.5	182.335
37.0	170.958
37.5	160.471
38.0	150.775
38.5	141.871
39.0	133.660
39.5	126.141
40.0	119.314
40.5	113.081
41.0	107.343
41.5	102.100
42.0	97.252
42.5	92.800
43.0	88.645
43.5	84.885
44.0	81.324
44.5	78.158
45.0	75.091
45.5	72.321
46.0	69.649
46.5	67.176
47.0	64.901
47.5	62.823
48.0	60.844
48.5	58.965
49.0	57.184
49.5	55.403
50.0	53.820
50.5	52.336
51.0	50.852
51.5	49.467
52.0	48.181
52.5	46.796
53.0	45.608
53.5	44.421
54.0	43.234
54.5	42.047

CANDELA TABULATION - (Cont.)

55.0	40.959
55.5	39.870
56.0	38.881
56.5	37.793
57.0	36.803
57.5	35.814
58.0	34.825
58.5	33.835
59.0	32.945
59.5	31.956
60.0	31.065
60.5	30.175
61.0	29.284
61.5	28.394
62.0	27.504
62.5	26.613
63.0	25.822
63.5	24.931
64.0	24.140
64.5	23.249
65.0	22.458
65.5	21.666
66.0	20.875
66.5	20.084
67.0	19.292
67.5	18.600
68.0	17.808
68.5	17.116
69.0	16.423
69.5	15.632
70.0	15.038
70.5	14.345
71.0	13.752
71.5	13.059
72.0	12.466
72.5	11.872
73.0	11.377
73.5	10.883
74.0	10.388
74.5	9.893
75.0	9.498
75.5	9.003
76.0	8.607
76.5	8.310
77.0	7.915
77.5	7.519
78.0	7.222
78.5	6.826
79.0	6.530
79.5	6.233
80.0	5.837
80.5	5.540
81.0	5.145
81.5	4.848
82.0	4.551
82.5	4.254

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CANDELA TABULATION - (Cont.)

83.0	3.957
83.5	3.562
84.0	3.265
84.5	2.968
85.0	2.671
85.5	2.374
86.0	2.177
86.5	1.880
87.0	1.583
87.5	1.286
88.0	0.989
88.5	0.791
89.0	0.693
89.5	0.495
90.0	0.396
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
116.5	0.000
117.0	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

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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
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152.0	0.000
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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

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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1084.77	N.A.	61.50
0-30	1483.19	N.A.	84.10
0-40	1629.84	N.A.	92.40
0-60	1727.16	N.A.	98.00
0-80	1759.88	N.A.	99.80
0-90	1762.93	N.A.	100.00
10-90	1389.01	N.A.	78.80
20-40	545.07	N.A.	30.90
20-50	605.41	N.A.	34.30
40-70	119.71	N.A.	6.80
60-80	32.72	N.A.	1.90
70-80	10.34	N.A.	0.60
80-90	3.05	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	1762.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	373.92
10-20	710.84
20-30	398.42
30-40	146.65
40-50	60.34
50-60	36.99
60-70	22.38
70-80	10.34
80-90	3.05
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	112	109	107	105	105	104	102	102	100	99	98	97	96	94
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89
3	104	99	94	91	103	97	93	90	95	91	89	92	90	87	90	88	86	84
4	100	94	89	85	98	92	88	84	90	86	83	88	85	83	87	84	82	80
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	92	85	80	76	91	84	79	76	83	78	75	81	77	75	80	77	74	73
7	89	81	76	72	88	80	75	72	79	75	72	78	74	71	77	73	71	70
8	86	77	72	69	85	77	72	69	76	72	68	75	71	68	74	71	68	67
9	83	74	69	66	82	74	69	66	73	69	66	72	68	65	71	68	65	64
10	80	71	67	63	79	71	66	63	70	66	63	70	66	63	69	65	63	62

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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	9.6	10.6	10.0	10.9	11.2	9.6	10.6	10.0	10.9	11.2
	3H	10.7	11.6	11.1	11.9	12.3	10.7	11.6	11.1	11.9	12.3
	4H	11.0	11.8	11.4	12.2	12.6	11.0	11.8	11.4	12.2	12.6
	6H	11.3	12.0	11.7	12.4	12.8	11.3	12.0	11.7	12.4	12.8
	8H	11.3	12.0	11.8	12.4	12.8	11.3	12.0	11.8	12.4	12.8
	12H	11.4	12.0	11.8	12.4	12.8	11.4	12.0	11.8	12.4	12.8

UGR Viewed Endwise

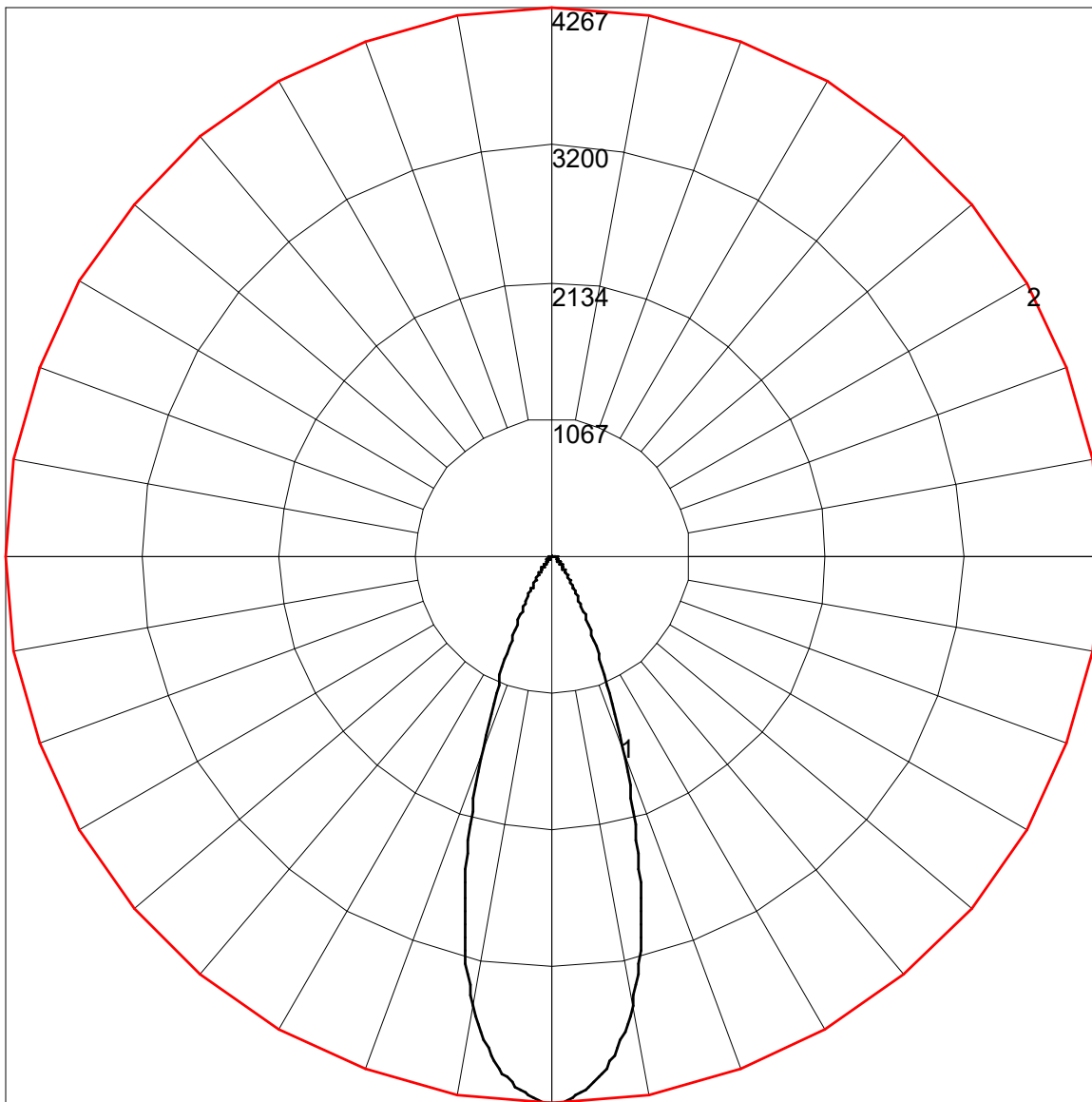
4H	2H	9.9	10.7	10.3	11.1	11.5	9.9	10.7	10.3	11.1	11.5
	3H	11.2	11.8	11.6	12.3	12.7	11.2	11.8	11.6	12.3	12.7
	4H	11.6	12.2	12.0	12.6	13.1	11.6	12.2	12.0	12.6	13.1
	6H	11.9	12.4	12.4	12.9	13.4	11.9	12.4	12.4	12.9	13.4
	8H	12.1	12.5	12.5	13.0	13.4	12.1	12.5	12.5	13.0	13.4
	12H	12.1	12.5	12.6	13.0	13.5	12.1	12.5	12.6	13.0	13.5

8H	4H	11.7	12.1	12.2	12.6	13.1	11.7	12.1	12.2	12.6	13.1
	6H	12.1	12.5	12.7	13.0	13.5	12.1	12.5	12.7	13.0	13.5
	8H	12.3	12.6	12.9	13.2	13.7	12.3	12.6	12.9	13.2	13.7
	12H	12.5	12.7	13.0	13.2	13.8	12.5	12.7	13.0	13.2	13.8

12H	4H	11.7	12.1	12.2	12.5	13.0	11.7	12.1	12.2	12.5	13.0
	6H	12.1	12.5	12.7	12.9	13.5	12.1	12.5	12.7	12.9	13.5
	8H	12.4	12.6	12.9	13.1	13.7	12.4	12.6	12.9	13.1	13.7

Maximum UGR = 13.8

POLAR GRAPH



Maximum Candela = 4267.014 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.)