



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L10-935-XXX-DIM-UNV-LN-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.10

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L10-935-xxx-DIM-UNV-LN-CS-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	818
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	8.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.44
Spacing Criterion (90-270)	0.44
Spacing Criterion (Diagonal)	0.44
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	3077	3077	3077
55	2251	2251	2251
65	1831	1831	1831
75	1495	1495	1495
85	968	968	968

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CANDELA TABULATION

	<u>0</u>
0.0	3059.854
0.5	3057.181
1.0	3048.269
1.5	3032.673
2.0	3011.285
2.5	2984.104
3.0	2951.576
3.5	2913.256
4.0	2869.588
4.5	2821.464
5.0	2769.331
5.5	2712.295
6.0	2650.804
6.5	2585.303
7.0	2515.791
7.5	2442.715
8.0	2365.628
8.5	2286.313
9.0	2205.216
9.5	2121.445
10.0	2036.784
10.5	1950.785
11.0	1863.450
11.5	1775.669
12.0	1687.888
12.5	1600.998
13.0	1515.000
13.5	1430.338
14.0	1347.459
14.5	1266.807
15.0	1189.275
15.5	1114.862
16.0	1044.013
16.5	976.729
17.0	912.565
17.5	851.519
18.0	794.038
18.5	740.568
19.0	690.216
19.5	643.429
20.0	598.871
20.5	556.540
21.0	517.328
21.5	480.790
22.0	446.034
22.5	413.818
23.0	383.607
23.5	355.624
24.0	329.423
24.5	305.139
25.0	282.681
25.5	261.872
26.0	242.623
26.5	224.888

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CANDELA TABULATION - (Cont.)

27.0	208.624
27.5	193.653
28.0	179.929
28.5	167.407
29.0	155.867
29.5	145.262
30.0	135.548
30.5	126.681
31.0	118.526
31.5	111.085
32.0	104.223
32.5	97.940
33.0	92.148
33.5	86.845
34.0	81.944
34.5	77.488
35.0	73.344
35.5	69.556
36.0	66.081
36.5	62.828
37.0	59.887
37.5	57.169
38.0	54.674
38.5	52.312
39.0	50.173
39.5	48.168
40.0	46.341
40.5	44.603
41.0	43.044
41.5	41.529
42.0	40.147
42.5	38.855
43.0	37.608
43.5	36.449
44.0	35.335
44.5	34.310
45.0	33.330
45.5	32.394
46.0	31.503
46.5	30.612
47.0	29.810
47.5	29.008
48.0	28.206
48.5	27.448
49.0	26.735
49.5	26.067
50.0	25.399
50.5	24.730
51.0	24.106
51.5	23.527
52.0	22.948
52.5	22.369
53.0	21.789
53.5	21.299
54.0	20.764
54.5	20.274

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CANDELA TABULATION - (Cont.)

55.0	19.784
55.5	19.294
56.0	18.804
56.5	18.358
57.0	17.913
57.5	17.512
58.0	17.066
58.5	16.665
59.0	16.264
59.5	15.818
60.0	15.462
60.5	15.061
61.0	14.660
61.5	14.303
62.0	13.947
62.5	13.590
63.0	13.234
63.5	12.877
64.0	12.521
64.5	12.165
65.0	11.853
65.5	11.496
66.0	11.184
66.5	10.828
67.0	10.516
67.5	10.204
68.0	9.892
68.5	9.580
69.0	9.268
69.5	8.956
70.0	8.644
70.5	8.377
71.0	8.065
71.5	7.798
72.0	7.530
72.5	7.219
73.0	6.951
73.5	6.684
74.0	6.416
74.5	6.149
75.0	5.926
75.5	5.659
76.0	5.392
76.5	5.124
77.0	4.901
77.5	4.634
78.0	4.411
78.5	4.189
79.0	3.921
79.5	3.698
80.0	3.476
80.5	3.253
81.0	3.030
81.5	2.807
82.0	2.584
82.5	2.362

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CANDELA TABULATION - (Cont.)

83.0	2.139
83.5	1.916
84.0	1.738
84.5	1.515
85.0	1.292
85.5	1.114
86.0	0.936
86.5	0.757
87.0	0.624
87.5	0.490
88.0	0.356
88.5	0.267
89.0	0.223
89.5	0.134
90.0	0.089
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
117.5	0.000
118.0	0.000
118.5	0.000
119.0	0.000
119.5	0.000
120.0	0.000
120.5	0.000
121.0	0.000
121.5	0.000
122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
129.5	0.000
130.0	0.000
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131.0	0.000
131.5	0.000
132.0	0.000
132.5	0.000
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

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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
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
157.5	0.000
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

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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	568.19	N.A.	69.50
0-30	705.60	N.A.	86.30
0-40	754.17	N.A.	92.20
0-60	798.23	N.A.	97.60
0-80	816.28	N.A.	99.80
0-90	817.88	N.A.	100.00
10-90	577.37	N.A.	70.60
20-40	185.98	N.A.	22.70
20-50	212.19	N.A.	25.90
40-70	55.83	N.A.	6.80
60-80	18.05	N.A.	2.20
70-80	6.28	N.A.	0.80
80-90	1.59	N.A.	0.20
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	817.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	240.50
10-20	327.69
20-30	137.40
30-40	48.58
40-50	26.21
50-60	17.84
60-70	11.78
70-80	6.28
80-90	1.59
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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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	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	105	102	99	107	104	101	98	101	98	96	98	96	94	95	93	92	90
3	105	100	96	92	103	99	95	92	96	93	90	94	91	89	92	89	87	86
4	101	95	91	87	100	94	90	87	92	88	86	90	87	85	88	86	84	82
5	98	91	86	83	96	90	86	82	88	85	82	87	84	81	85	83	80	79
6	94	87	82	79	93	86	82	79	85	81	78	84	80	78	83	80	77	76
7	91	84	79	76	90	83	79	75	82	78	75	81	77	75	80	77	74	73
8	88	81	76	73	87	80	76	73	79	75	72	78	75	72	77	74	72	71
9	86	78	73	70	85	78	73	70	77	73	70	76	72	70	75	72	69	68
10	83	75	71	68	82	75	71	68	74	70	68	74	70	67	73	70	67	66

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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

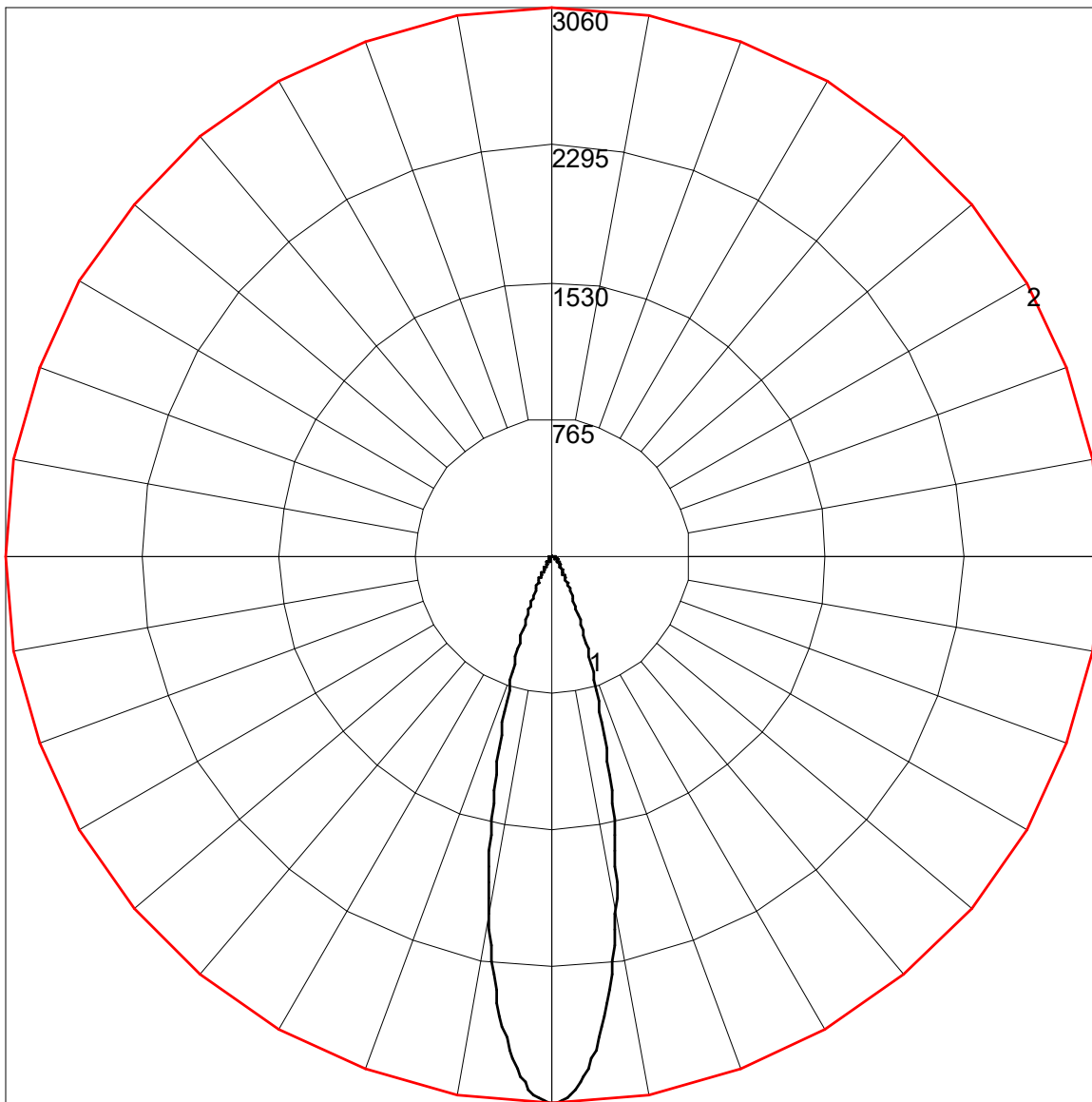
X=2H	Y=2H	7.7	8.7	8.0	9.0	9.3	7.7	8.7	8.0	9.0	9.3
	3H	9.1	9.9	9.5	10.3	10.6	9.1	9.9	9.5	10.3	10.6
	4H	9.6	10.4	10.0	10.7	11.1	9.6	10.4	10.0	10.7	11.1
	6H	9.9	10.6	10.3	11.0	11.4	9.9	10.6	10.3	11.0	11.4
	8H	10.0	10.7	10.4	11.1	11.5	10.0	10.7	10.4	11.1	11.5
	12H	10.0	10.7	10.5	11.1	11.5	10.0	10.7	10.5	11.1	11.5

UGR Viewed Endwise

4H	2H	8.1	8.9	8.5	9.2	9.6	8.1	8.9	8.5	9.2	9.6
	3H	9.7	10.3	10.1	10.7	11.1	9.7	10.3	10.1	10.7	11.1
	4H	10.3	10.9	10.7	11.3	11.7	10.3	10.9	10.7	11.3	11.7
	6H	10.7	11.2	11.2	11.7	12.2	10.7	11.2	11.2	11.7	12.2
	8H	10.9	11.3	11.3	11.8	12.3	10.9	11.3	11.3	11.8	12.3
	12H	10.9	11.3	11.4	11.8	12.3	10.9	11.3	11.4	11.8	12.3
8H	4H	10.4	10.9	10.9	11.4	11.8	10.4	10.9	10.9	11.4	11.8
	6H	11.0	11.4	11.5	11.9	12.4	11.0	11.4	11.5	11.9	12.4
	8H	11.2	11.5	11.8	12.1	12.6	11.2	11.5	11.8	12.1	12.6
	12H	11.3	11.6	11.9	12.1	12.7	11.3	11.6	11.9	12.1	12.7
12H	4H	10.4	10.8	10.9	11.3	11.8	10.4	10.8	10.9	11.3	11.8
	6H	11.0	11.4	11.6	11.8	12.4	11.0	11.4	11.6	11.8	12.4
	8H	11.3	11.6	11.8	12.0	12.6	11.3	11.6	11.8	12.0	12.6

Maximum UGR = 12.7

POLAR GRAPH



Maximum Candela = 3059.854 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.)