



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-835-XXX-DIM-UNV-RW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.12

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L15-835-xxx-DIM-UNV-RW-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	1090
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	79
Total Luminaire Watts	13.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.04
Spacing Criterion (90-270)	1.04
Spacing Criterion (Diagonal)	0.94
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	14719	14719	14719
55	12275	12275	12275
65	8660	8660	8660
75	5305	5305	5305
85	4184	4184	4184

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CANDELA TABULATION

	<u>0</u>
0.0	806.374
0.5	805.619
1.0	804.865
1.5	804.111
2.0	802.602
2.5	800.339
3.0	798.076
3.5	795.059
4.0	792.042
4.5	789.779
5.0	786.761
5.5	783.744
6.0	780.727
6.5	777.709
7.0	774.692
7.5	771.675
8.0	767.903
8.5	764.886
9.0	761.869
9.5	758.097
10.0	755.080
10.5	751.383
11.0	747.763
11.5	744.142
12.0	740.521
12.5	736.976
13.0	733.355
13.5	729.583
14.0	725.887
14.5	722.266
15.0	718.872
15.5	715.402
16.0	712.008
16.5	708.689
17.0	705.596
17.5	702.503
18.0	699.486
18.5	696.619
19.0	693.753
19.5	690.811
20.0	687.794
20.5	684.550
21.0	680.854
21.5	676.630
22.0	671.878
22.5	666.597
23.0	660.864
23.5	654.377
24.0	647.287
24.5	639.517
25.0	630.918
25.5	621.639
26.0	611.305
26.5	599.990

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CANDELA TABULATION - (Cont.)

27.0	587.921
27.5	574.796
28.0	560.841
28.5	545.679
29.0	529.687
29.5	512.338
30.0	493.932
30.5	474.471
31.0	454.255
31.5	433.586
32.0	412.540
32.5	391.646
33.0	370.977
33.5	350.988
34.0	331.828
34.5	313.799
35.0	297.355
35.5	282.269
36.0	268.992
36.5	257.225
37.0	246.891
37.5	238.065
38.0	230.296
38.5	223.431
39.0	217.472
39.5	212.192
40.0	207.364
40.5	202.989
41.0	198.916
41.5	195.219
42.0	191.825
42.5	188.581
43.0	185.489
43.5	182.547
44.0	179.756
44.5	177.116
45.0	174.400
45.5	171.835
46.0	169.195
46.5	166.630
47.0	163.990
47.5	161.350
48.0	158.635
48.5	155.919
49.0	153.354
49.5	150.714
50.0	147.923
50.5	145.057
51.0	142.115
51.5	139.173
52.0	136.231
52.5	133.214
53.0	130.272
53.5	127.406
54.0	124.237
54.5	121.069

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CANDELA TABULATION - (Cont.)

55.0	117.976
55.5	114.808
56.0	111.716
56.5	108.623
57.0	105.530
57.5	102.437
58.0	99.496
58.5	96.478
59.0	93.536
59.5	90.670
60.0	87.803
60.5	84.937
61.0	82.146
61.5	79.430
62.0	76.715
62.5	74.075
63.0	71.435
63.5	68.794
64.0	66.305
64.5	63.740
65.0	61.327
65.5	58.837
66.0	56.499
66.5	54.161
67.0	51.898
67.5	49.635
68.0	47.447
68.5	45.260
69.0	43.223
69.5	41.111
70.0	39.149
70.5	37.188
71.0	35.302
71.5	33.492
72.0	31.682
72.5	30.022
73.0	28.438
73.5	27.005
74.0	25.572
74.5	24.289
75.0	23.007
75.5	21.875
76.0	20.744
76.5	19.763
77.0	18.858
77.5	17.953
78.0	17.048
78.5	16.143
79.0	15.313
79.5	14.483
80.0	13.653
80.5	12.824
81.0	11.994
81.5	11.239
82.0	10.410
82.5	9.655

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CANDELA TABULATION - (Cont.)

83.0	8.901
83.5	8.222
84.0	7.468
84.5	6.789
85.0	6.110
85.5	5.431
86.0	4.752
86.5	4.073
87.0	3.470
87.5	2.791
88.0	2.263
88.5	1.810
89.0	1.433
89.5	1.056
90.0	0.754
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
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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	277.09	N.A.	25.40
0-30	560.16	N.A.	51.40
0-40	756.01	N.A.	69.40
0-60	996.35	N.A.	91.40
0-80	1083.12	N.A.	99.40
0-90	1090.08	N.A.	100.00
10-90	1016.00	N.A.	93.20
20-40	478.93	N.A.	43.90
20-50	614.05	N.A.	56.30
40-70	301.58	N.A.	27.70
60-80	86.76	N.A.	8.00
70-80	25.53	N.A.	2.30
80-90	6.96	N.A.	0.60
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1090.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	74.07
10-20	203.01
20-30	283.08
30-40	195.85
40-50	135.13
50-60	105.22
60-70	61.24
70-80	25.53
80-90	6.96
90-100	0.02
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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	58
6	79	68	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38

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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

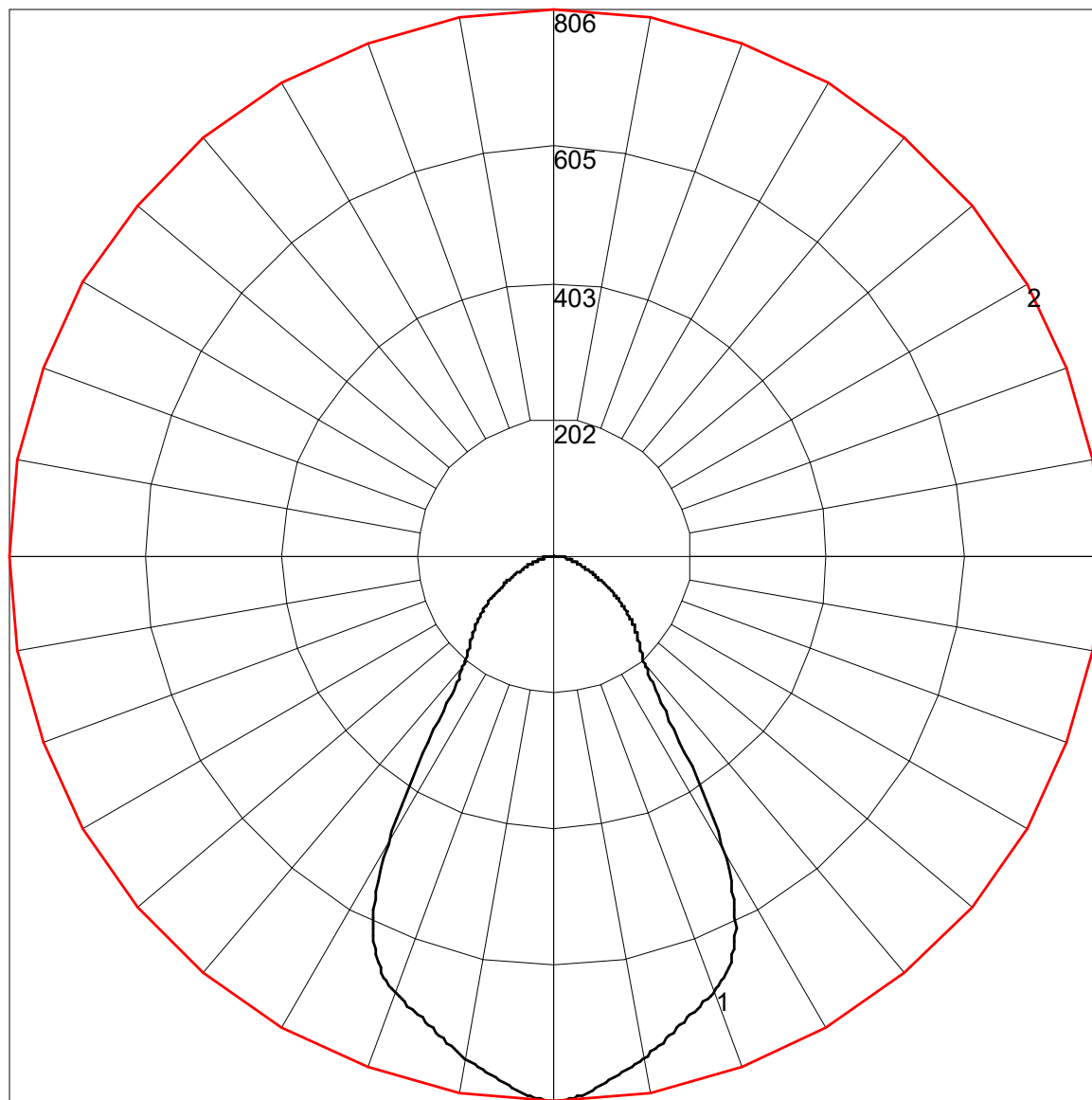
X=2H	Y=2H	18.2	19.5	18.5	19.8	20.1	18.2	19.5	18.5	19.8	20.1
	3H	19.1	20.3	19.5	20.6	21.0	19.1	20.3	19.5	20.6	21.0
	4H	19.4	20.5	19.8	20.8	21.2	19.4	20.5	19.8	20.8	21.2
	6H	19.5	20.6	20.0	20.9	21.3	19.5	20.6	20.0	20.9	21.3
	8H	19.6	20.6	20.0	21.0	21.4	19.6	20.6	20.0	21.0	21.4
	12H	19.6	20.6	20.1	20.9	21.4	19.6	20.6	20.1	20.9	21.4

UGR Viewed Endwise

4H	2H	18.5	19.6	18.9	19.9	20.3	18.5	19.6	18.9	19.9	20.3
	3H	19.6	20.5	20.0	20.9	21.3	19.6	20.5	20.0	20.9	21.3
	4H	20.0	20.8	20.4	21.2	21.6	20.0	20.8	20.4	21.2	21.6
	6H	20.2	20.9	20.7	21.4	21.8	20.2	20.9	20.7	21.4	21.8
	8H	20.3	20.9	20.8	21.4	21.9	20.3	20.9	20.8	21.4	21.9
	12H	20.4	20.9	20.8	21.4	21.9	20.4	20.9	20.8	21.4	21.9
8H	4H	20.0	20.7	20.5	21.1	21.6	20.0	20.7	20.5	21.1	21.6
	6H	20.4	20.9	20.9	21.4	21.9	20.4	20.9	20.9	21.4	21.9
	8H	20.5	21.0	21.0	21.5	22.0	20.5	21.0	21.0	21.5	22.0
	12H	20.6	21.0	21.1	21.5	22.1	20.6	21.0	21.1	21.5	22.1
12H	4H	20.0	20.6	20.5	21.1	21.6	20.0	20.6	20.5	21.1	21.6
	6H	20.4	20.9	20.9	21.3	21.9	20.4	20.9	20.9	21.3	21.9
	8H	20.5	21.0	21.1	21.5	22.0	20.5	21.0	21.1	21.5	22.0

Maximum UGR = 22.1

POLAR GRAPH



Maximum Candela = 806.374 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.)