



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-LN-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.10

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 29-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L20-835-xxx-DIM-UNV-LN-WH-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	1836
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	96
Total Luminaire Watts	19.0871
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	6905	6905	6905
55	5053	5053	5053
65	4108	4108	4108
75	3354	3354	3354
85	2172	2172	2172

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CANDELA TABULATION

	<u>0</u>
0.0	6867.0
0.5	6861.0
1.0	6841.0
1.5	6806.0
2.0	6758.0
2.5	6697.0
3.0	6624.0
3.5	6538.0
4.0	6440.0
4.5	6332.0
5.0	6215.0
5.5	6087.0
6.0	5949.0
6.5	5802.0
7.0	5646.0
7.5	5482.0
8.0	5309.0
8.5	5131.0
9.0	4949.0
9.5	4761.0
10.0	4571.0
10.5	4378.0
11.0	4182.0
11.5	3985.0
12.0	3788.0
12.5	3593.0
13.0	3400.0
13.5	3210.0
14.0	3024.0
14.5	2843.0
15.0	2669.0
15.5	2502.0
16.0	2343.0
16.5	2192.0
17.0	2048.0
17.5	1911.0
18.0	1782.0
18.5	1662.0
19.0	1549.0
19.5	1444.0
20.0	1344.0
20.5	1249.0
21.0	1161.0
21.5	1079.0
22.0	1001.0
22.5	928.7
23.0	860.9
23.5	798.1
24.0	739.3
24.5	684.8
25.0	634.4
25.5	587.7
26.0	544.5
26.5	504.7

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CANDELA TABULATION - (Cont.)

27.0	468.2
27.5	434.6
28.0	403.8
28.5	375.7
29.0	349.8
29.5	326.0
30.0	304.2
30.5	284.3
31.0	266.0
31.5	249.3
32.0	233.9
32.5	219.8
33.0	206.8
33.5	194.9
34.0	183.9
34.5	173.9
35.0	164.6
35.5	156.1
36.0	148.3
36.5	141.0
37.0	134.4
37.5	128.3
38.0	122.7
38.5	117.4
39.0	112.6
39.5	108.1
40.0	104.0
40.5	100.1
41.0	96.6
41.5	93.2
42.0	90.1
42.5	87.2
43.0	84.4
43.5	81.8
44.0	79.3
44.5	77.0
45.0	74.8
45.5	72.7
46.0	70.7
46.5	68.7
47.0	66.9
47.5	65.1
48.0	63.3
48.5	61.6
49.0	60.0
49.5	58.5
50.0	57.0
50.5	55.5
51.0	54.1
51.5	52.8
52.0	51.5
52.5	50.2
53.0	48.9
53.5	47.8
54.0	46.6
54.5	45.5

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CANDELA TABULATION - (Cont.)

55.0	44.4
55.5	43.3
56.0	42.2
56.5	41.2
57.0	40.2
57.5	39.3
58.0	38.3
58.5	37.4
59.0	36.5
59.5	35.5
60.0	34.7
60.5	33.8
61.0	32.9
61.5	32.1
62.0	31.3
62.5	30.5
63.0	29.7
63.5	28.9
64.0	28.1
64.5	27.3
65.0	26.6
65.5	25.8
66.0	25.1
66.5	24.3
67.0	23.6
67.5	22.9
68.0	22.2
68.5	21.5
69.0	20.8
69.5	20.1
70.0	19.4
70.5	18.8
71.0	18.1
71.5	17.5
72.0	16.9
72.5	16.2
73.0	15.6
73.5	15.0
74.0	14.4
74.5	13.8
75.0	13.3
75.5	12.7
76.0	12.1
76.5	11.5
77.0	11.0
77.5	10.4
78.0	9.9
78.5	9.4
79.0	8.8
79.5	8.3
80.0	7.8
80.5	7.3
81.0	6.8
81.5	6.3
82.0	5.8
82.5	5.3

CANDELA TABULATION - (Cont.)

83.0	4.8
83.5	4.3
84.0	3.9
84.5	3.4
85.0	2.9
85.5	2.5
86.0	2.1
86.5	1.7
87.0	1.4
87.5	1.1
88.0	0.8
88.5	0.6
89.0	0.5
89.5	0.3
90.0	0.2
90.5	0.0
91.0	0.0
91.5	0.0
92.0	0.0
92.5	0.0
93.0	0.0
93.5	0.0
94.0	0.0
94.5	0.0
95.0	0.0
95.5	0.0
96.0	0.0
96.5	0.0
97.0	0.0
97.5	0.0
98.0	0.0
98.5	0.0
99.0	0.0
99.5	0.0
100.0	0.0
100.5	0.0
101.0	0.0
101.5	0.0
102.0	0.0
102.5	0.0
103.0	0.0
103.5	0.0
104.0	0.0
104.5	0.0
105.0	0.0
105.5	0.0
106.0	0.0
106.5	0.0
107.0	0.0
107.5	0.0
108.0	0.0
108.5	0.0
109.0	0.0
109.5	0.0
110.0	0.0
110.5	0.0

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CANDELA TABULATION - (Cont.)

111.0	0.0
111.5	0.0
112.0	0.0
112.5	0.0
113.0	0.0
113.5	0.0
114.0	0.0
114.5	0.0
115.0	0.0
115.5	0.0
116.0	0.0
116.5	0.0
117.0	0.0
117.5	0.0
118.0	0.0
118.5	0.0
119.0	0.0
119.5	0.0
120.0	0.0
120.5	0.0
121.0	0.0
121.5	0.0
122.0	0.0
122.5	0.0
123.0	0.0
123.5	0.0
124.0	0.0
124.5	0.0
125.0	0.0
125.5	0.0
126.0	0.0
126.5	0.0
127.0	0.0
127.5	0.0
128.0	0.0
128.5	0.0
129.0	0.0
129.5	0.0
130.0	0.0
130.5	0.0
131.0	0.0
131.5	0.0
132.0	0.0
132.5	0.0
133.0	0.0
133.5	0.0
134.0	0.0
134.5	0.0
135.0	0.0
135.5	0.0
136.0	0.0
136.5	0.0
137.0	0.0
137.5	0.0
138.0	0.0
138.5	0.0

CANDELA TABULATION - (Cont.)

139.0	0.0
139.5	0.0
140.0	0.0
140.5	0.0
141.0	0.0
141.5	0.0
142.0	0.0
142.5	0.0
143.0	0.0
143.5	0.0
144.0	0.0
144.5	0.0
145.0	0.0
145.5	0.0
146.0	0.0
146.5	0.0
147.0	0.0
147.5	0.0
148.0	0.0
148.5	0.0
149.0	0.0
149.5	0.0
150.0	0.0
150.5	0.0
151.0	0.0
151.5	0.0
152.0	0.0
152.5	0.0
153.0	0.0
153.5	0.0
154.0	0.0
154.5	0.0
155.0	0.0
155.5	0.0
156.0	0.0
156.5	0.0
157.0	0.0
157.5	0.0
158.0	0.0
158.5	0.0
159.0	0.0
159.5	0.0
160.0	0.0
160.5	0.0
161.0	0.0
161.5	0.0
162.0	0.0
162.5	0.0
163.0	0.0
163.5	0.0
164.0	0.0
164.5	0.0
165.0	0.0
165.5	0.0
166.0	0.0
166.5	0.0

CANDELA TABULATION - (Cont.)

167.0	0.0
167.5	0.0
168.0	0.0
168.5	0.0
169.0	0.0
169.5	0.0
170.0	0.0
170.5	0.0
171.0	0.0
171.5	0.0
172.0	0.0
172.5	0.0
173.0	0.0
173.5	0.0
174.0	0.0
174.5	0.0
175.0	0.0
175.5	0.0
176.0	0.0
176.5	0.0
177.0	0.0
177.5	0.0
178.0	0.0
178.5	0.0
179.0	0.0
179.5	0.0
180.0	0.0

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Zone	Lumens	%Lamp	%Fixt
0-20	1275.16	N.A.	69.50
0-30	1583.52	N.A.	86.30
0-40	1692.54	N.A.	92.20
0-60	1791.4	N.A.	97.60
0-80	1831.92	N.A.	99.80
0-90	1835.5	N.A.	100.00
10-90	1295.76	N.A.	70.60
20-40	417.38	N.A.	22.70
20-50	476.21	N.A.	25.90
40-70	125.29	N.A.	6.80
60-80	40.52	N.A.	2.20
70-80	14.09	N.A.	0.80
80-90	3.58	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	1835.51	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	539.74
10-20	735.41
20-30	308.36
30-40	109.02
40-50	58.83
50-60	40.04
60-70	26.43
70-80	14.09
80-90	3.58
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	112	110	108	112	110	108	106	106	104	103	102	101	100	98	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

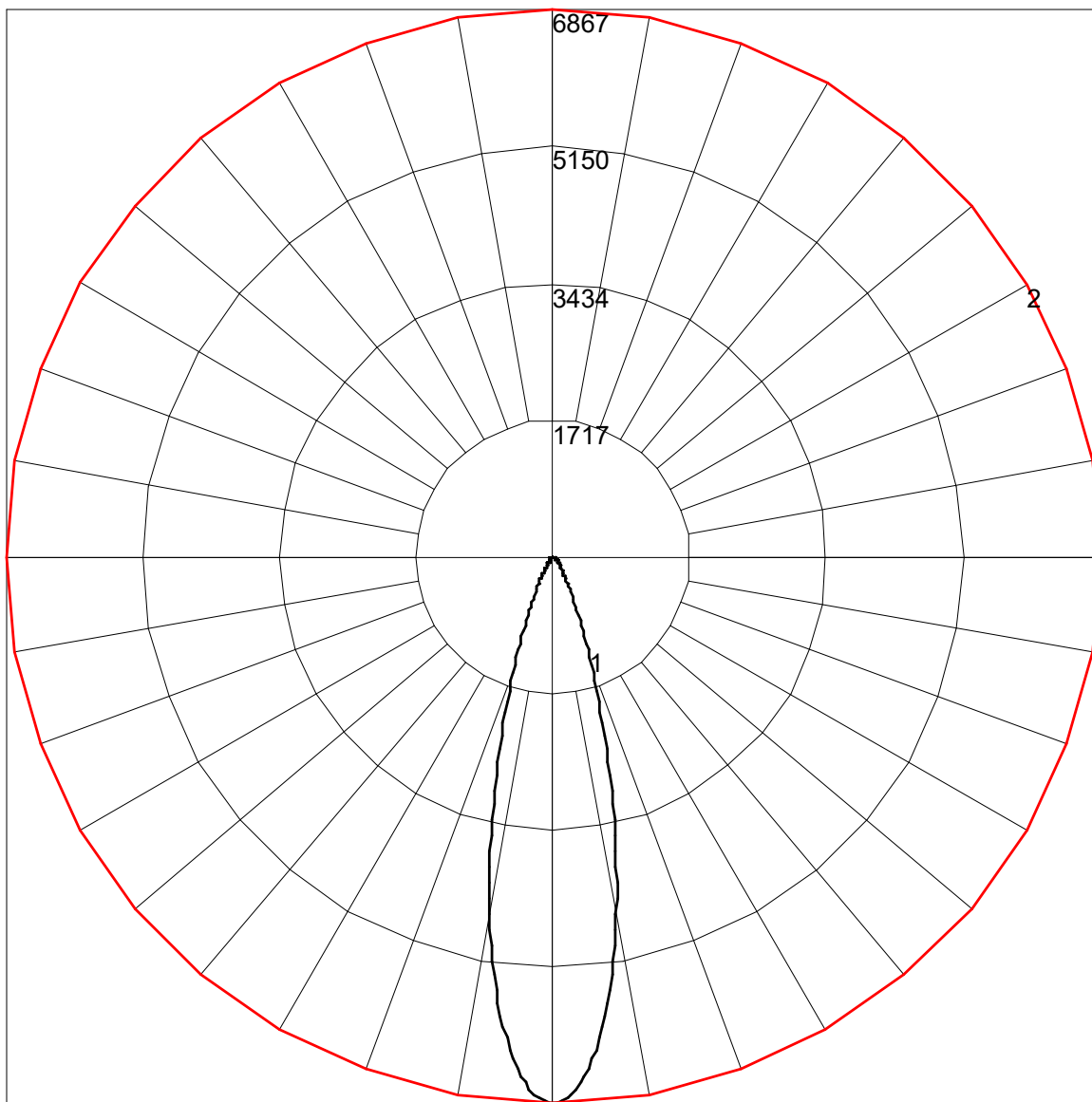
X=2H	Y=2H	10.5	11.5	10.8	11.8	12.1	10.5	11.5	10.8	11.8	12.1
	3H	11.9	12.7	12.3	13.1	13.4	11.9	12.7	12.3	13.1	13.4
	4H	12.4	13.2	12.8	13.5	13.9	12.4	13.2	12.8	13.5	13.9
	6H	12.7	13.4	13.1	13.8	14.2	12.7	13.4	13.1	13.8	14.2
	8H	12.8	13.5	13.2	13.9	14.3	12.8	13.5	13.2	13.9	14.3
	12H	12.8	13.5	13.3	13.9	14.3	12.8	13.5	13.3	13.9	14.3

UGR Viewed Endwise

4H	2H	10.9	11.7	11.3	12.0	12.4	10.9	11.7	11.3	12.0	12.4
	3H	12.5	13.1	12.9	13.5	13.9	12.5	13.1	12.9	13.5	13.9
	4H	13.1	13.7	13.5	14.1	14.5	13.1	13.7	13.5	14.1	14.5
	6H	13.5	14.0	14.0	14.5	15.0	13.5	14.0	14.0	14.5	15.0
	8H	13.7	14.1	14.2	14.6	15.1	13.7	14.1	14.2	14.6	15.1
	12H	13.7	14.1	14.2	14.6	15.1	13.7	14.1	14.2	14.6	15.1
8H	4H	13.3	13.7	13.7	14.2	14.6	13.3	13.7	13.7	14.2	14.6
	6H	13.8	14.2	14.3	14.7	15.2	13.8	14.2	14.3	14.7	15.2
	8H	14.0	14.3	14.6	14.9	15.4	14.0	14.3	14.6	14.9	15.4
	12H	14.1	14.4	14.7	14.9	15.5	14.1	14.4	14.7	14.9	15.5
12H	4H	13.2	13.6	13.7	14.1	14.6	13.2	13.6	13.7	14.1	14.6
	6H	13.8	14.2	14.4	14.6	15.2	13.8	14.2	14.4	14.6	15.2
	8H	14.1	14.4	14.6	14.9	15.4	14.1	14.4	14.6	14.9	15.4

Maximum UGR = 15.5

POLAR GRAPH



Maximum Candela = 6867 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.)