



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L30-835-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-L30-835-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	2160
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	80
Total Luminaire Watts	26.9
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	29167	29167	29167
55	24324	24324	24324
65	17161	17161	17161
75	10512	10512	10512
85	8290	8290	8290

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CANDELA TABULATION

	<u>0</u>
0.0	1597.952
0.5	1596.457
1.0	1594.962
1.5	1593.467
2.0	1590.478
2.5	1585.993
3.0	1581.509
3.5	1575.530
4.0	1569.550
4.5	1565.066
5.0	1559.087
5.5	1553.108
6.0	1547.128
6.5	1541.149
7.0	1535.170
7.5	1529.191
8.0	1521.717
8.5	1515.737
9.0	1509.758
9.5	1502.284
10.0	1496.305
10.5	1488.980
11.0	1481.805
11.5	1474.630
12.0	1467.455
12.5	1460.429
13.0	1453.254
13.5	1445.780
14.0	1438.456
14.5	1431.281
15.0	1424.554
15.5	1417.678
16.0	1410.951
16.5	1404.374
17.0	1398.245
17.5	1392.117
18.0	1386.137
18.5	1380.457
19.0	1374.777
19.5	1368.947
20.0	1362.968
20.5	1356.540
21.0	1349.215
21.5	1340.845
22.0	1331.427
22.5	1320.964
23.0	1309.603
23.5	1296.748
24.0	1282.696
24.5	1267.300
25.0	1250.259
25.5	1231.873
26.0	1211.394
26.5	1188.972

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CANDELA TABULATION - (Cont.)

27.0	1165.055
27.5	1139.045
28.0	1111.391
28.5	1081.346
29.0	1049.656
29.5	1015.275
30.0	978.802
30.5	940.235
31.0	900.175
31.5	859.217
32.0	817.512
32.5	776.105
33.0	735.148
33.5	695.535
34.0	657.567
34.5	621.841
35.0	589.254
35.5	559.358
36.0	533.049
36.5	509.730
37.0	489.251
37.5	471.762
38.0	456.365
38.5	442.763
39.0	430.954
39.5	420.490
40.0	410.923
40.5	402.253
41.0	394.181
41.5	386.857
42.0	380.130
42.5	373.702
43.0	367.574
43.5	361.744
44.0	356.213
44.5	350.981
45.0	345.600
45.5	340.518
46.0	335.286
46.5	330.204
47.0	324.972
47.5	319.740
48.0	314.359
48.5	308.977
49.0	303.895
49.5	298.663
50.0	293.132
50.5	287.452
51.0	281.622
51.5	275.792
52.0	269.963
52.5	263.983
53.0	258.154
53.5	252.473
54.0	246.195
54.5	239.917

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CANDELA TABULATION - (Cont.)

55.0	233.788
55.5	227.510
56.0	221.381
56.5	215.253
57.0	209.124
57.5	202.995
58.0	197.165
58.5	191.186
59.0	185.356
59.5	179.676
60.0	173.996
60.5	168.316
61.0	162.785
61.5	157.403
62.0	152.022
62.5	146.790
63.0	141.559
63.5	136.327
64.0	131.394
64.5	126.311
65.0	121.528
65.5	116.595
66.0	111.961
66.5	107.327
67.0	102.843
67.5	98.358
68.0	94.024
68.5	89.689
69.0	85.653
69.5	81.467
70.0	77.581
70.5	73.694
71.0	69.957
71.5	66.370
72.0	62.782
72.5	59.493
73.0	56.354
73.5	53.514
74.0	50.674
74.5	48.133
75.0	45.592
75.5	43.349
76.0	41.107
76.5	39.164
77.0	37.370
77.5	35.576
78.0	33.783
78.5	31.989
79.0	30.345
79.5	28.700
80.0	27.056
80.5	25.412
81.0	23.767
81.5	22.273
82.0	20.628
82.5	19.134

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CANDELA TABULATION - (Cont.)

83.0	17.639
83.5	16.293
84.0	14.799
84.5	13.453
85.0	12.108
85.5	10.763
86.0	9.417
86.5	8.072
87.0	6.876
87.5	5.531
88.0	4.484
88.5	3.588
89.0	2.840
89.5	2.093
90.0	1.495
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
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122.5	0.000
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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
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130.0	0.000
130.5	0.000
131.0	0.000
131.5	0.000
132.0	0.000
132.5	0.000
133.0	0.000
133.5	0.000
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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	549.09	N.A.	25.40
0-30	1110.05	N.A.	51.40
0-40	1498.15	N.A.	69.40
0-60	1974.43	N.A.	91.40
0-80	2146.36	N.A.	99.40
0-90	2160.15	N.A.	100.00
10-90	2013.36	N.A.	93.20
20-40	949.07	N.A.	43.90
20-50	1216.84	N.A.	56.30
40-70	597.62	N.A.	27.70
60-80	171.94	N.A.	8.00
70-80	50.59	N.A.	2.30
80-90	13.79	N.A.	0.60
90-110	0.04	N.A.	0.00
90-120	0.04	N.A.	0.00
90-130	0.04	N.A.	0.00
90-150	0.04	N.A.	0.00
90-180	0.04	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2160.19	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	146.79
10-20	402.30
20-30	560.96
30-40	388.11
40-50	267.77
50-60	208.50
60-70	121.35
70-80	50.59
80-90	13.79
90-100	0.04
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

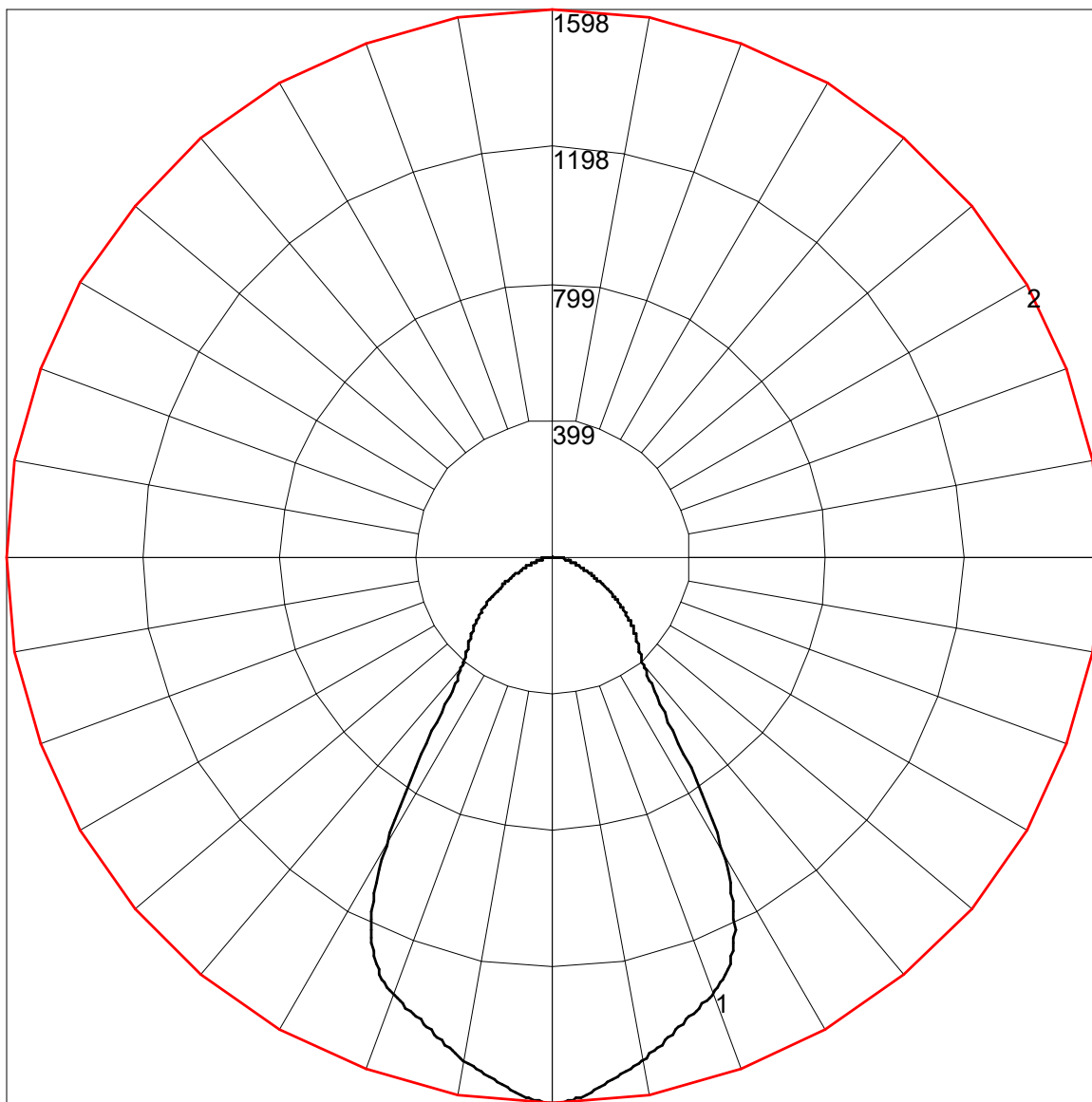
X=2H	Y=2H	20.5	21.9	20.9	22.2	22.5	20.5	21.9	20.9	22.2	22.5
	3H	21.5	22.7	21.9	23.0	23.4	21.5	22.7	21.9	23.0	23.4
	4H	21.8	22.9	22.2	23.2	23.6	21.8	22.9	22.2	23.2	23.6
	6H	21.9	23.0	22.4	23.3	23.7	21.9	23.0	22.4	23.3	23.7
	8H	22.0	23.0	22.4	23.3	23.8	22.0	23.0	22.4	23.3	23.8
	12H	22.0	22.9	22.5	23.3	23.8	22.0	22.9	22.5	23.3	23.8

UGR Viewed Endwise

4H	2H	20.9	22.0	21.3	22.3	22.7	20.9	22.0	21.3	22.3	22.7
	3H	22.0	22.9	22.4	23.3	23.7	22.0	22.9	22.4	23.3	23.7
	4H	22.3	23.2	22.8	23.6	24.0	22.3	23.2	22.8	23.6	24.0
	6H	22.6	23.3	23.1	23.8	24.2	22.6	23.3	23.1	23.8	24.2
	8H	22.7	23.3	23.2	23.8	24.3	22.7	23.3	23.2	23.8	24.3
	12H	22.8	23.3	23.2	23.8	24.3	22.8	23.3	23.2	23.8	24.3
8H	4H	22.4	23.1	22.9	23.5	24.0	22.4	23.1	22.9	23.5	24.0
	6H	22.8	23.3	23.3	23.8	24.3	22.8	23.3	23.3	23.8	24.3
	8H	22.9	23.4	23.4	23.9	24.4	22.9	23.4	23.4	23.9	24.4
	12H	23.0	23.4	23.5	23.9	24.5	23.0	23.4	23.5	23.9	24.5
12H	4H	22.4	23.0	22.9	23.5	23.9	22.4	23.0	22.9	23.5	23.9
	6H	22.8	23.3	23.3	23.7	24.3	22.8	23.3	23.3	23.7	24.3
	8H	22.9	23.4	23.5	23.9	24.4	22.9	23.4	23.5	23.9	24.4

Maximum UGR = 24.5

POLAR GRAPH



Maximum Candela = 1597.952 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.)