



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L60-835-XXX-DIM-UNV-LW-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L60-835-xxx-DIM-UNV-LW-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	4608
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	54
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.08
Spacing Criterion (Diagonal)	0.98
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	76595	76595	76595
55	63768	63768	63768
65	48445	48445	48445
75	35132	35132	35132
85	22894	22894	22894

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CANDELA TABULATION

	<u>0</u>
0.0	2930.934
0.5	2930.344
1.0	2927.984
1.5	2924.443
2.0	2920.017
2.5	2914.115
3.0	2908.214
3.5	2901.427
4.0	2895.231
4.5	2889.034
5.0	2884.608
5.5	2880.477
6.0	2876.641
6.5	2872.806
7.0	2868.675
7.5	2864.839
8.0	2861.003
8.5	2857.462
9.0	2853.921
9.5	2850.970
10.0	2848.020
10.5	2845.659
11.0	2843.594
11.5	2842.413
12.0	2840.348
12.5	2838.282
13.0	2835.332
13.5	2831.496
14.0	2826.775
14.5	2821.463
15.0	2815.857
15.5	2808.775
16.0	2801.103
16.5	2793.432
17.0	2785.760
17.5	2777.793
18.0	2769.236
18.5	2759.498
19.0	2748.581
19.5	2736.483
20.0	2722.615
20.5	2707.566
21.0	2688.977
21.5	2666.846
22.0	2641.765
22.5	2613.439
23.0	2582.456
23.5	2548.818
24.0	2511.639
24.5	2471.510
25.0	2428.134
25.5	2382.989
26.0	2334.892
26.5	2284.730

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CANDELA TABULATION - (Cont.)

27.0	2231.322
27.5	2176.439
28.0	2118.606
28.5	2057.526
29.0	1994.086
29.5	1927.400
30.0	1858.944
30.5	1788.422
31.0	1717.900
31.5	1646.788
32.0	1577.741
32.5	1511.646
33.0	1448.206
33.5	1388.896
34.0	1334.308
34.5	1284.737
35.0	1240.476
35.5	1199.756
36.0	1164.053
36.5	1131.300
37.0	1102.088
37.5	1075.827
38.0	1051.926
38.5	1030.091
39.0	1009.436
39.5	990.846
40.0	972.847
40.5	956.028
41.0	940.389
41.5	925.046
42.0	910.292
42.5	896.719
43.0	882.851
43.5	869.277
44.0	855.999
44.5	843.016
45.0	829.738
45.5	817.050
46.0	804.067
46.5	791.084
47.0	777.806
47.5	764.823
48.0	751.544
48.5	738.266
49.0	724.988
49.5	711.120
50.0	697.842
50.5	684.268
51.0	670.695
51.5	656.827
52.0	642.958
52.5	629.090
53.0	615.222
53.5	601.353
54.0	588.075
54.5	574.502

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CANDELA TABULATION - (Cont.)

55.0	560.339
55.5	546.470
56.0	532.602
56.5	519.619
57.0	506.636
57.5	493.063
58.0	479.489
58.5	466.211
59.0	453.228
59.5	440.245
60.0	427.852
60.5	415.459
61.0	403.361
61.5	391.263
62.0	379.756
62.5	368.248
63.0	357.035
63.5	345.823
64.0	334.905
64.5	324.282
65.0	313.660
65.5	303.332
66.0	293.034
66.5	282.914
67.0	272.911
67.5	263.114
68.0	253.495
68.5	243.846
69.0	234.492
69.5	225.227
70.0	216.228
70.5	207.523
71.0	198.995
71.5	190.734
72.0	182.767
72.5	175.036
73.0	167.511
73.5	160.135
74.0	153.053
74.5	146.119
75.0	139.303
75.5	132.723
76.0	126.261
76.5	119.917
77.0	113.750
77.5	107.701
78.0	101.829
78.5	96.075
79.0	90.439
79.5	85.010
80.0	79.610
80.5	74.387
81.0	69.224
81.5	64.089
82.0	59.073
82.5	54.086

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CANDELA TABULATION - (Cont.)

83.0	49.218
83.5	44.438
84.0	39.716
84.5	35.084
85.0	30.569
85.5	26.202
86.0	21.983
86.5	17.911
87.0	13.957
87.5	10.652
88.0	8.144
88.5	5.960
89.0	4.131
89.5	2.597
90.0	1.652
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
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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

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
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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1067.64	N.A.	23.20
0-30	2158.14	N.A.	46.80
0-40	2966.76	N.A.	64.40
0-60	4108.51	N.A.	89.20
0-80	4570.97	N.A.	99.20
0-90	4607.52	N.A.	100.00
10-90	4333.24	N.A.	94.00
20-40	1899.11	N.A.	41.20
20-50	2539.87	N.A.	55.10
40-70	1454.4	N.A.	31.60
60-80	462.46	N.A.	10.00
70-80	149.81	N.A.	3.30
80-90	36.55	N.A.	0.80
90-110	0.05	N.A.	0.00
90-120	0.05	N.A.	0.00
90-130	0.05	N.A.	0.00
90-150	0.05	N.A.	0.00
90-180	0.05	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	4607.56	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	274.27
10-20	793.37
20-30	1090.5
30-40	808.62
40-50	640.75
50-60	501.00
60-70	312.65
70-80	149.81
80-90	36.55
90-100	0.05
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	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	78	74	70	69
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	51	50
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38
10	61	49	42	37	60	49	42	37	48	42	37	47	41	37	46	41	37	35

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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	24.3	25.7	24.7	26.0	26.3	24.3	25.7	24.7	26.0	26.3
	3H	25.5	26.8	25.9	27.1	27.4	25.5	26.8	25.9	27.1	27.4
	4H	25.9	27.1	26.3	27.4	27.8	25.9	27.1	26.3	27.4	27.8
	6H	26.2	27.2	26.6	27.6	28.0	26.2	27.2	26.6	27.6	28.0
	8H	26.2	27.3	26.7	27.7	28.1	26.2	27.3	26.7	27.7	28.1
	12H	26.3	27.3	26.7	27.6	28.1	26.3	27.3	26.7	27.6	28.1

UGR Viewed Endwise

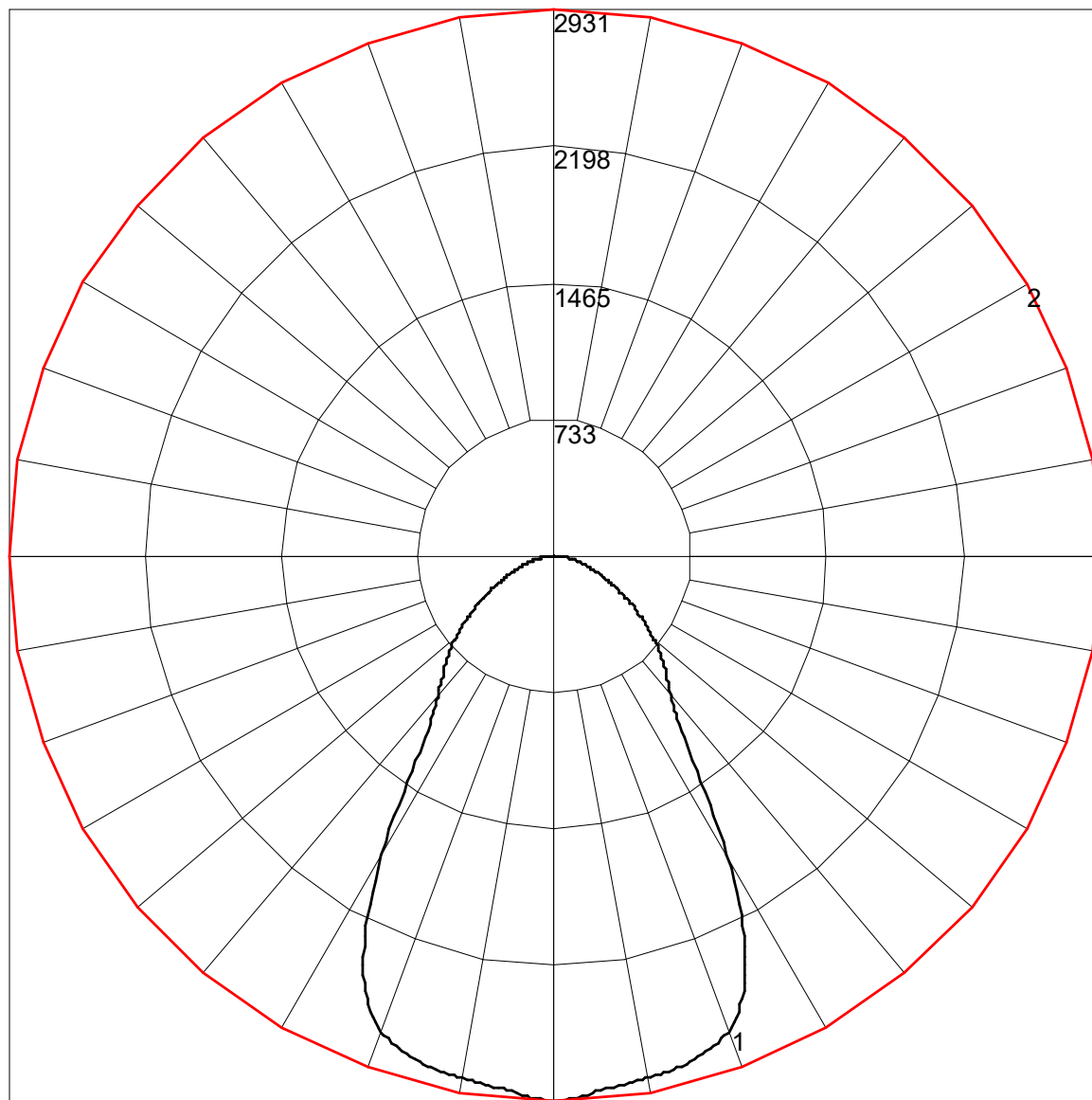
4H	2H	24.7	25.9	25.1	26.2	26.6	24.7	25.9	25.1	26.2	26.6
	3H	26.1	27.1	26.5	27.5	27.9	26.1	27.1	26.5	27.5	27.9
	4H	26.6	27.5	27.1	27.9	28.3	26.6	27.5	27.1	27.9	28.3
	6H	27.0	27.7	27.5	28.2	28.6	27.0	27.7	27.5	28.2	28.6
	8H	27.1	27.8	27.5	28.2	28.7	27.1	27.8	27.5	28.2	28.7
	12H	27.2	27.8	27.6	28.3	28.7	27.2	27.8	27.6	28.3	28.7

8H	4H	26.8	27.5	27.2	27.9	28.4	26.8	27.5	27.2	27.9	28.4
	6H	27.2	27.8	27.7	28.3	28.8	27.2	27.8	27.7	28.3	28.8
	8H	27.4	27.9	27.9	28.4	28.9	27.4	27.9	27.9	28.4	28.9
	12H	27.5	28.0	28.0	28.5	29.0	27.5	28.0	28.0	28.5	29.0

12H	4H	26.8	27.4	27.3	27.9	28.3	26.8	27.4	27.3	27.9	28.3
	6H	27.3	27.8	27.8	28.2	28.8	27.3	27.8	27.8	28.2	28.8
	8H	27.5	27.9	28.0	28.4	29.0	27.5	27.9	28.0	28.4	29.0

Maximum UGR = 29.0

POLAR GRAPH



Maximum Candela = 2930.934 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.)