



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L70-930-XXX-DIM-UNV-LW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.64836

[LUMCAT] 8CR-TL-L70-930-xxx-DIM-UNV-LW-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	4222
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	62
Total Luminaire Watts	67.8
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	70180	70180	70180
55	58427	58427	58427
65	44388	44388	44388
75	32190	32190	32190
85	20977	20977	20977

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CANDELA TABULATION

	<u>0</u>
0.0	2685.471
0.5	2684.930
1.0	2682.767
1.5	2679.523
2.0	2675.468
2.5	2670.060
3.0	2664.653
3.5	2658.435
4.0	2652.758
4.5	2647.080
5.0	2643.025
5.5	2639.240
6.0	2635.725
6.5	2632.210
7.0	2628.425
7.5	2624.911
8.0	2621.396
8.5	2618.152
9.0	2614.907
9.5	2612.204
10.0	2609.500
10.5	2607.337
11.0	2605.445
11.5	2604.363
12.0	2602.471
12.5	2600.578
13.0	2597.875
13.5	2594.360
14.0	2590.034
14.5	2585.168
15.0	2580.031
15.5	2573.542
16.0	2566.513
16.5	2559.484
17.0	2552.455
17.5	2545.155
18.0	2537.314
18.5	2528.393
19.0	2518.389
19.5	2507.305
20.0	2494.598
20.5	2480.810
21.0	2463.777
21.5	2443.500
22.0	2420.520
22.5	2394.565
23.0	2366.178
23.5	2335.357
24.0	2301.291
24.5	2264.523
25.0	2224.780
25.5	2183.415
26.0	2139.347
26.5	2093.386

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CANDELA TABULATION - (Cont.)

27.0	2044.451
27.5	1994.164
28.0	1941.174
28.5	1885.210
29.0	1827.083
29.5	1765.982
30.0	1703.258
30.5	1638.643
31.0	1574.027
31.5	1508.871
32.0	1445.607
32.5	1385.047
33.0	1326.919
33.5	1272.577
34.0	1222.561
34.5	1177.141
35.0	1136.587
35.5	1099.278
36.0	1066.564
36.5	1036.554
37.0	1009.789
37.5	985.727
38.0	963.828
38.5	943.821
39.0	924.896
39.5	907.864
40.0	891.372
40.5	875.962
41.0	861.633
41.5	847.574
42.0	834.056
42.5	821.619
43.0	808.913
43.5	796.476
44.0	784.310
44.5	772.414
45.0	760.248
45.5	748.623
46.0	736.727
46.5	724.831
47.0	712.665
47.5	700.769
48.0	688.603
48.5	676.437
49.0	664.271
49.5	651.564
50.0	639.398
50.5	626.961
51.0	614.525
51.5	601.818
52.0	589.111
52.5	576.404
53.0	563.697
53.5	550.991
54.0	538.824
54.5	526.388

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L70-930-XXX-DIM-UNV-LW-WH-XX_.IES****CANDELA TABULATION - (Cont.)**

55.0	513.411
55.5	500.704
56.0	487.997
56.5	476.101
57.0	464.206
57.5	451.769
58.0	439.333
58.5	427.166
59.0	415.271
59.5	403.375
60.0	392.020
60.5	380.665
61.0	369.580
61.5	358.495
62.0	347.951
62.5	337.407
63.0	327.134
63.5	316.860
64.0	306.857
64.5	297.124
65.0	287.391
65.5	277.929
66.0	268.493
66.5	259.220
67.0	250.055
67.5	241.079
68.0	232.265
68.5	223.424
69.0	214.854
69.5	206.365
70.0	198.119
70.5	190.143
71.0	182.330
71.5	174.760
72.0	167.460
72.5	160.377
73.0	153.483
73.5	146.724
74.0	140.235
74.5	133.882
75.0	127.636
75.5	121.607
76.0	115.686
76.5	109.874
77.0	104.223
77.5	98.681
78.0	93.301
78.5	88.029
79.0	82.865
79.5	77.890
80.0	72.943
80.5	68.157
81.0	63.426
81.5	58.722
82.0	54.126
82.5	49.557

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CANDELA TABULATION - (Cont.)

83.0	45.096
83.5	40.716
84.0	36.390
84.5	32.146
85.0	28.009
85.5	24.008
86.0	20.142
86.5	16.411
87.0	12.788
87.5	9.760
88.0	7.462
88.5	5.461
89.0	3.785
89.5	2.379
90.0	1.514
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

IES INDOOR REPORT
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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
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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
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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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 8CR-TL-L70-930-XXX-DIM-UNV-LW-WH-XX_.IES

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
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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

CANDELA TABULATION - (Cont.)

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	978.23	N.A.	23.20
0-30	1977.4	N.A.	46.80
0-40	2718.29	N.A.	64.40
0-60	3764.42	N.A.	89.20
0-80	4188.16	N.A.	99.20
0-90	4221.64	N.A.	100.00
10-90	3970.34	N.A.	94.00
20-40	1740.06	N.A.	41.20
20-50	2327.15	N.A.	55.10
40-70	1332.6	N.A.	31.60
60-80	423.73	N.A.	10.00
70-80	137.26	N.A.	3.30
80-90	33.48	N.A.	0.80
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	4221.68	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	251.30
10-20	726.93
20-30	999.17
30-40	740.89
40-50	587.09
50-60	459.04
60-70	286.47
70-80	137.26
80-90	33.48
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	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	24.0	25.4	24.4	25.7	26.0	24.0	25.4	24.4	25.7	26.0
	3H	25.2	26.5	25.6	26.8	27.1	25.2	26.5	25.6	26.8	27.1
	4H	25.6	26.8	26.0	27.1	27.5	25.6	26.8	26.0	27.1	27.5
	6H	25.9	26.9	26.3	27.3	27.7	25.9	26.9	26.3	27.3	27.7
	8H	25.9	27.0	26.4	27.4	27.8	25.9	27.0	26.4	27.4	27.8
	12H	26.0	27.0	26.4	27.3	27.8	26.0	27.0	26.4	27.3	27.8

UGR Viewed Endwise

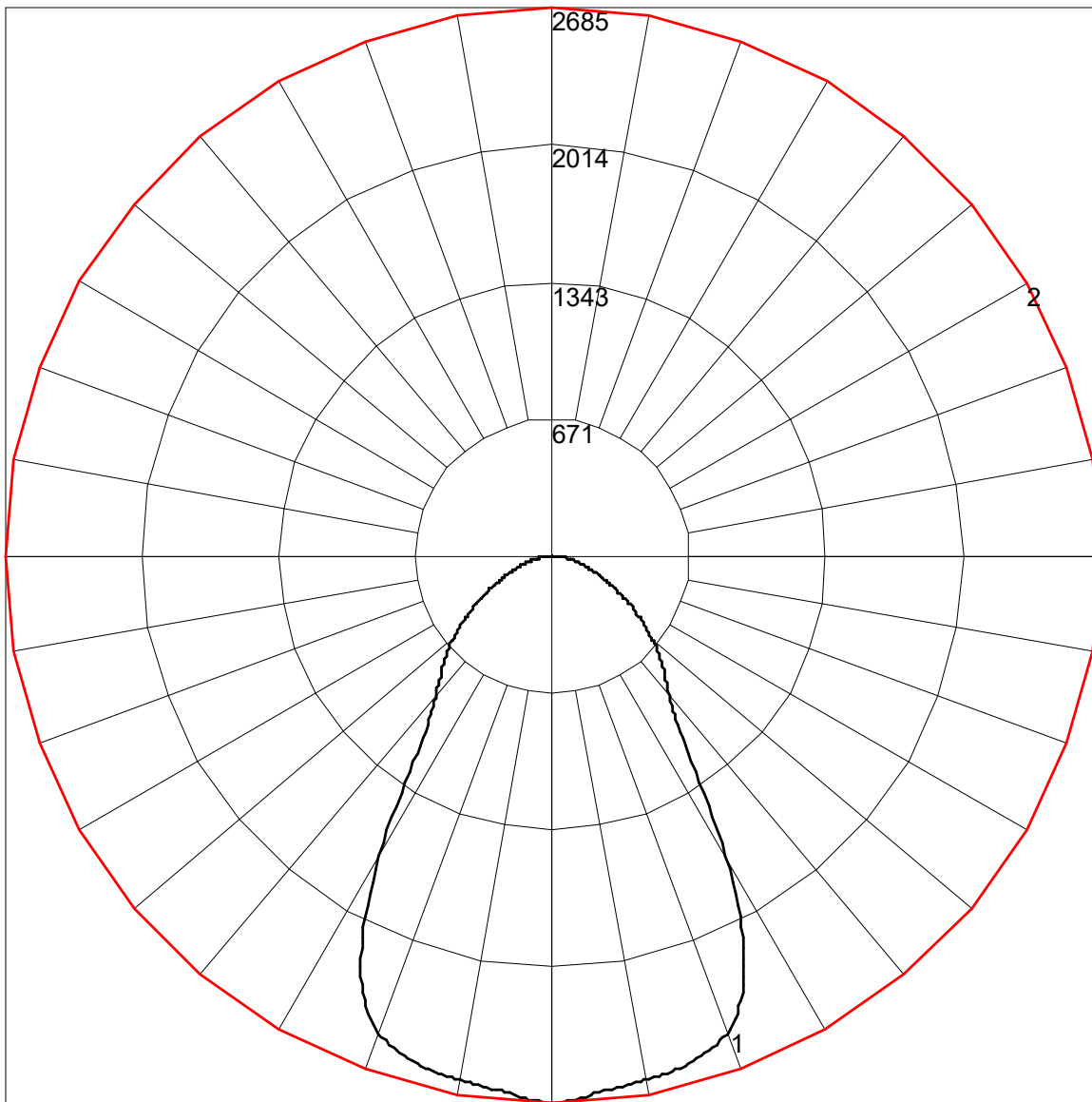
4H	2H	24.4	25.6	24.8	25.9	26.3	24.4	25.6	24.8	25.9	26.3
	3H	25.8	26.8	26.2	27.2	27.6	25.8	26.8	26.2	27.2	27.6
	4H	26.3	27.2	26.7	27.6	28.0	26.3	27.2	26.7	27.6	28.0
	6H	26.7	27.4	27.2	27.9	28.3	26.7	27.4	27.2	27.9	28.3
	8H	26.8	27.5	27.2	27.9	28.4	26.8	27.5	27.2	27.9	28.4
	12H	26.9	27.5	27.3	28.0	28.4	26.9	27.5	27.3	28.0	28.4

8H	4H	26.5	27.2	26.9	27.6	28.1	26.5	27.2	26.9	27.6	28.1
	6H	26.9	27.5	27.4	28.0	28.5	26.9	27.5	27.4	28.0	28.5
	8H	27.1	27.6	27.6	28.1	28.6	27.1	27.6	27.6	28.1	28.6
	12H	27.2	27.7	27.7	28.2	28.7	27.2	27.7	27.7	28.2	28.7

12H	4H	26.5	27.1	26.9	27.6	28.0	26.5	27.1	26.9	27.6	28.0
	6H	27.0	27.5	27.5	27.9	28.5	27.0	27.5	27.5	27.9	28.5
	8H	27.2	27.6	27.7	28.1	28.7	27.2	27.6	27.7	28.1	28.7

Maximum UGR = 28.7

POLAR GRAPH



Maximum Candela = 2685.471 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.)