



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L40-830-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-L40-830-xxx-DIM-UNV-RW-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	2774
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	76
Total Luminaire Watts	36.5
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	37450	37450	37450
55	31232	31232	31232
65	22034	22034	22034
75	13498	13498	13498
85	10645	10645	10645

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CANDELA TABULATION

	<u>0</u>
0.0	2051.770
0.5	2049.851
1.0	2047.931
1.5	2046.012
2.0	2042.173
2.5	2036.415
3.0	2030.657
3.5	2022.980
4.0	2015.303
4.5	2009.545
5.0	2001.867
5.5	1994.190
6.0	1986.513
6.5	1978.835
7.0	1971.158
7.5	1963.481
8.0	1953.884
8.5	1946.207
9.0	1938.529
9.5	1928.933
10.0	1921.255
10.5	1911.851
11.0	1902.638
11.5	1893.425
12.0	1884.212
12.5	1875.191
13.0	1865.978
13.5	1856.382
14.0	1846.977
14.5	1837.764
15.0	1829.127
15.5	1820.298
16.0	1811.661
16.5	1803.216
17.0	1795.347
17.5	1787.478
18.0	1779.800
18.5	1772.507
19.0	1765.213
19.5	1757.728
20.0	1750.051
20.5	1741.797
21.0	1732.393
21.5	1721.644
22.0	1709.553
22.5	1696.117
23.0	1681.530
23.5	1665.024
24.0	1646.982
24.5	1627.213
25.0	1605.333
25.5	1581.725
26.0	1555.430
26.5	1526.640

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CANDELA TABULATION - (Cont.)

27.0	1495.930
27.5	1462.534
28.0	1427.026
28.5	1388.448
29.0	1347.758
29.5	1303.613
30.0	1256.781
30.5	1207.262
31.0	1155.824
31.5	1103.234
32.0	1049.685
32.5	996.519
33.0	943.929
33.5	893.067
34.0	844.316
34.5	798.444
35.0	756.602
35.5	718.216
36.0	684.435
36.5	654.494
37.0	628.199
37.5	605.742
38.0	585.973
38.5	568.507
39.0	553.345
39.5	539.909
40.0	527.625
40.5	516.493
41.0	506.129
41.5	496.724
42.0	488.087
42.5	479.834
43.0	471.965
43.5	464.479
44.0	457.378
44.5	450.660
45.0	443.750
45.5	437.225
46.0	430.507
46.5	423.981
47.0	417.264
47.5	410.546
48.0	403.636
48.5	396.727
49.0	390.201
49.5	383.483
50.0	376.382
50.5	369.088
51.0	361.603
51.5	354.117
52.0	346.632
52.5	338.955
53.0	331.469
53.5	324.176
54.0	316.115
54.5	308.053

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CANDELA TABULATION - (Cont.)

55.0	300.184
55.5	292.123
56.0	284.254
56.5	276.384
57.0	268.515
57.5	260.646
58.0	253.160
58.5	245.483
59.0	237.998
59.5	230.704
60.0	223.411
60.5	216.117
61.0	209.016
61.5	202.106
62.0	195.196
62.5	188.479
63.0	181.761
63.5	175.043
64.0	168.710
64.5	162.184
65.0	156.042
65.5	149.708
66.0	143.758
66.5	137.808
67.0	132.050
67.5	126.292
68.0	120.726
68.5	115.160
69.0	109.978
69.5	104.604
70.0	99.614
70.5	94.623
71.0	89.825
71.5	85.219
72.0	80.612
72.5	76.390
73.0	72.359
73.5	68.712
74.0	65.065
74.5	61.803
75.0	58.540
75.5	55.661
76.0	52.782
76.5	50.287
77.0	47.983
77.5	45.680
78.0	43.377
78.5	41.074
79.0	38.963
79.5	36.851
80.0	34.740
80.5	32.629
81.0	30.517
81.5	28.598
82.0	26.487
82.5	24.568

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CANDELA TABULATION - (Cont.)

83.0	22.648
83.5	20.921
84.0	19.001
84.5	17.274
85.0	15.547
85.5	13.819
86.0	12.092
86.5	10.364
87.0	8.829
87.5	7.102
88.0	5.758
88.5	4.606
89.0	3.647
89.5	2.687
90.0	1.919
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
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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
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157.5	0.000
158.0	0.000
158.5	0.000
159.0	0.000
159.5	0.000
160.0	0.000
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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	705.03	N.A.	25.40
0-30	1425.3	N.A.	51.40
0-40	1923.63	N.A.	69.40
0-60	2535.16	N.A.	91.40
0-80	2755.93	N.A.	99.40
0-90	2773.64	N.A.	100.00
10-90	2585.16	N.A.	93.20
20-40	1218.6	N.A.	43.90
20-50	1562.42	N.A.	56.30
40-70	767.35	N.A.	27.70
60-80	220.77	N.A.	8.00
70-80	64.96	N.A.	2.30
80-90	17.71	N.A.	0.60
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	2773.69	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	188.48
10-20	516.55
20-30	720.27
30-40	498.33
40-50	343.82
50-60	267.72
60-70	155.81
70-80	64.96
80-90	17.71
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	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	61	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	21.4	22.8	21.8	23.1	23.4	21.4	22.8	21.8	23.1	23.4
	3H	22.4	23.6	22.8	23.9	24.3	22.4	23.6	22.8	23.9	24.3
	4H	22.7	23.8	23.1	24.1	24.5	22.7	23.8	23.1	24.1	24.5
	6H	22.8	23.9	23.3	24.2	24.6	22.8	23.9	23.3	24.2	24.6
	8H	22.9	23.9	23.3	24.3	24.7	22.9	23.9	23.3	24.3	24.7
	12H	22.9	23.8	23.4	24.2	24.7	22.9	23.8	23.4	24.2	24.7

UGR Viewed Endwise

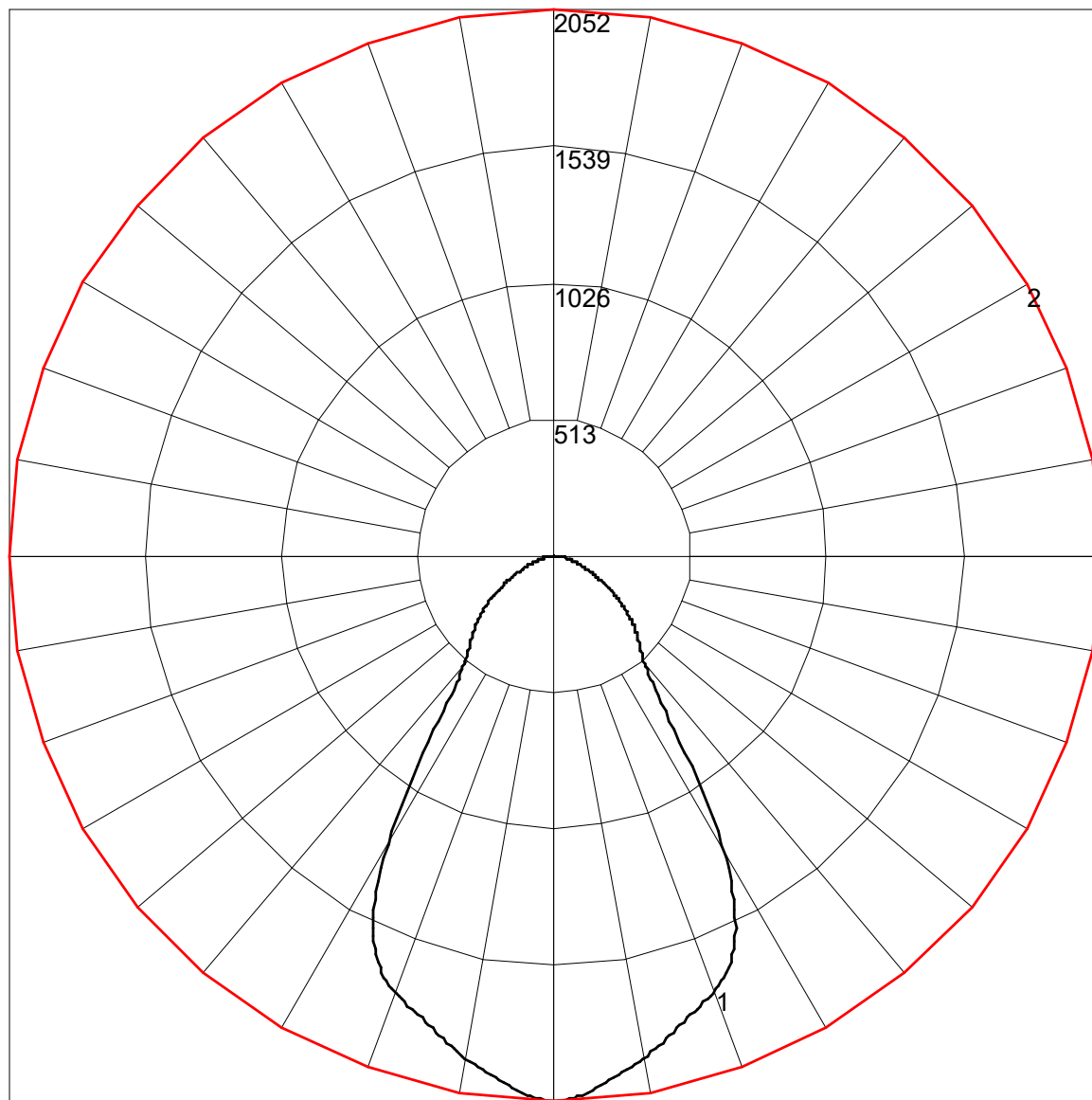
4H	2H	21.8	22.9	22.2	23.2	23.6	21.8	22.9	22.2	23.2	23.6
	3H	22.9	23.8	23.3	24.2	24.6	22.9	23.8	23.3	24.2	24.6
	4H	23.3	24.1	23.7	24.5	24.9	23.3	24.1	23.7	24.5	24.9
	6H	23.5	24.2	24.0	24.7	25.1	23.5	24.2	24.0	24.7	25.1
	8H	23.6	24.2	24.1	24.7	25.2	23.6	24.2	24.1	24.7	25.2
	12H	23.7	24.2	24.1	24.7	25.2	23.7	24.2	24.1	24.7	25.2

8H	4H	23.3	24.0	23.8	24.4	24.9	23.3	24.0	23.8	24.4	24.9
	6H	23.7	24.2	24.2	24.7	25.2	23.7	24.2	24.2	24.7	25.2
	8H	23.8	24.3	24.3	24.8	25.3	23.8	24.3	24.3	24.8	25.3
	12H	23.9	24.3	24.4	24.8	25.4	23.9	24.3	24.4	24.8	25.4

12H	4H	23.3	23.9	23.8	24.4	24.9	23.3	23.9	23.8	24.4	24.9
	6H	23.7	24.2	24.2	24.6	25.2	23.7	24.2	24.2	24.6	25.2
	8H	23.8	24.3	24.4	24.8	25.3	23.8	24.3	24.4	24.8	25.3

Maximum UGR = 25.4

POLAR GRAPH



Maximum Candela = 2051.77 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.)