



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L40-840-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-L40-840-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	2917
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	80
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	39389	39389	39389
55	32849	32849	32849
65	23175	23175	23175
75	14196	14196	14196
85	11196	11196	11196

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CANDELA TABULATION

	<u>0</u>
0.0	2157.974
0.5	2155.956
1.0	2153.937
1.5	2151.918
2.0	2147.881
2.5	2141.825
3.0	2135.769
3.5	2127.694
4.0	2119.619
4.5	2113.563
5.0	2105.489
5.5	2097.414
6.0	2089.339
6.5	2081.264
7.0	2073.190
7.5	2065.115
8.0	2055.021
8.5	2046.947
9.0	2038.872
9.5	2028.779
10.0	2020.704
10.5	2010.812
11.0	2001.123
11.5	1991.433
12.0	1981.743
12.5	1972.255
13.0	1962.566
13.5	1952.472
14.0	1942.581
14.5	1932.891
15.0	1923.807
15.5	1914.521
16.0	1905.437
16.5	1896.555
17.0	1888.278
17.5	1880.001
18.0	1871.927
18.5	1864.256
19.0	1856.585
19.5	1848.712
20.0	1840.637
20.5	1831.957
21.0	1822.065
21.5	1810.761
22.0	1798.043
22.5	1783.912
23.0	1768.570
23.5	1751.209
24.0	1732.234
24.5	1711.441
25.0	1688.428
25.5	1663.598
26.0	1635.942
26.5	1605.662

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CANDELA TABULATION - (Cont.)

27.0	1573.363
27.5	1538.238
28.0	1500.892
28.5	1460.317
29.0	1417.521
29.5	1371.091
30.0	1321.835
30.5	1269.753
31.0	1215.652
31.5	1160.340
32.0	1104.019
32.5	1048.101
33.0	992.789
33.5	939.294
34.0	888.020
34.5	839.773
35.0	795.766
35.5	755.392
36.0	719.863
36.5	688.372
37.0	660.716
37.5	637.097
38.0	616.305
38.5	597.935
39.0	581.987
39.5	567.856
40.0	554.937
40.5	543.228
41.0	532.327
41.5	522.436
42.0	513.352
42.5	504.671
43.0	496.395
43.5	488.522
44.0	481.053
44.5	473.987
45.0	466.720
45.5	459.856
46.0	452.791
46.5	445.928
47.0	438.862
47.5	431.797
48.0	424.529
48.5	417.262
49.0	410.399
49.5	403.333
50.0	395.864
50.5	388.193
51.0	380.320
51.5	372.447
52.0	364.575
52.5	356.500
53.0	348.627
53.5	340.956
54.0	332.477
54.5	323.999

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CANDELA TABULATION - (Cont.)

55.0	315.722
55.5	307.244
56.0	298.967
56.5	290.691
57.0	282.414
57.5	274.137
58.0	266.265
58.5	258.190
59.0	250.317
59.5	242.646
60.0	234.975
60.5	227.304
61.0	219.835
61.5	212.568
62.0	205.300
62.5	198.235
63.0	191.169
63.5	184.104
64.0	177.442
64.5	170.579
65.0	164.119
65.5	157.457
66.0	151.200
66.5	144.942
67.0	138.886
67.5	132.829
68.0	126.975
68.5	121.121
69.0	115.671
69.5	110.018
70.0	104.770
70.5	99.521
71.0	94.474
71.5	89.630
72.0	84.785
72.5	80.344
73.0	76.104
73.5	72.269
74.0	68.433
74.5	65.002
75.0	61.570
75.5	58.542
76.0	55.514
76.5	52.890
77.0	50.467
77.5	48.045
78.0	45.622
78.5	43.200
79.0	40.979
79.5	38.759
80.0	36.538
80.5	34.318
81.0	32.097
81.5	30.078
82.0	27.858
82.5	25.839

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CANDELA TABULATION - (Cont.)

83.0	23.820
83.5	22.004
84.0	19.985
84.5	18.168
85.0	16.351
85.5	14.535
86.0	12.718
86.5	10.901
87.0	9.286
87.5	7.469
88.0	6.056
88.5	4.845
89.0	3.836
89.5	2.826
90.0	2.019
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
120.5	0.000
121.0	0.000
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122.0	0.000
122.5	0.000
123.0	0.000
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
129.5	0.000
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
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

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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	741.52	N.A.	25.40
0-30	1499.07	N.A.	51.40
0-40	2023.2	N.A.	69.40
0-60	2666.39	N.A.	91.40
0-80	2898.59	N.A.	99.40
0-90	2917.21	N.A.	100.00
10-90	2718.97	N.A.	93.20
20-40	1281.68	N.A.	43.90
20-50	1643.29	N.A.	56.30
40-70	807.07	N.A.	27.70
60-80	232.20	N.A.	8.00
70-80	68.32	N.A.	2.30
80-90	18.62	N.A.	0.60
90-110	0.06	N.A.	0.00
90-120	0.06	N.A.	0.00
90-130	0.06	N.A.	0.00
90-150	0.06	N.A.	0.00
90-180	0.06	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2917.26	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	198.23
10-20	543.29
20-30	757.55
30-40	524.13
40-50	361.62
50-60	281.57
60-70	163.88
70-80	68.32
80-90	18.62
90-100	0.06
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

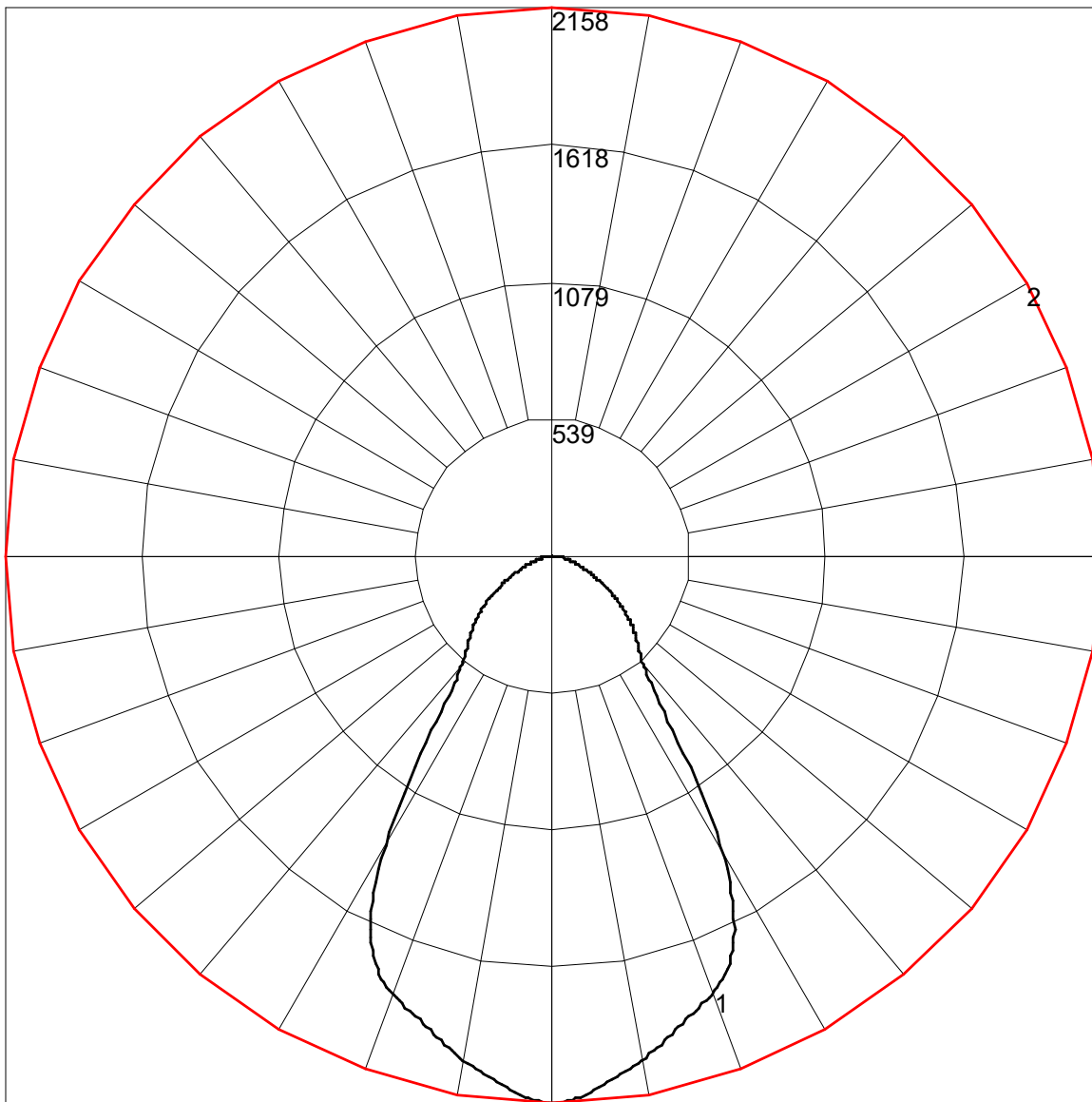
X=2H	Y=2H	21.6	22.9	21.9	23.2	23.5	21.6	22.9	21.9	23.2	23.5
	3H	22.5	23.7	22.9	24.0	24.4	22.5	23.7	22.9	24.0	24.4
	4H	22.8	23.9	23.2	24.2	24.6	22.8	23.9	23.2	24.2	24.6
	6H	22.9	24.0	23.4	24.3	24.7	22.9	24.0	23.4	24.3	24.7
	8H	23.0	24.0	23.4	24.4	24.8	23.0	24.0	23.4	24.4	24.8
	12H	23.0	23.9	23.5	24.3	24.8	23.0	23.9	23.5	24.3	24.8

UGR Viewed Endwise

4H	2H	21.9	23.0	22.3	23.3	23.7	21.9	23.0	22.3	23.3	23.7
	3H	23.0	23.9	23.4	24.3	24.7	23.0	23.9	23.4	24.3	24.7
	4H	23.4	24.2	23.8	24.6	25.0	23.4	24.2	23.8	24.6	25.0
	6H	23.6	24.3	24.1	24.8	25.2	23.6	24.3	24.1	24.8	25.2
	8H	23.7	24.3	24.2	24.8	25.3	23.7	24.3	24.2	24.8	25.3
	12H	23.8	24.3	24.2	24.8	25.3	23.8	24.3	24.2	24.8	25.3
8H	4H	23.4	24.1	23.9	24.5	25.0	23.4	24.1	23.9	24.5	25.0
	6H	23.8	24.3	24.3	24.8	25.3	23.8	24.3	24.3	24.8	25.3
	8H	23.9	24.4	24.4	24.9	25.4	23.9	24.4	24.4	24.9	25.4
	12H	24.0	24.4	24.5	24.9	25.5	24.0	24.4	24.5	24.9	25.5
12H	4H	23.4	24.0	23.9	24.5	25.0	23.4	24.0	23.9	24.5	25.0
	6H	23.8	24.3	24.3	24.7	25.3	23.8	24.3	24.3	24.7	25.3
	8H	23.9	24.4	24.5	24.9	25.4	23.9	24.4	24.5	24.9	25.4

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 2157.974 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.)