



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L40-930-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.

[LUMCAT] 8CR-TL-L40-930-xxx-DIM-UNV-LW-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	2465
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	68
Total Luminaire Watts	36.5
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	40981	40981	40981
55	34118	34118	34118
65	25920	25920	25920
75	18797	18797	18797
85	12250	12250	12250

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CANDELA TABULATION

	<u>0</u>
0.0	1568.167
0.5	1567.852
1.0	1566.589
1.5	1564.694
2.0	1562.326
2.5	1559.169
3.0	1556.011
3.5	1552.380
4.0	1549.065
4.5	1545.749
5.0	1543.381
5.5	1541.171
6.0	1539.119
6.5	1537.066
7.0	1534.856
7.5	1532.804
8.0	1530.751
8.5	1528.857
9.0	1526.962
9.5	1525.383
10.0	1523.805
10.5	1522.542
11.0	1521.437
11.5	1520.805
12.0	1519.700
12.5	1518.595
13.0	1517.016
13.5	1514.964
14.0	1512.438
14.5	1509.596
15.0	1506.596
15.5	1502.807
16.0	1498.703
16.5	1494.598
17.0	1490.493
17.5	1486.231
18.0	1481.652
18.5	1476.442
19.0	1470.601
19.5	1464.128
20.0	1456.708
20.5	1448.656
21.0	1438.710
21.5	1426.870
22.0	1413.450
22.5	1398.294
23.0	1381.718
23.5	1363.720
24.0	1343.828
24.5	1322.357
25.0	1299.149
25.5	1274.994
26.0	1249.261
26.5	1222.422

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CANDELA TABULATION - (Cont.)

27.0	1193.847
27.5	1164.482
28.0	1133.539
28.5	1100.859
29.0	1066.916
29.5	1031.236
30.0	994.609
30.5	956.877
31.0	919.145
31.5	881.098
32.0	844.155
32.5	808.791
33.0	774.848
33.5	743.115
34.0	713.908
34.5	687.386
35.0	663.704
35.5	641.918
36.0	622.815
36.5	605.291
37.0	589.661
37.5	575.610
38.0	562.823
38.5	551.140
39.0	540.089
39.5	530.143
40.0	520.512
40.5	511.513
41.0	503.146
41.5	494.937
42.0	487.043
42.5	479.781
43.0	472.361
43.5	465.098
44.0	457.994
44.5	451.047
45.0	443.943
45.5	437.154
46.0	430.208
46.5	423.262
47.0	416.157
47.5	409.211
48.0	402.106
48.5	395.002
49.0	387.898
49.5	380.478
50.0	373.373
50.5	366.111
51.0	358.849
51.5	351.429
52.0	344.009
52.5	336.588
53.0	329.168
53.5	321.748
54.0	314.644
54.5	307.382

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CANDELA TABULATION - (Cont.)

55.0	299.804
55.5	292.384
56.0	284.963
56.5	278.017
57.0	271.071
57.5	263.808
58.0	256.546
58.5	249.442
59.0	242.495
59.5	235.549
60.0	228.918
60.5	222.287
61.0	215.814
61.5	209.342
62.0	203.184
62.5	197.027
63.0	191.028
63.5	185.029
64.0	179.188
64.5	173.504
65.0	167.821
65.5	162.295
66.0	156.785
66.5	151.370
67.0	146.018
67.5	140.777
68.0	135.630
68.5	130.467
69.0	125.463
69.5	120.506
70.0	115.690
70.5	111.033
71.0	106.471
71.5	102.050
72.0	97.787
72.5	93.651
73.0	89.625
73.5	85.678
74.0	81.890
74.5	78.179
75.0	74.533
75.5	71.012
76.0	67.554
76.5	64.160
77.0	60.861
77.5	57.624
78.0	54.482
78.5	51.404
79.0	48.389
79.5	45.484
80.0	42.595
80.5	39.800
81.0	37.037
81.5	34.290
82.0	31.606
82.5	28.938

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CANDELA TABULATION - (Cont.)

83.0	26.333
83.5	23.776
84.0	21.250
84.5	18.771
85.0	16.356
85.5	14.019
86.0	11.762
86.5	9.583
87.0	7.467
87.5	5.699
88.0	4.357
88.5	3.189
89.0	2.210
89.5	1.389
90.0	0.884
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
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117.5	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
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154.5	0.000
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159.5	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

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	571.23	N.A.	23.20
0-30	1154.69	N.A.	46.80
0-40	1587.33	N.A.	64.40
0-60	2198.22	N.A.	89.20
0-80	2445.65	N.A.	99.20
0-90	2465.21	N.A.	100.00
10-90	2318.46	N.A.	94.00
20-40	1016.1	N.A.	41.20
20-50	1358.93	N.A.	55.10
40-70	778.16	N.A.	31.60
60-80	247.44	N.A.	10.00
70-80	80.15	N.A.	3.30
80-90	19.55	N.A.	0.80
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2465.23	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	146.75
10-20	424.48
20-30	583.46
30-40	432.64
40-50	342.83
50-60	268.05
60-70	167.28
70-80	80.15
80-90	19.55
90-100	0.02
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	52	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	22.1	23.5	22.5	23.8	24.1	22.1	23.5	22.5	23.8	24.1
	3H	23.3	24.6	23.7	24.9	25.2	23.3	24.6	23.7	24.9	25.2
	4H	23.7	24.9	24.1	25.2	25.6	23.7	24.9	24.1	25.2	25.6
	6H	24.0	25.0	24.4	25.4	25.8	24.0	25.0	24.4	25.4	25.8
	8H	24.0	25.1	24.5	25.5	25.9	24.0	25.1	24.5	25.5	25.9
	12H	24.1	25.0	24.5	25.4	25.9	24.1	25.0	24.5	25.4	25.9

UGR Viewed Endwise

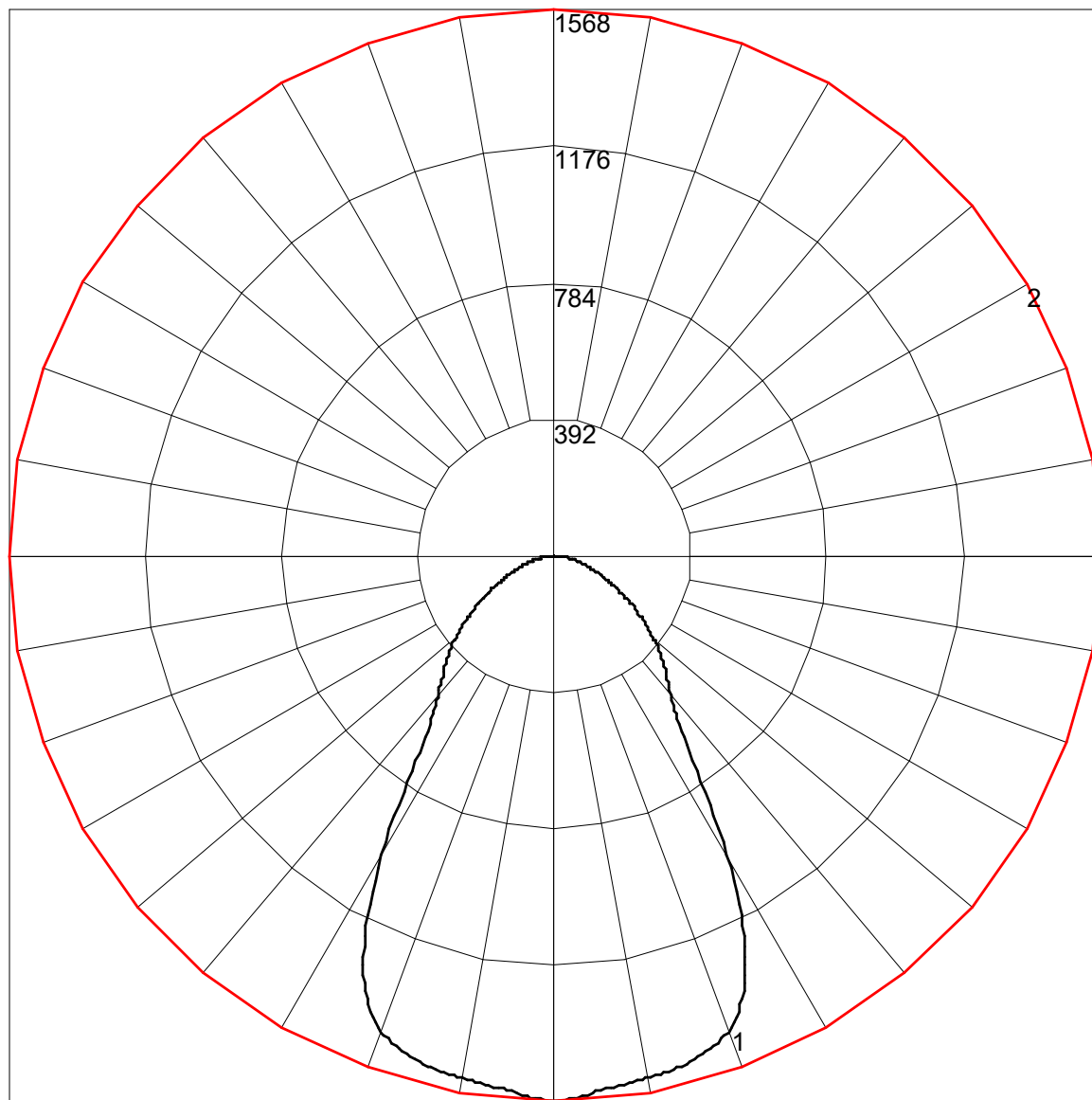
4H	2H	22.5	23.7	22.9	24.0	24.4	22.5	23.7	22.9	24.0	24.4
	3H	23.9	24.9	24.3	25.3	25.7	23.9	24.9	24.3	25.3	25.7
	4H	24.4	25.3	24.8	25.7	26.1	24.4	25.3	24.8	25.7	26.1
	6H	24.8	25.5	25.3	26.0	26.4	24.8	25.5	25.3	26.0	26.4
	8H	24.9	25.6	25.3	26.0	26.5	24.9	25.6	25.3	26.0	26.5
	12H	25.0	25.6	25.4	26.1	26.5	25.0	25.6	25.4	26.1	26.5

8H	4H	24.6	25.3	25.0	25.7	26.2	24.6	25.3	25.0	25.7	26.2
	6H	25.0	25.6	25.5	26.1	26.6	25.0	25.6	25.5	26.1	26.6
	8H	25.2	25.7	25.7	26.2	26.7	25.2	25.7	25.7	26.2	26.7
	12H	25.3	25.8	25.8	26.3	26.8	25.3	25.8	25.8	26.3	26.8

12H	4H	24.6	25.2	25.0	25.7	26.1	24.6	25.2	25.0	25.7	26.1
	6H	25.1	25.6	25.6	26.0	26.6	25.1	25.6	25.6	26.0	26.6
	8H	25.3	25.7	25.8	26.2	26.8	25.3	25.7	25.8	26.2	26.8

Maximum UGR = 26.8

POLAR GRAPH



Maximum Candela = 1568.167 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.)