



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L30-830-XXX-DIM-UNV-LW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 29-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L30-830-xxx-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	2240
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	83
Total Luminaire Watts	27
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	37242	37242	37242
55	31005	31005	31005
65	23555	23555	23555
75	17082	17082	17082
85	11131	11131	11131

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CANDELA TABULATION

	<u>0</u>
0.0	1425.078
0.5	1424.791
1.0	1423.643
1.5	1421.921
2.0	1419.769
2.5	1416.900
3.0	1414.030
3.5	1410.731
4.0	1407.718
4.5	1404.705
5.0	1402.553
5.5	1400.544
6.0	1398.679
6.5	1396.814
7.0	1394.806
7.5	1392.941
8.0	1391.075
8.5	1389.354
9.0	1387.632
9.5	1386.197
10.0	1384.763
10.5	1383.615
11.0	1382.611
11.5	1382.037
12.0	1381.033
12.5	1380.028
13.0	1378.594
13.5	1376.729
14.0	1374.433
14.5	1371.851
15.0	1369.125
15.5	1365.681
16.0	1361.951
16.5	1358.221
17.0	1354.491
17.5	1350.617
18.0	1346.457
18.5	1341.722
19.0	1336.414
19.5	1330.532
20.0	1323.788
20.5	1316.472
21.0	1307.433
21.5	1296.673
22.0	1284.478
22.5	1270.705
23.0	1255.641
23.5	1239.285
24.0	1221.208
24.5	1201.696
25.0	1180.606
25.5	1158.656
26.0	1135.270
26.5	1110.880

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CANDELA TABULATION - (Cont.)

27.0	1084.913
27.5	1058.227
28.0	1030.107
28.5	1000.409
29.0	969.564
29.5	937.140
30.0	903.855
30.5	869.566
31.0	835.277
31.5	800.700
32.0	767.129
32.5	734.992
33.0	704.146
33.5	675.309
34.0	648.767
34.5	624.664
35.0	603.144
35.5	583.345
36.0	565.985
36.5	550.060
37.0	535.857
37.5	523.088
38.0	511.467
38.5	500.850
39.0	490.807
39.5	481.769
40.0	473.017
40.5	464.840
41.0	457.236
41.5	449.775
42.0	442.602
42.5	436.002
43.0	429.259
43.5	422.660
44.0	416.204
44.5	409.891
45.0	403.435
45.5	397.266
46.0	390.953
46.5	384.640
47.0	378.184
47.5	371.872
48.0	365.416
48.5	358.959
49.0	352.503
49.5	345.760
50.0	339.304
50.5	332.705
51.0	326.105
51.5	319.362
52.0	312.619
52.5	305.876
53.0	299.133
53.5	292.390
54.0	285.934
54.5	279.334

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CANDELA TABULATION - (Cont.)

55.0	272.448
55.5	265.705
56.0	258.962
56.5	252.649
57.0	246.336
57.5	239.737
58.0	233.137
58.5	226.681
59.0	220.368
59.5	214.056
60.0	208.030
60.5	202.004
61.0	196.122
61.5	190.240
62.0	184.645
62.5	179.049
63.0	173.597
63.5	168.146
64.0	162.837
64.5	157.672
65.0	152.508
65.5	147.486
66.0	142.479
66.5	137.558
67.0	132.694
67.5	127.931
68.0	123.254
68.5	118.563
69.0	114.015
69.5	109.510
70.0	105.134
70.5	100.902
71.0	96.755
71.5	92.738
72.0	88.865
72.5	85.106
73.0	81.447
73.5	77.861
74.0	74.417
74.5	71.046
75.0	67.732
75.5	64.532
76.0	61.390
76.5	58.306
77.0	55.307
77.5	52.366
78.0	49.511
78.5	46.714
79.0	43.973
79.5	41.333
80.0	38.708
80.5	36.169
81.0	33.658
81.5	31.161
82.0	28.722
82.5	26.298

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CANDELA TABULATION - (Cont.)

83.0	23.931
83.5	21.606
84.0	19.311
84.5	17.058
85.0	14.863
85.5	12.740
86.0	10.688
86.5	8.709
87.0	6.786
87.5	5.179
88.0	3.960
88.5	2.898
89.0	2.009
89.5	1.263
90.0	0.803
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
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124.5	0.000
125.0	0.000
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128.0	0.000
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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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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
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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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	519.11	N.A.	23.20
0-30	1049.33	N.A.	46.80
0-40	1442.5	N.A.	64.40
0-60	1997.64	N.A.	89.20
0-80	2222.5	N.A.	99.20
0-90	2240.26	N.A.	100.00
10-90	2106.91	N.A.	94.00
20-40	923.39	N.A.	41.20
20-50	1234.93	N.A.	55.10
40-70	707.16	N.A.	31.60
60-80	224.86	N.A.	10.00
70-80	72.84	N.A.	3.30
80-90	17.77	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	2240.29	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	133.36
10-20	385.75
20-30	530.22
30-40	393.16
40-50	311.55
50-60	243.59
60-70	152.02
70-80	72.84
80-90	17.77
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	58	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

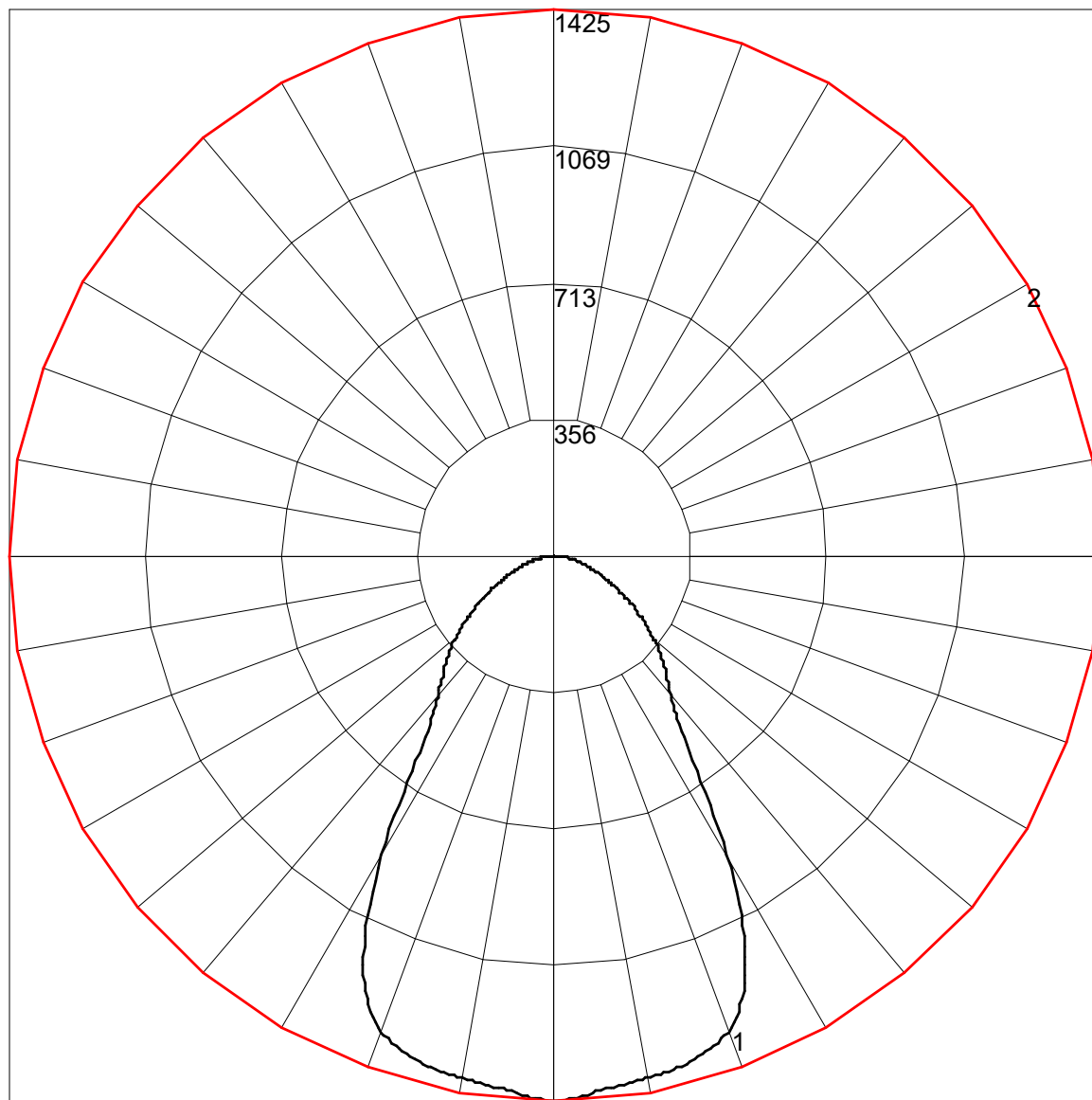
X=2H	Y=2H	21.8	23.2	22.2	23.5	23.8	21.8	23.2	22.2	23.5	23.8
	3H	23.0	24.3	23.4	24.6	24.9	23.0	24.3	23.4	24.6	24.9
	4H	23.4	24.6	23.8	24.9	25.3	23.4	24.6	23.8	24.9	25.3
	6H	23.7	24.7	24.1	25.1	25.5	23.7	24.7	24.1	25.1	25.5
	8H	23.7	24.8	24.2	25.2	25.6	23.7	24.8	24.2	25.2	25.6
	12H	23.8	24.8	24.2	25.1	25.6	23.8	24.8	24.2	25.1	25.6

UGR Viewed Endwise

4H	2H	22.2	23.4	22.6	23.7	24.1	22.2	23.4	22.6	23.7	24.1
	3H	23.6	24.6	24.0	25.0	25.4	23.6	24.6	24.0	25.0	25.4
	4H	24.1	25.0	24.5	25.4	25.8	24.1	25.0	24.5	25.4	25.8
	6H	24.5	25.2	25.0	25.7	26.1	24.5	25.2	25.0	25.7	26.1
	8H	24.6	25.3	25.0	25.7	26.2	24.6	25.3	25.0	25.7	26.2
	12H	24.7	25.3	25.1	25.8	26.2	24.7	25.3	25.1	25.8	26.2
8H	4H	24.3	25.0	24.7	25.4	25.9	24.3	25.0	24.7	25.4	25.9
	6H	24.7	25.3	25.2	25.8	26.3	24.7	25.3	25.2	25.8	26.3
	8H	24.9	25.4	25.4	25.9	26.4	24.9	25.4	25.4	25.9	26.4
	12H	25.0	25.5	25.5	26.0	26.5	25.0	25.5	25.5	26.0	26.5
12H	4H	24.3	24.9	24.7	25.4	25.8	24.3	24.9	24.7	25.4	25.8
	6H	24.8	25.3	25.3	25.7	26.3	24.8	25.3	25.3	25.7	26.3
	8H	25.0	25.4	25.5	25.9	26.5	25.0	25.4	25.5	25.9	26.5

Maximum UGR = 26.5

POLAR GRAPH



Maximum Candela = 1425.078 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.)