



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L30-835-XXX-DIM-UNV-OM-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12316380.22
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 26-JAN-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 6CR-TL-L30-835-xxx-DIM-UNV-OM-WH-xx
 [LUMINAIRE] 6" DIA. SURFACE CYLINDER
 [LAMP] One white LED
 [SEARCH_SOURCETYPE] LED
 [SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight
 [SEARCH_MOUNTING] Surface

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2900
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	27.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.74
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 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	7108	7108	7108
55	2076	2076	2076
65	743	743	743
75	339	339	339
85	251	251	251

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CANDELA TABULATION

	<u>0</u>
0.0	6082.122
0.5	6092.626
1.0	6097.128
1.5	6094.127
2.0	6083.622
2.5	6068.616
3.0	6036.352
3.5	5998.836
4.0	5946.313
4.5	5877.283
5.0	5789.495
5.5	5682.950
6.0	5574.153
6.5	5445.847
7.0	5310.039
7.5	5166.727
8.0	5018.913
8.5	4871.100
9.0	4724.036
9.5	4579.224
10.0	4439.664
10.5	4307.607
11.0	4181.552
11.5	4064.502
12.0	3957.206
12.5	3855.912
13.0	3763.622
13.5	3678.836
14.0	3601.552
14.5	3528.021
15.0	3459.741
15.5	3395.213
16.0	3337.439
16.5	3286.417
17.0	3239.146
17.5	3194.877
18.0	3152.859
18.5	3110.841
19.0	3071.824
19.5	3034.308
20.0	2999.793
20.5	2966.028
21.0	2931.514
21.5	2896.248
22.0	2857.232
22.5	2815.213
23.0	2769.444
23.5	2719.922
24.0	2665.149
24.5	2603.622
25.0	2536.093
25.5	2461.061
26.0	2377.025
26.5	2282.484

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CANDELA TABULATION - (Cont.)

27.0	2178.939
27.5	2066.391
28.0	1946.339
28.5	1817.283
29.0	1677.723
29.5	1533.661
30.0	1385.847
30.5	1237.283
31.0	1090.970
31.5	950.660
32.0	815.602
32.5	691.123
33.0	577.449
33.5	473.979
34.0	385.516
34.5	311.309
35.0	251.809
35.5	205.964
36.0	171.149
36.5	145.863
37.0	129.431
37.5	119.001
38.0	111.573
38.5	104.970
39.0	99.043
39.5	93.640
40.0	88.538
40.5	83.811
41.0	79.384
41.5	75.182
42.0	71.356
42.5	67.604
43.0	64.078
43.5	60.701
44.0	57.475
44.5	54.473
45.0	51.622
45.5	48.846
46.0	46.145
46.5	43.444
47.0	40.818
47.5	38.191
48.0	35.640
48.5	33.314
49.0	31.063
49.5	28.812
50.0	26.636
50.5	24.461
51.0	22.660
51.5	20.934
52.0	19.358
52.5	17.933
53.0	16.582
53.5	15.382
54.0	14.181
54.5	13.206

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CANDELA TABULATION - (Cont.)

55.0	12.230
55.5	11.330
56.0	10.655
56.5	9.829
57.0	9.154
57.5	8.554
58.0	8.028
58.5	7.503
59.0	6.978
59.5	6.603
60.0	6.153
60.5	5.777
61.0	5.402
61.5	5.027
62.0	4.802
62.5	4.427
63.0	4.202
63.5	3.902
64.0	3.677
64.5	3.451
65.0	3.226
65.5	3.076
66.0	2.851
66.5	2.776
67.0	2.551
67.5	2.401
68.0	2.251
68.5	2.101
69.0	1.951
69.5	1.876
70.0	1.801
70.5	1.651
71.0	1.501
71.5	1.501
72.0	1.351
72.5	1.276
73.0	1.125
73.5	1.050
74.0	0.975
74.5	0.975
75.0	0.900
75.5	0.825
76.0	0.825
76.5	0.750
77.0	0.675
77.5	0.675
78.0	0.600
78.5	0.525
79.0	0.525
79.5	0.525
80.0	0.450
80.5	0.375
81.0	0.450
81.5	0.375
82.0	0.375
82.5	0.375

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CANDELA TABULATION - (Cont.)

83.0	0.300
83.5	0.300
84.0	0.225
84.5	0.225
85.0	0.225
85.5	0.225
86.0	0.225
86.5	0.150
87.0	0.150
87.5	0.150
88.0	0.150
88.5	0.150
89.0	0.150
89.5	0.150
90.0	0.075
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
121.5	0.000
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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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	1490.14	N.A.	51.40
0-30	2585.46	N.A.	89.10
0-40	2842.79	N.A.	98.00
0-60	2895.54	N.A.	99.80
0-80	2899.99	N.A.	100.00
0-90	2900.26	N.A.	100.00
10-90	2394.37	N.A.	82.60
20-40	1352.65	N.A.	46.60
20-50	1393.38	N.A.	48.00
40-70	56.19	N.A.	1.90
60-80	4.45	N.A.	0.20
70-80	1.02	N.A.	0.00
80-90	0.27	N.A.	0.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2900.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	505.90
10-20	984.24
20-30	1095.32
30-40	257.33
40-50	40.74
50-60	12.02
60-70	3.43
70-80	1.02
80-90	0.27
90-100	0.00
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	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	98	98	97	95	95	95	95
2	109	105	102	99	107	103	100	98	100	98	95	97	95	93	95	93	91	90	90	90	90
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	89	87	85	85	85	85
4	101	94	89	86	99	93	88	85	91	87	84	89	86	83	87	84	82	81	81	81	81
5	96	89	84	80	95	88	84	80	87	82	79	85	81	79	83	80	78	77	77	77	77
6	92	85	80	76	91	84	79	76	83	78	75	81	77	75	80	77	74	73	73	73	73
7	89	81	75	72	87	80	75	72	79	74	71	78	74	71	77	73	71	69	69	69	69
8	85	77	72	68	84	76	71	68	75	71	68	74	70	67	73	70	67	66	66	66	66
9	82	73	68	65	81	73	68	65	72	68	65	71	67	64	71	67	64	63	63	63	63
10	79	70	65	62	78	70	65	62	69	65	62	68	64	61	68	64	61	60	60	60	60

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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

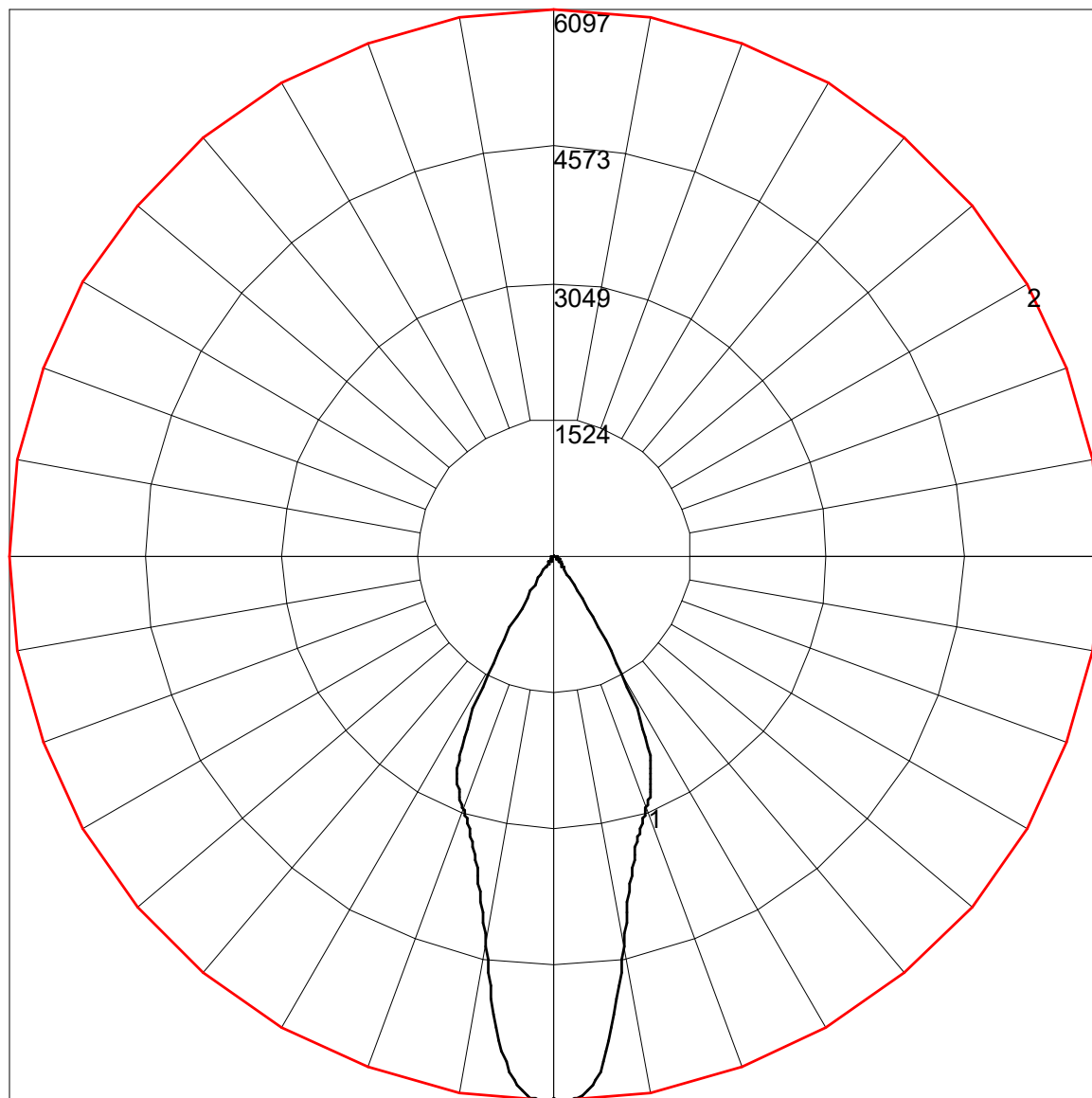
X=2H	Y=2H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	3H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	4H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	6H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	8H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	12H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8

UGR Viewed Endwise

4H	2H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	3H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	4H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	6H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	8H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	12H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
8H	4H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	6H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	8H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	12H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
12H	4H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	6H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
	8H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8

Maximum UGR = 3.8

POLAR GRAPH



Maximum Candela = 6097.128 Located At Horizontal Angle = 0, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)