



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L30-830-XXX-DIM-UNV-RW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12316380.12
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 27-JAN-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 6CR-TL-L30-830-xxx-DIM-UNV-RW-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	1900
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	68
Total Luminaire Watts	27.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	0.98
Spacing Criterion (Diagonal)	0.88
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	43956	43956	43956
55	35492	35492	35492
65	22960	22960	22960
75	12803	12803	12803
85	6578	6578	6578

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CANDELA TABULATION

<u>0</u>	
0.0	1526.446
0.5	1526.446
1.0	1525.010
1.5	1522.138
2.0	1519.266
2.5	1516.394
3.0	1512.086
3.5	1507.778
4.0	1503.470
4.5	1497.726
5.0	1493.418
5.5	1487.674
6.0	1481.930
6.5	1476.186
7.0	1470.443
7.5	1464.699
8.0	1458.955
8.5	1451.775
9.0	1446.031
9.5	1440.287
10.0	1434.830
10.5	1428.943
11.0	1422.912
11.5	1417.024
12.0	1411.424
12.5	1405.823
13.0	1400.223
13.5	1394.479
14.0	1388.735
14.5	1382.991
15.0	1377.104
15.5	1371.073
16.0	1364.754
16.5	1358.436
17.0	1351.974
17.5	1345.082
18.0	1337.758
18.5	1329.860
19.0	1322.249
19.5	1314.064
20.0	1305.161
20.5	1294.966
21.0	1283.191
21.5	1270.411
22.0	1255.764
22.5	1239.537
23.0	1221.157
23.5	1200.478
24.0	1177.790
24.5	1152.086
25.0	1123.366
25.5	1091.631
26.0	1057.311
26.5	1020.837

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CANDELA TABULATION - (Cont.)

27.0	982.497
27.5	943.582
28.0	902.800
28.5	862.449
29.0	822.242
29.5	782.034
30.0	742.545
30.5	703.773
31.0	667.156
31.5	631.687
32.0	598.229
32.5	567.068
33.0	538.205
33.5	512.214
34.0	488.807
34.5	468.416
35.0	450.467
35.5	435.245
36.0	421.891
36.5	410.690
37.0	400.782
37.5	392.309
38.0	384.555
38.5	377.662
39.0	371.488
39.5	365.887
40.0	360.862
40.5	356.123
41.0	351.528
41.5	347.363
42.0	343.199
42.5	339.322
43.0	335.445
43.5	331.424
44.0	327.403
44.5	323.382
45.0	319.218
45.5	314.910
46.0	310.459
46.5	305.864
47.0	301.125
47.5	296.242
48.0	291.360
48.5	286.191
49.0	280.877
49.5	275.277
50.0	269.677
50.5	263.933
51.0	257.902
51.5	252.014
52.0	245.983
52.5	239.952
53.0	234.208
53.5	227.890
54.0	221.572
54.5	215.253

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CANDELA TABULATION - (Cont.)

55.0	209.079
55.5	202.760
56.0	196.586
56.5	190.554
57.0	184.523
57.5	178.492
58.0	172.605
58.5	166.861
59.0	161.117
59.5	155.517
60.0	149.916
60.5	144.459
61.0	139.146
61.5	133.833
62.0	128.807
62.5	123.638
63.0	118.755
63.5	113.730
64.0	108.991
64.5	104.252
65.0	99.657
65.5	95.062
66.0	90.610
66.5	86.302
67.0	82.138
67.5	77.974
68.0	73.953
68.5	69.932
69.0	66.055
69.5	62.321
70.0	58.875
70.5	55.572
71.0	52.557
71.5	49.685
72.0	46.957
72.5	44.372
73.0	41.931
73.5	39.777
74.0	37.623
74.5	35.756
75.0	34.033
75.5	32.453
76.0	30.730
76.5	29.150
77.0	27.571
77.5	25.991
78.0	24.555
78.5	22.976
79.0	21.540
79.5	20.104
80.0	18.668
80.5	17.232
81.0	15.939
81.5	14.647
82.0	13.211
82.5	12.062

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PHOTOMETRIC FILENAME : 6CR-TL-L30-830-XXX-DIM-UNV-RW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

83.0	10.770
83.5	9.477
84.0	8.329
84.5	7.036
85.0	5.888
85.5	4.882
86.0	3.877
86.5	3.159
87.0	2.441
87.5	1.867
88.0	1.292
88.5	0.862
89.0	0.431
89.5	0.144
90.0	0.000
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6CR-TL-L30-830-XXX-DIM-UNV-RW-WH-XX_.IES****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
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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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6CR-TL-L30-830-XXX-DIM-UNV-RW-WH-XX_.IES

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

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	528.36	N.A.	27.80
0-30	1022.43	N.A.	53.80
0-40	1323.52	N.A.	69.60
0-60	1755.19	N.A.	92.40
0-80	1892.53	N.A.	99.60
0-90	1900.3	N.A.	100.00
10-90	1759.71	N.A.	92.60
20-40	795.17	N.A.	41.80
20-50	1040.14	N.A.	54.70
40-70	531.51	N.A.	28.00
60-80	137.35	N.A.	7.20
70-80	37.51	N.A.	2.00
80-90	7.77	N.A.	0.40
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	1900.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	140.59
10-20	387.77
20-30	494.08
30-40	301.09
40-50	244.97
50-60	186.70
60-70	99.84
70-80	37.51
80-90	7.77
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	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	83	78	75	80	77	74	72
4	91	82	75	70	89	80	74	69	78	73	68	76	71	67	74	70	67	65
5	85	75	68	63	84	74	67	62	72	66	62	70	65	61	69	64	61	59
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46
9	67	56	49	45	66	56	49	44	54	48	44	54	48	44	53	48	44	42
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	45	41	39

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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

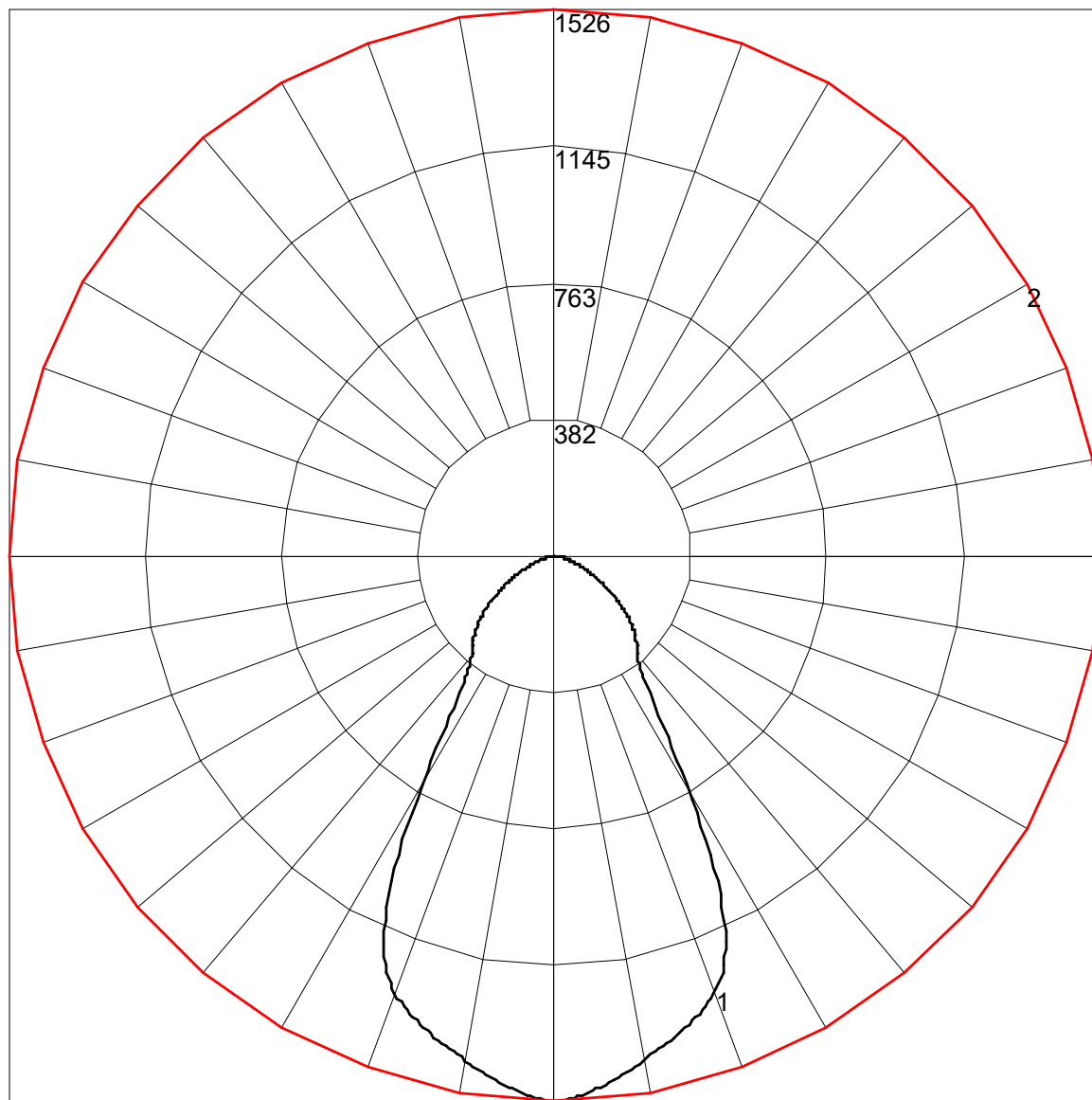
X=2H	Y=2H	21.8	23.1	22.2	23.4	23.7	21.8	23.1	22.2	23.4	23.7
	3H	22.6	23.7	22.9	24.1	24.4	22.6	23.7	22.9	24.1	24.4
	4H	22.8	23.8	23.2	24.2	24.6	22.8	23.8	23.2	24.2	24.6
	6H	22.9	23.8	23.3	24.2	24.6	22.9	23.8	23.3	24.2	24.6
	8H	22.9	23.8	23.3	24.2	24.6	22.9	23.8	23.3	24.2	24.6
	12H	22.8	23.7	23.3	24.1	24.6	22.8	23.7	23.3	24.1	24.6

UGR Viewed Endwise

4H	2H	22.1	23.2	22.5	23.5	23.9	22.1	23.2	22.5	23.5	23.9
	3H	23.0	23.9	23.4	24.3	24.7	23.0	23.9	23.4	24.3	24.7
	4H	23.2	24.0	23.6	24.4	24.9	23.2	24.0	23.6	24.4	24.9
	6H	23.4	24.1	23.9	24.5	25.0	23.4	24.1	23.9	24.5	25.0
	8H	23.4	24.1	23.9	24.5	25.0	23.4	24.1	23.9	24.5	25.0
	12H	23.4	24.0	23.9	24.5	24.9	23.4	24.0	23.9	24.5	24.9
8H	4H	23.3	23.9	23.7	24.3	24.8	23.3	23.9	23.7	24.3	24.8
	6H	23.5	24.0	24.0	24.5	25.0	23.5	24.0	24.0	24.5	25.0
	8H	23.5	24.0	24.1	24.5	25.0	23.5	24.0	24.1	24.5	25.0
	12H	23.6	24.0	24.1	24.5	25.0	23.6	24.0	24.1	24.5	25.0
12H	4H	23.2	23.8	23.7	24.3	24.7	23.2	23.8	23.7	24.3	24.7
	6H	23.5	23.9	24.0	24.4	24.9	23.5	23.9	24.0	24.4	24.9
	8H	23.6	24.0	24.1	24.4	25.0	23.6	24.0	24.1	24.4	25.0

Maximum UGR = 25.0

POLAR GRAPH



Maximum Candela = 1526.446 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.)