



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-P28-835-XXX-POE-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] 28-JAN-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 6CR-TL-P28-835-xxx-POE-RW-WH-xx
 [LUMINAIRE] 6" DIA. SURFACE CYLINDER
 [LAMP] One white LED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2220
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	25
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	51341	51341	51341
55	41455	41455	41455
65	26818	26818	26818
75	14954	14954	14954
85	7683	7683	7683

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CANDELA TABULATION

	<u>0</u>
0.0	1782.916
0.5	1782.916
1.0	1781.238
1.5	1777.884
2.0	1774.529
2.5	1771.175
3.0	1766.143
3.5	1761.111
4.0	1756.080
4.5	1749.371
5.0	1744.339
5.5	1737.630
6.0	1730.921
6.5	1724.212
7.0	1717.503
7.5	1710.794
8.0	1704.085
8.5	1695.699
9.0	1688.990
9.5	1682.281
10.0	1675.907
10.5	1669.030
11.0	1661.986
11.5	1655.109
12.0	1648.568
12.5	1642.027
13.0	1635.485
13.5	1628.776
14.0	1622.067
14.5	1615.358
15.0	1608.482
15.5	1601.437
16.0	1594.057
16.5	1586.678
17.0	1579.130
17.5	1571.079
18.0	1562.525
18.5	1553.300
19.0	1544.411
19.5	1534.851
20.0	1524.452
20.5	1512.543
21.0	1498.790
21.5	1483.862
22.0	1466.754
22.5	1447.801
23.0	1426.333
23.5	1402.180
24.0	1375.680
24.5	1345.657
25.0	1312.112
25.5	1275.045
26.0	1234.958
26.5	1192.356

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CANDELA TABULATION - (Cont.)

27.0	1147.574
27.5	1102.120
28.0	1054.486
28.5	1007.356
29.0	960.393
29.5	913.430
30.0	867.305
30.5	822.020
31.0	779.250
31.5	737.822
32.0	698.742
32.5	662.346
33.0	628.633
33.5	598.275
34.0	570.936
34.5	547.119
35.0	526.153
35.5	508.374
36.0	492.776
36.5	479.693
37.0	468.120
37.5	458.224
38.0	449.167
38.5	441.116
39.0	433.904
39.5	427.363
40.0	421.493
40.5	415.958
41.0	410.591
41.5	405.727
42.0	400.863
42.5	396.334
43.0	391.805
43.5	387.109
44.0	382.413
44.5	377.716
45.0	372.852
45.5	367.821
46.0	362.621
46.5	357.254
47.0	351.719
47.5	346.016
48.0	340.314
48.5	334.276
49.0	328.070
49.5	321.529
50.0	314.987
50.5	308.278
51.0	301.234
51.5	294.357
52.0	287.313
52.5	280.268
53.0	273.559
53.5	266.179
54.0	258.800
54.5	251.420

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CANDELA TABULATION - (Cont.)

55.0	244.207
55.5	236.828
56.0	229.615
56.5	222.571
57.0	215.526
57.5	208.482
58.0	201.605
58.5	194.896
59.0	188.187
59.5	181.646
60.0	175.105
60.5	168.731
61.0	162.525
61.5	156.320
62.0	150.449
62.5	144.411
63.0	138.708
63.5	132.838
64.0	127.303
64.5	121.768
65.0	116.401
65.5	111.034
66.0	105.834
66.5	100.803
67.0	95.939
67.5	91.075
68.0	86.378
68.5	81.682
69.0	77.153
69.5	72.793
70.0	68.767
70.5	64.910
71.0	61.387
71.5	58.033
72.0	54.846
72.5	51.827
73.0	48.976
73.5	46.460
74.0	43.944
74.5	41.763
75.0	39.751
75.5	37.906
76.0	35.893
76.5	34.048
77.0	32.203
77.5	30.358
78.0	28.681
78.5	26.836
79.0	25.159
79.5	23.481
80.0	21.804
80.5	20.127
81.0	18.617
81.5	17.108
82.0	15.431
82.5	14.089

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CANDELA TABULATION - (Cont.)

83.0	12.579
83.5	11.070
84.0	9.728
84.5	8.219
85.0	6.877
85.5	5.703
86.0	4.529
86.5	3.690
87.0	2.851
87.5	2.180
88.0	1.510
88.5	1.006
89.0	0.503
89.5	0.168
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

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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
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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
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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

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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	617.13	N.A.	27.80
0-30	1194.22	N.A.	53.80
0-40	1545.9	N.A.	69.60
0-60	2050.09	N.A.	92.40
0-80	2210.51	N.A.	99.60
0-90	2219.58	N.A.	100.00
10-90	2055.38	N.A.	92.60
20-40	928.77	N.A.	41.80
20-50	1214.9	N.A.	54.70
40-70	620.81	N.A.	28.00
60-80	160.42	N.A.	7.20
70-80	43.81	N.A.	2.00
80-90	9.07	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	2219.58	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	164.21
10-20	452.92
20-30	577.09
30-40	351.68
40-50	286.13
50-60	218.06
60-70	116.61
70-80	43.81
80-90	9.07
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	82	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	78	68	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	44	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	22.4	23.7	22.8	24.0	24.3	22.4	23.7	22.8	24.0	24.3
	3H	23.2	24.3	23.5	24.7	25.0	23.2	24.3	23.5	24.7	25.0
	4H	23.3	24.4	23.7	24.8	25.2	23.3	24.4	23.7	24.8	25.2
	6H	23.5	24.4	23.9	24.8	25.2	23.5	24.4	23.9	24.8	25.2
	8H	23.5	24.4	23.9	24.8	25.2	23.5	24.4	23.9	24.8	25.2
	12H	23.4	24.3	23.9	24.7	25.2	23.4	24.3	23.9	24.7	25.2

UGR Viewed Endwise

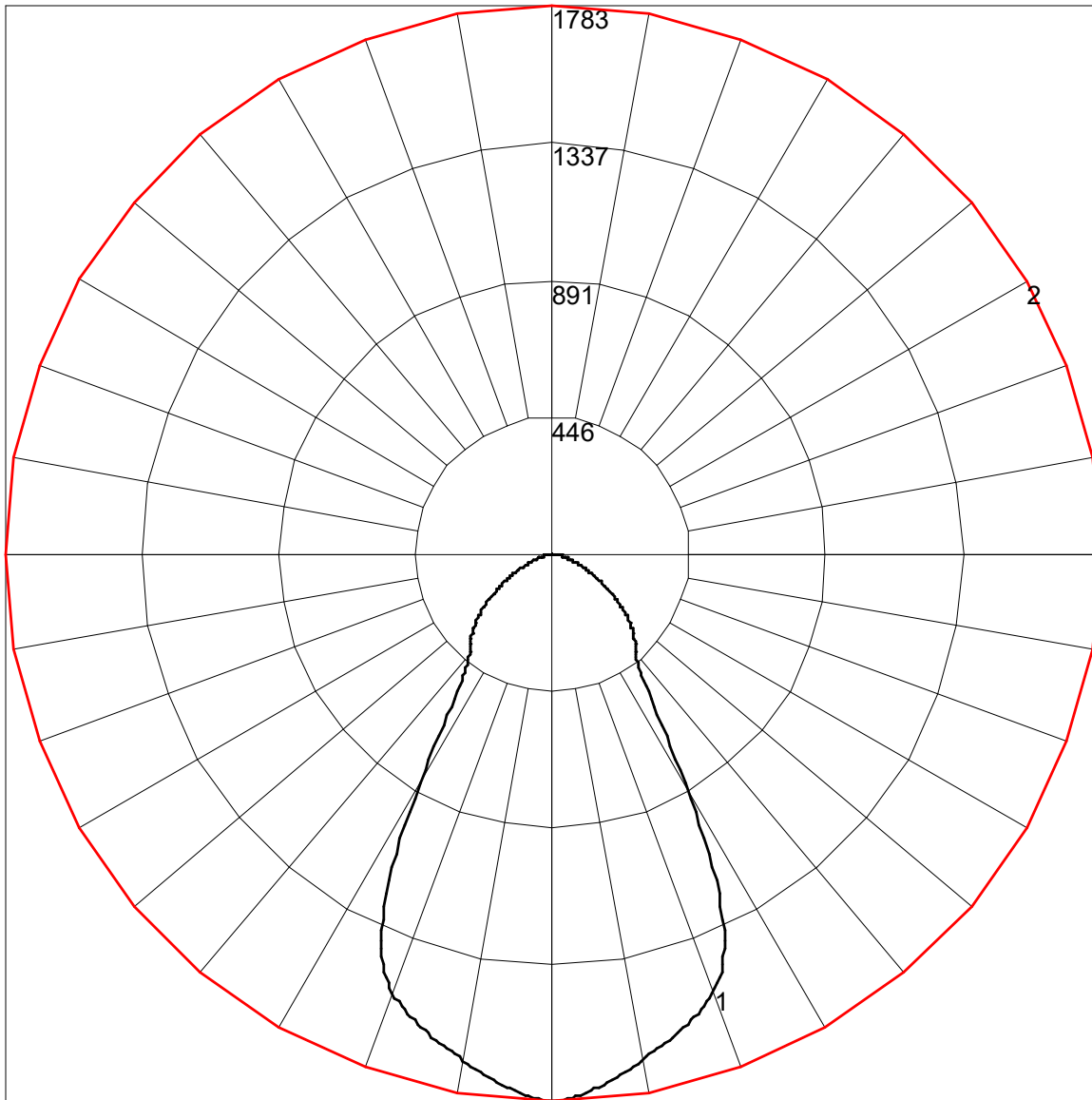
4H	2H	22.7	23.8	23.1	24.1	24.5	22.7	23.8	23.1	24.1	24.5
	3H	23.6	24.5	24.0	24.9	25.3	23.6	24.5	24.0	24.9	25.3
	4H	23.8	24.6	24.2	25.0	25.5	23.8	24.6	24.2	25.0	25.5
	6H	24.0	24.7	24.5	25.1	25.6	24.0	24.7	24.5	25.1	25.6
	8H	24.0	24.7	24.5	25.1	25.6	24.0	24.7	24.5	25.1	25.6
	12H	24.0	24.6	24.5	25.1	25.5	24.0	24.6	24.5	25.1	25.5

8H	4H	23.9	24.5	24.3	24.9	25.4	23.9	24.5	24.3	24.9	25.4
	6H	24.1	24.6	24.6	25.1	25.6	24.1	24.6	24.6	25.1	25.6
	8H	24.1	24.6	24.7	25.1	25.6	24.1	24.6	24.7	25.1	25.6
	12H	24.2	24.6	24.7	25.1	25.6	24.2	24.6	24.7	25.1	25.6

12H	4H	23.8	24.4	24.3	24.9	25.3	23.8	24.4	24.3	24.9	25.3
	6H	24.1	24.5	24.6	25.0	25.5	24.1	24.5	24.6	25.0	25.5
	8H	24.2	24.6	24.7	25.0	25.6	24.2	24.6	24.7	25.0	25.6

Maximum UGR = 25.6

POLAR GRAPH



Maximum Candela = 1782.916 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.)