



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L50-935-XXX-DIM-UNV-OM-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12316380.04
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 1/25/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 6CR-TL-L50-935-xxx-DIM-UNV-OM-CS-xx
 [LUMINAIRE] Black formed aluminum cylinder, specular reflector, no lens
 [MORE] enclosure
 [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	4460
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
Total Luminaire Watts	45.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.76
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	11074	11074	11074
55	3214	3214	3214
65	1129	1129	1129
75	503	503	503
85	249	249	249

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CANDELA TABULATION

	<u>0</u>
0.0	9024.704
0.5	9031.388
1.0	9058.121
1.5	9082.626
2.0	9138.321
2.5	9173.965
3.0	9180.648
3.5	9182.876
4.0	9131.637
4.5	9062.576
5.0	8931.138
5.5	8764.055
6.0	8576.922
6.5	8367.512
7.0	8140.279
7.5	7904.135
8.0	7661.308
8.5	7420.709
9.0	7184.565
9.5	6955.104
10.0	6736.783
10.5	6531.827
11.0	6340.239
11.5	6159.790
12.0	5988.251
12.5	5827.852
13.0	5676.363
13.5	5531.558
14.0	5393.436
14.5	5266.453
15.0	5150.609
15.5	5048.131
16.0	4963.476
16.5	4887.732
17.0	4816.443
17.5	4754.065
18.0	4698.371
18.5	4651.588
19.0	4618.171
19.5	4589.210
20.0	4564.705
20.5	4535.744
21.0	4506.783
21.5	4475.594
22.0	4442.177
22.5	4399.850
23.0	4348.611
23.5	4286.233
24.0	4208.261
24.5	4105.784
25.0	3987.712
25.5	3862.957
26.0	3740.429
26.5	3604.535

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CANDELA TABULATION - (Cont.)

27.0	3461.958
27.5	3299.330
28.0	3114.425
28.5	2911.698
29.0	2700.060
29.5	2483.966
30.0	2254.505
30.5	2016.802
31.0	1767.960
31.5	1520.009
32.0	1281.637
32.5	1058.637
33.0	864.598
33.5	699.075
34.0	559.616
34.5	443.772
35.0	349.760
35.5	278.917
36.0	233.471
36.5	209.633
37.0	195.376
37.5	182.900
38.0	171.984
38.5	161.959
39.0	152.825
39.5	144.582
40.0	136.785
40.5	129.434
41.0	122.527
41.5	116.290
42.0	110.275
42.5	104.705
43.0	99.136
43.5	94.235
44.0	89.334
44.5	84.655
45.0	80.423
45.5	76.190
46.0	71.957
46.5	67.947
47.0	63.714
47.5	59.704
48.0	55.917
48.5	52.353
49.0	48.788
49.5	45.224
50.0	41.659
50.5	38.318
51.0	35.422
51.5	32.748
52.0	30.075
52.5	27.847
53.0	25.619
53.5	23.837
54.0	22.055
54.5	20.273

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CANDELA TABULATION - (Cont.)

55.0	18.936
55.5	17.599
56.0	16.263
56.5	15.149
57.0	14.035
57.5	13.144
58.0	12.253
58.5	11.362
59.0	10.693
59.5	10.025
60.0	9.357
60.5	8.688
61.0	8.243
61.5	7.574
62.0	7.129
62.5	6.683
63.0	6.238
63.5	6.015
64.0	5.569
64.5	5.124
65.0	4.901
65.5	4.678
66.0	4.233
66.5	4.010
67.0	3.787
67.5	3.564
68.0	3.342
68.5	3.119
69.0	2.896
69.5	2.673
70.0	2.451
70.5	2.451
71.0	2.228
71.5	2.005
72.0	1.782
72.5	1.782
73.0	1.559
73.5	1.559
74.0	1.337
74.5	1.337
75.0	1.337
75.5	1.114
76.0	1.114
76.5	0.891
77.0	0.891
77.5	0.891
78.0	0.668
78.5	0.668
79.0	0.668
79.5	0.668
80.0	0.446
80.5	0.446
81.0	0.446
81.5	0.446
82.0	0.446
82.5	0.446

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CANDELA TABULATION - (Cont.)

83.0	0.446
83.5	0.223
84.0	0.223
84.5	0.223
85.0	0.223
85.5	0.223
86.0	0.223
86.5	0.223
87.0	0.223
87.5	0.223
88.0	0.000
88.5	0.000
89.0	0.000
89.5	0.000
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-L50-935-XXX-DIM-UNV-OM-CS-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
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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

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
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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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Zone	Lumens	%Lamp	%Fixt
0-20	2249.7	N.A.	50.40
0-30	3973.5	N.A.	89.10
0-40	4371.42	N.A.	98.00
0-60	4453.35	N.A.	99.80
0-80	4459.87	N.A.	100.00
0-90	4460.14	N.A.	100.00
10-90	3687.37	N.A.	82.70
20-40	2121.72	N.A.	47.60
20-50	2185.04	N.A.	49.00
40-70	87.07	N.A.	2.00
60-80	6.52	N.A.	0.10
70-80	1.39	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	4460.14	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	772.77
10-20	1476.93
20-30	1723.8
30-40	397.92
40-50	63.32
50-60	18.61
60-70	5.14
70-80	1.39
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

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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	98	98	97	95
2	109	105	102	99	107	103	100	97	100	98	95	97	95	93	95	93	91	90
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	87	85
4	100	94	89	85	99	93	88	85	91	87	84	89	86	83	87	84	82	81
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	92	85	79	76	91	84	79	75	82	78	75	81	77	74	80	77	74	73
7	89	80	75	72	87	80	75	71	79	74	71	78	74	71	76	73	70	69
8	85	77	72	68	84	76	71	68	75	71	68	74	70	67	73	70	67	66
9	82	73	68	65	81	73	68	65	72	67	64	71	67	64	70	67	64	63
10	79	70	65	62	78	70	65	62	69	64	61	68	64	61	67	64	61	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

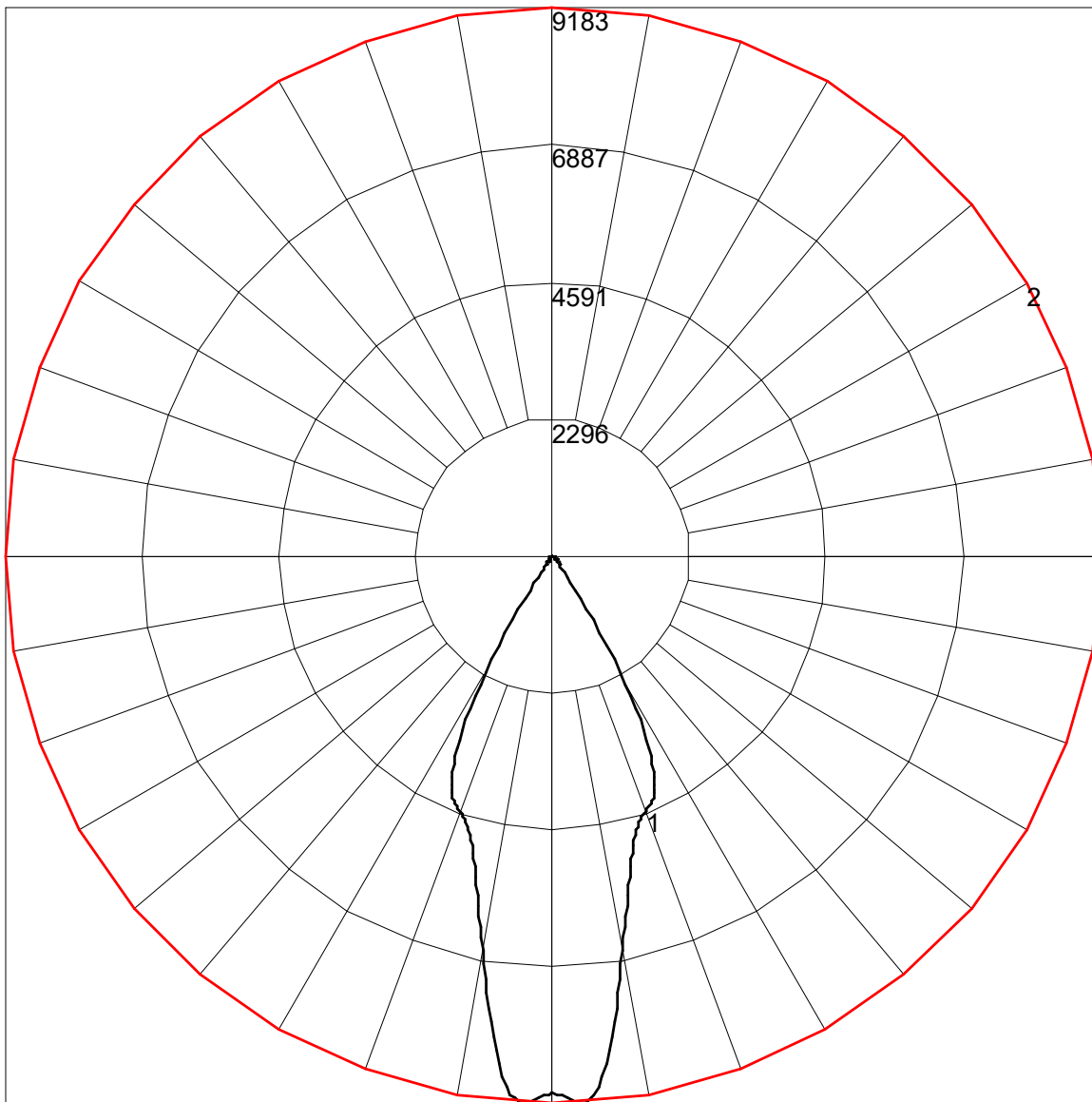
X=2H	Y=2H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	3H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	12H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2

UGR Viewed Endwise

4H	2H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	3H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	12H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
8H	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	12H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
12H	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2

Maximum UGR = 5.2

POLAR GRAPH



Maximum Candela = 9182.876 Located At Horizontal Angle = 0, Vertical Angle = 3.5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)