



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L15-935-XXX-DIM-UNV-OM-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 13131414.06
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01-03-2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L15-935-xxx-DIM-UNV-OM-CS-xx
 [LUMINAIRE] Aluminum cylinder housing and reflector, no lens enclosure
 [LAMP] One white LED
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Downlight
 [_SEARCH_MOUNTING] Surface, Suspended, Wall

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1245
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	70
Total Luminaire Watts	17.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.66
Spacing Criterion (90-270)	0.66
Spacing Criterion (Diagonal)	0.66
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.21 ft (Diameter)
Luminous Width (90-270)	0.21 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	8584	8584	8584
55	2581	2581	2581
65	856	856	856
75	382	382	382
85	189	189	189

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CANDELA TABULATION

	<u>0</u>
0.0	2809.156
0.5	2809.156
1.0	2808.636
1.5	2808.116
2.0	2808.116
2.5	2803.958
3.0	2796.682
3.5	2789.406
4.0	2780.570
4.5	2771.735
5.0	2761.340
5.5	2746.788
6.0	2728.597
6.5	2701.571
7.0	2669.867
7.5	2637.124
8.0	2601.782
8.5	2562.283
9.0	2519.664
9.5	2474.967
10.0	2427.672
10.5	2378.297
11.0	2327.363
11.5	2275.910
12.0	2223.937
12.5	2170.924
13.0	2118.431
13.5	2066.458
14.0	2016.043
14.5	1966.669
15.0	1917.814
15.5	1869.479
16.0	1821.144
16.5	1772.808
17.0	1724.993
17.5	1677.697
18.0	1630.921
18.5	1584.665
19.0	1536.850
19.5	1488.515
20.0	1438.620
20.5	1388.206
21.0	1336.753
21.5	1284.260
22.0	1230.727
22.5	1174.596
23.0	1116.906
23.5	1057.656
24.0	996.328
24.5	933.960
25.0	870.552
25.5	806.106
26.0	741.659
26.5	676.692

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CANDELA TABULATION - (Cont.)

27.0	612.765
27.5	550.397
28.0	491.095
28.5	434.081
29.0	381.640
29.5	333.357
30.0	289.803
30.5	249.836
31.0	213.870
31.5	181.699
32.0	154.413
32.5	131.233
33.0	112.106
33.5	96.255
34.0	83.313
34.5	72.555
35.0	64.239
35.5	58.002
36.0	53.221
36.5	49.427
37.0	45.996
37.5	42.878
38.0	40.123
38.5	37.785
39.0	35.654
39.5	33.731
40.0	31.964
40.5	30.352
41.0	28.845
41.5	27.390
42.0	26.039
42.5	24.791
43.0	23.596
43.5	22.452
44.0	21.361
44.5	20.322
45.0	19.178
45.5	18.035
46.0	16.995
46.5	16.008
47.0	15.124
47.5	14.189
48.0	13.357
48.5	12.526
49.0	11.746
49.5	11.018
50.0	10.239
50.5	9.511
51.0	8.783
51.5	8.056
52.0	7.380
52.5	6.860
53.0	6.393
53.5	5.925
54.0	5.457
54.5	5.093

CANDELA TABULATION - (Cont.)

55.0	4.678
55.5	4.314
56.0	4.002
56.5	3.638
57.0	3.326
57.5	3.118
58.0	2.911
58.5	2.703
59.0	2.495
59.5	2.339
60.0	2.183
60.5	2.079
61.0	1.923
61.5	1.819
62.0	1.715
62.5	1.611
63.0	1.507
63.5	1.403
64.0	1.299
64.5	1.247
65.0	1.143
65.5	1.091
66.0	1.039
66.5	0.987
67.0	0.884
67.5	0.832
68.0	0.780
68.5	0.728
69.0	0.728
69.5	0.676
70.0	0.624
70.5	0.572
71.0	0.520
71.5	0.520
72.0	0.468
72.5	0.468
73.0	0.416
73.5	0.364
74.0	0.364
74.5	0.312
75.0	0.312
75.5	0.312
76.0	0.260
76.5	0.260
77.0	0.260
77.5	0.208
78.0	0.208
78.5	0.208
79.0	0.156
79.5	0.156
80.0	0.156
80.5	0.156
81.0	0.104
81.5	0.104
82.0	0.104
82.5	0.104

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CANDELA TABULATION - (Cont.)

83.0	0.104
83.5	0.052
84.0	0.052
84.5	0.052
85.0	0.052
85.5	0.052
86.0	0.052
86.5	0.052
87.0	0.052
87.5	0.052
88.0	0.052
88.5	0.052
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

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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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Zone	Lumens	%Lamp	%Fixt
0-20	783.59	N.A.	62.90
0-30	1166.26	N.A.	93.70
0-40	1223.64	N.A.	98.30
0-60	1243.23	N.A.	99.90
0-80	1244.81	N.A.	100.00
0-90	1244.88	N.A.	100.00
10-90	991.83	N.A.	79.70
20-40	440.05	N.A.	35.30
20-50	455.08	N.A.	36.60
40-70	20.81	N.A.	1.70
60-80	1.58	N.A.	0.10
70-80	0.35	N.A.	0.00
80-90	0.07	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	1244.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	253.05
10-20	530.54
20-30	382.67
30-40	57.38
40-50	15.03
50-60	4.56
60-70	1.23
70-80	0.35
80-90	0.07
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	114	112	110	108	112	110	108	106	106	105	103	102	101	100	99	98	97	95
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91
3	106	101	97	93	104	99	96	93	97	94	91	94	92	90	92	90	88	87
4	102	96	91	88	100	95	90	87	93	89	86	91	88	85	89	86	84	83
5	98	91	87	83	97	90	86	83	89	85	82	87	84	81	86	83	81	79
6	94	87	82	79	93	87	82	79	85	81	78	84	80	78	83	80	77	76
7	91	84	79	75	90	83	78	75	82	78	75	81	77	74	80	76	74	73
8	88	80	75	72	87	80	75	72	79	74	72	78	74	71	77	73	71	70
9	85	77	72	69	84	77	72	69	76	72	69	75	71	68	74	71	68	67
10	82	74	69	66	81	74	69	66	73	69	66	72	68	66	72	68	66	65

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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

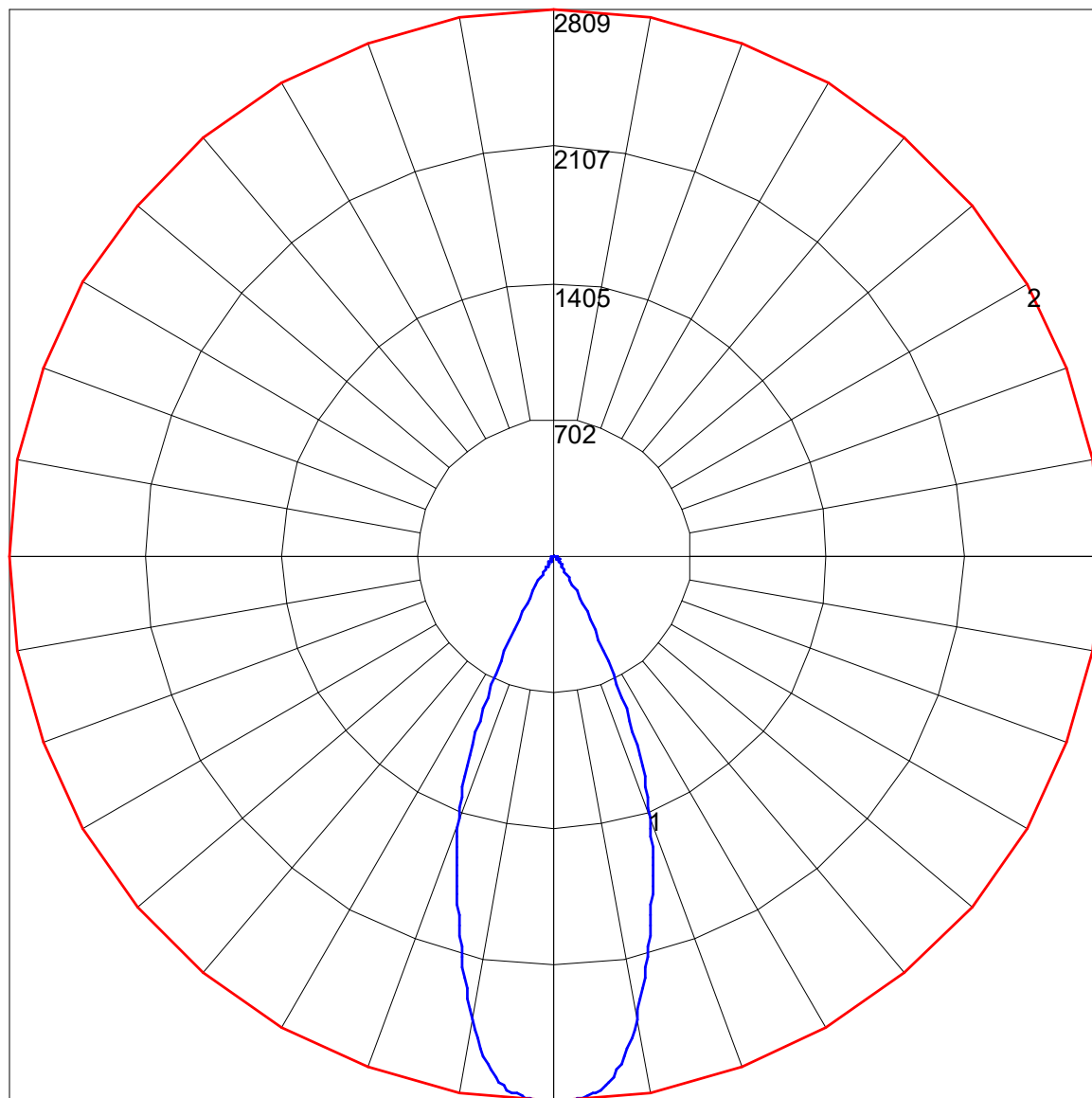
X=2H	Y=2H	0.8	0.8	0.8	0.9	1.2	0.8	0.8	0.8	0.9	1.2
	3H	0.8	0.8	0.8	1.0	1.3	0.8	0.8	0.8	1.0	1.3
	4H	0.8	0.8	0.8	0.9	1.3	0.8	0.8	0.8	0.9	1.3
	6H	0.8	0.8	0.8	0.8	1.2	0.8	0.8	0.8	0.8	1.2
	8H	0.8	0.8	0.8	0.8	1.1	0.8	0.8	0.8	0.8	1.1
	12H	0.8	0.8	0.8	0.8	1.0	0.8	0.8	0.8	0.8	1.0

UGR Viewed Endwise

4H	2H	0.8	0.8	0.8	0.8	1.1	0.8	0.8	0.8	0.8	1.1
	3H	0.8	0.8	0.8	0.8	1.2	0.8	0.8	0.8	0.8	1.2
	4H	0.8	0.8	0.8	0.8	1.2	0.8	0.8	0.8	0.8	1.2
	6H	0.8	0.8	0.8	0.8	1.2	0.8	0.8	0.8	0.8	1.2
	8H	0.8	0.8	0.8	0.8	1.1	0.8	0.8	0.8	0.8	1.1
	12H	0.8	0.8	0.8	0.8	1.0	0.8	0.8	0.8	0.8	1.0
8H	4H	0.8	0.8	0.8	0.8	1.0	0.8	0.8	0.8	0.8	1.0
	6H	0.8	0.8	0.8	0.8	1.0	0.8	0.8	0.8	0.8	1.0
	8H	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.9
	12H	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.9
12H	4H	0.8	0.8	0.8	0.8	1.0	0.8	0.8	0.8	0.8	1.0
	6H	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.9
	8H	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.9

Maximum UGR = 1.3

POLAR GRAPH



Maximum Candela = 2809.156 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)