



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L25-935-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] 6-20-2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L25-935-xxx-DIM-UNV-OM-CS-xx
 [LUMINAIRE] Aluminum housing and reflector, no lens enclosure
 [LAMP] One white LED
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Downlight
 [_SEARCH_MOUNTING] Pendant, Surface, Suspended, Wall

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2089
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	69
Total Luminaire Watts	30.1
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	14405	14405	14405
55	4331	4331	4331
65	1437	1437	1437
75	640	640	640
85	316	316	316

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CANDELA TABULATION

	<u>0</u>
0.0	4714.424
0.5	4714.424
1.0	4713.551
1.5	4712.679
2.0	4712.679
2.5	4705.701
3.0	4693.490
3.5	4681.279
4.0	4666.451
4.5	4651.623
5.0	4634.178
5.5	4609.756
6.0	4579.227
6.5	4533.871
7.0	4480.665
7.5	4425.714
8.0	4366.402
8.5	4300.113
9.0	4228.590
9.5	4153.577
10.0	4074.204
10.5	3991.342
11.0	3905.863
11.5	3819.512
12.0	3732.288
12.5	3643.321
13.0	3555.225
13.5	3468.002
14.0	3383.395
14.5	3300.533
15.0	3218.543
15.5	3137.425
16.0	3056.307
16.5	2975.190
17.0	2894.944
17.5	2815.571
18.0	2737.070
18.5	2659.441
19.0	2579.195
19.5	2498.078
20.0	2414.343
20.5	2329.737
21.0	2243.385
21.5	2155.290
22.0	2065.450
22.5	1971.248
23.0	1874.430
23.5	1774.996
24.0	1672.072
24.5	1567.404
25.0	1460.992
25.5	1352.835
26.0	1244.678
26.5	1135.648

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CANDELA TABULATION - (Cont.)

27.0	1028.364
27.5	923.696
28.0	824.174
28.5	728.490
29.0	640.481
29.5	559.451
30.0	486.358
30.5	419.283
31.0	358.924
31.5	304.933
32.0	259.141
32.5	220.239
33.0	188.141
33.5	161.538
34.0	139.819
34.5	121.764
35.0	107.808
35.5	97.341
36.0	89.317
36.5	82.949
37.0	77.193
37.5	71.959
38.0	67.336
38.5	63.411
39.0	59.835
39.5	56.608
40.0	53.642
40.5	50.938
41.0	48.409
41.5	45.967
42.0	43.699
42.5	41.606
43.0	39.599
43.5	37.681
44.0	35.849
44.5	34.104
45.0	32.185
45.5	30.267
46.0	28.522
46.5	26.865
47.0	25.382
47.5	23.812
48.0	22.416
48.5	21.021
49.0	19.712
49.5	18.491
50.0	17.183
50.5	15.962
51.0	14.741
51.5	13.520
52.0	12.386
52.5	11.513
53.0	10.728
53.5	9.943
54.0	9.158
54.5	8.548

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CANDELA TABULATION - (Cont.)

55.0	7.850
55.5	7.240
56.0	6.716
56.5	6.106
57.0	5.582
57.5	5.233
58.0	4.885
58.5	4.536
59.0	4.187
59.5	3.925
60.0	3.663
60.5	3.489
61.0	3.227
61.5	3.053
62.0	2.878
62.5	2.704
63.0	2.529
63.5	2.355
64.0	2.181
64.5	2.093
65.0	1.919
65.5	1.832
66.0	1.744
66.5	1.657
67.0	1.483
67.5	1.396
68.0	1.308
68.5	1.221
69.0	1.221
69.5	1.134
70.0	1.047
70.5	0.959
71.0	0.872
71.5	0.872
72.0	0.785
72.5	0.785
73.0	0.698
73.5	0.611
74.0	0.611
74.5	0.523
75.0	0.523
75.5	0.523
76.0	0.436
76.5	0.436
77.0	0.436
77.5	0.349
78.0	0.349
78.5	0.349
79.0	0.262
79.5	0.262
80.0	0.262
80.5	0.262
81.0	0.174
81.5	0.174
82.0	0.174
82.5	0.174

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CANDELA TABULATION - (Cont.)

83.0	0.174
83.5	0.087
84.0	0.087
84.5	0.087
85.0	0.087
85.5	0.087
86.0	0.087
86.5	0.087
87.0	0.087
87.5	0.087
88.0	0.087
88.5	0.087
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 : 4CR-XX-L25-935-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
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	1315.05	N.A.	62.90
0-30	1957.26	N.A.	93.70
0-40	2053.55	N.A.	98.30
0-60	2086.43	N.A.	99.90
0-80	2089.08	N.A.	100.00
0-90	2089.2	N.A.	100.00
10-90	1664.52	N.A.	79.70
20-40	738.50	N.A.	35.30
20-50	763.73	N.A.	36.60
40-70	34.93	N.A.	1.70
60-80	2.65	N.A.	0.10
70-80	0.59	N.A.	0.00
80-90	0.12	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	2089.2	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	424.68
10-20	890.37
20-30	642.21
30-40	96.29
40-50	25.23
50-60	7.65
60-70	2.06
70-80	0.59
80-90	0.12
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	96
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	91	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	75	72	78	74	71	77	74	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

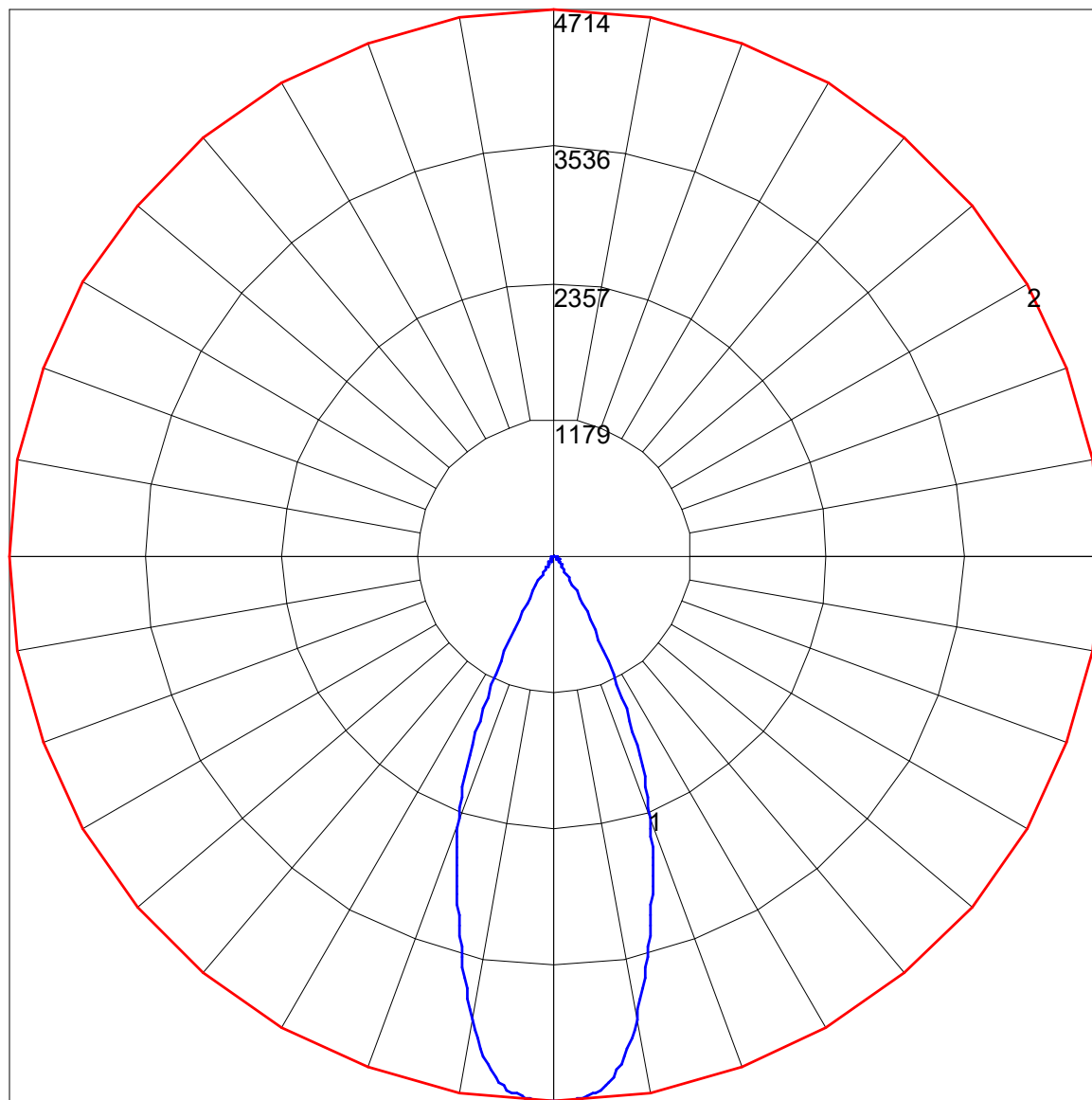
X=2H	Y=2H	2.6	2.6	2.6	2.7	3.0	2.6	2.6	2.6	2.7	3.0
	3H	2.6	2.6	2.6	2.8	3.1	2.6	2.6	2.6	2.8	3.1
	4H	2.6	2.6	2.6	2.7	3.1	2.6	2.6	2.6	2.7	3.1
	6H	2.6	2.6	2.6	2.6	3.0	2.6	2.6	2.6	2.6	3.0
	8H	2.6	2.6	2.6	2.6	2.9	2.6	2.6	2.6	2.6	2.9
	12H	2.6	2.6	2.6	2.6	2.9	2.6	2.6	2.6	2.6	2.9

UGR Viewed Endwise

4H	2H	2.6	2.6	2.6	2.6	2.9	2.6	2.6	2.6	2.6	2.9
	3H	2.6	2.6	2.6	2.6	3.0	2.6	2.6	2.6	2.6	3.0
	4H	2.6	2.6	2.6	2.6	3.0	2.6	2.6	2.6	2.6	3.0
	6H	2.6	2.6	2.6	2.6	3.0	2.6	2.6	2.6	2.6	3.0
	8H	2.6	2.6	2.6	2.6	2.9	2.6	2.6	2.6	2.6	2.9
	12H	2.6	2.6	2.6	2.6	2.8	2.6	2.6	2.6	2.6	2.8
8H	4H	2.6	2.6	2.6	2.6	2.8	2.6	2.6	2.6	2.6	2.8
	6H	2.6	2.6	2.6	2.6	2.8	2.6	2.6	2.6	2.6	2.8
	8H	2.6	2.6	2.6	2.6	2.7	2.6	2.6	2.6	2.6	2.7
	12H	2.6	2.6	2.6	2.6	2.7	2.6	2.6	2.6	2.6	2.7
12H	4H	2.6	2.6	2.6	2.6	2.8	2.6	2.6	2.6	2.6	2.8
	6H	2.6	2.6	2.6	2.6	2.7	2.6	2.6	2.6	2.6	2.7
	8H	2.6	2.6	2.6	2.6	2.7	2.6	2.6	2.6	2.6	2.7

Maximum UGR = 3.1

POLAR GRAPH



Maximum Candela = 4714.424 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.)