



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L12-840-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] 01-17-2024
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L12-840-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	1236
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	86
Total Luminaire Watts	14.3
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	8523	8523	8523
55	2563	2563	2563
65	850	850	850
75	379	379	379
85	189	189	189

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CANDELA TABULATION

	<u>0</u>
0.0	2789.386
0.5	2789.386
1.0	2788.870
1.5	2788.354
2.0	2788.354
2.5	2784.225
3.0	2777.000
3.5	2769.775
4.0	2761.002
4.5	2752.228
5.0	2741.907
5.5	2727.457
6.0	2709.394
6.5	2682.558
7.0	2651.078
7.5	2618.565
8.0	2583.472
8.5	2544.250
9.0	2501.932
9.5	2457.550
10.0	2410.587
10.5	2361.560
11.0	2310.984
11.5	2259.893
12.0	2208.285
12.5	2155.646
13.0	2103.522
13.5	2051.914
14.0	2001.855
14.5	1952.828
15.0	1904.317
15.5	1856.322
16.0	1808.327
16.5	1760.332
17.0	1712.853
17.5	1665.890
18.0	1619.444
18.5	1573.513
19.0	1526.034
19.5	1478.039
20.0	1428.496
20.5	1378.437
21.0	1327.345
21.5	1275.222
22.0	1222.066
22.5	1166.330
23.0	1109.045
23.5	1050.213
24.0	989.316
24.5	927.387
25.0	864.426
25.5	800.432
26.0	736.439
26.5	671.930

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CANDELA TABULATION - (Cont.)

27.0	608.453
27.5	546.524
28.0	487.639
28.5	431.026
29.0	378.954
29.5	331.011
30.0	287.763
30.5	248.077
31.0	212.365
31.5	180.420
32.0	153.326
32.5	130.309
33.0	111.317
33.5	95.577
34.0	82.727
34.5	72.044
35.0	63.787
35.5	57.594
36.0	52.846
36.5	49.079
37.0	45.673
37.5	42.576
38.0	39.841
38.5	37.519
39.0	35.403
39.5	33.493
40.0	31.739
40.5	30.139
41.0	28.642
41.5	27.197
42.0	25.855
42.5	24.617
43.0	23.430
43.5	22.294
44.0	21.211
44.5	20.179
45.0	19.043
45.5	17.908
46.0	16.876
46.5	15.895
47.0	15.018
47.5	14.089
48.0	13.263
48.5	12.437
49.0	11.663
49.5	10.941
50.0	10.167
50.5	9.444
51.0	8.722
51.5	7.999
52.0	7.328
52.5	6.812
53.0	6.348
53.5	5.883
54.0	5.419
54.5	5.058

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CANDELA TABULATION - (Cont.)

55.0	4.645
55.5	4.283
56.0	3.974
56.5	3.613
57.0	3.303
57.5	3.096
58.0	2.890
58.5	2.684
59.0	2.477
59.5	2.322
60.0	2.168
60.5	2.064
61.0	1.909
61.5	1.806
62.0	1.703
62.5	1.600
63.0	1.497
63.5	1.393
64.0	1.290
64.5	1.239
65.0	1.135
65.5	1.084
66.0	1.032
66.5	0.981
67.0	0.877
67.5	0.826
68.0	0.774
68.5	0.723
69.0	0.723
69.5	0.671
70.0	0.619
70.5	0.568
71.0	0.516
71.5	0.516
72.0	0.464
72.5	0.464
73.0	0.413
73.5	0.361
74.0	0.361
74.5	0.310
75.0	0.310
75.5	0.310
76.0	0.258
76.5	0.258
77.0	0.258
77.5	0.206
78.0	0.206
78.5	0.206
79.0	0.155
79.5	0.155
80.0	0.155
80.5	0.155
81.0	0.103
81.5	0.103
82.0	0.103
82.5	0.103

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CANDELA TABULATION - (Cont.)

83.0	0.103
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L12-840-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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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	778.07	N.A.	62.90
0-30	1158.05	N.A.	93.70
0-40	1215.03	N.A.	98.30
0-60	1234.48	N.A.	99.90
0-80	1236.05	N.A.	100.00
0-90	1236.12	N.A.	100.00
10-90	984.85	N.A.	79.70
20-40	436.95	N.A.	35.30
20-50	451.88	N.A.	36.60
40-70	20.67	N.A.	1.70
60-80	1.57	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	1236.12	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	251.27
10-20	526.80
20-30	379.98
30-40	56.97
40-50	14.93
50-60	4.53
60-70	1.22
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	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

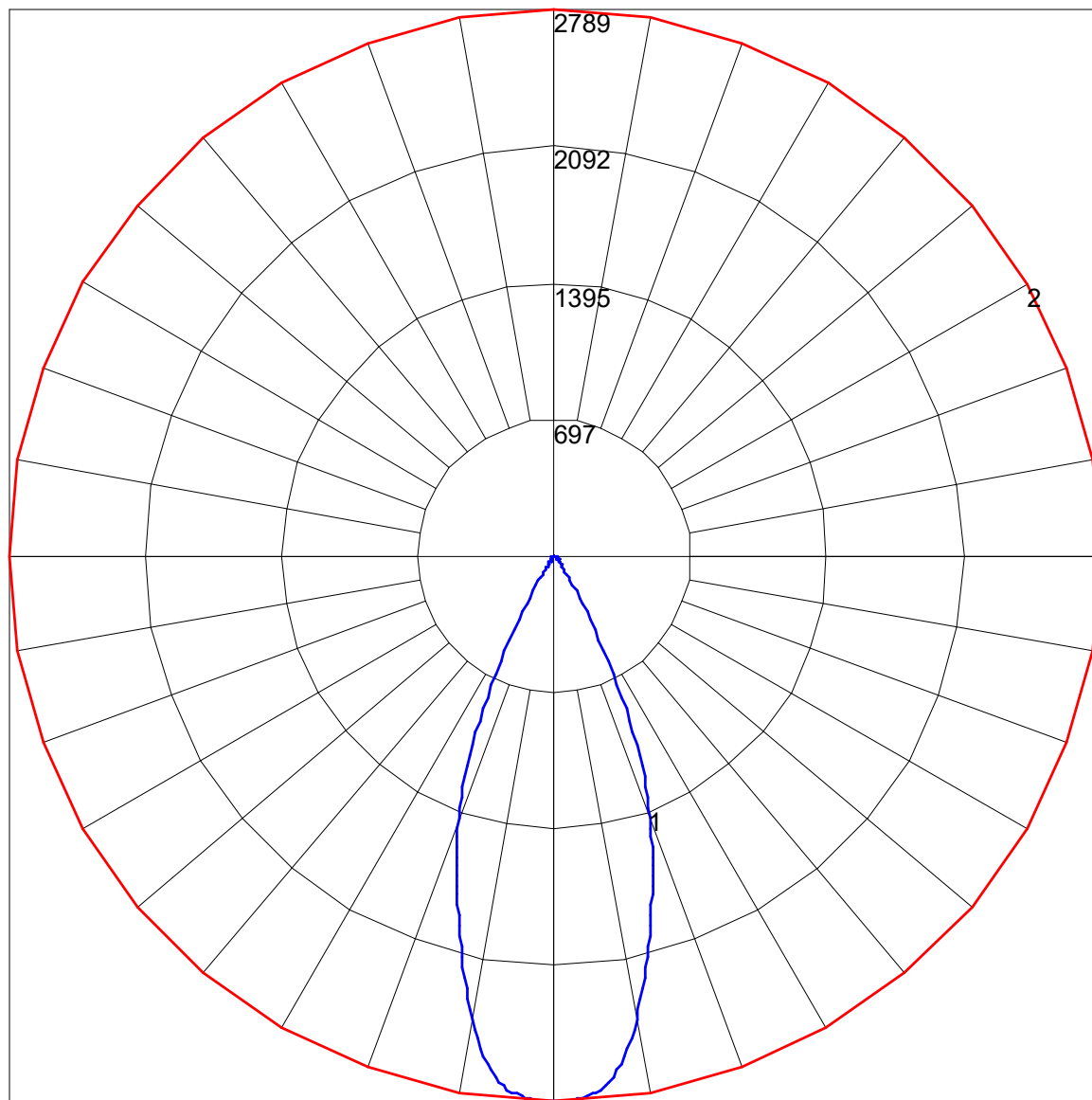
X=2H	Y=2H	0.8	0.8	0.8	0.9	1.2	0.8	0.8	0.8	0.9	1.2
	3H	0.8	0.8	0.8	1.0	1.3	0.8	0.8	0.8	1.0	1.3
	4H	0.8	0.8	0.8	0.9	1.3	0.8	0.8	0.8	0.9	1.3
	6H	0.8	0.8	0.8	0.8	1.2	0.8	0.8	0.8	0.8	1.2
	8H	0.8	0.8	0.8	0.8	1.1	0.8	0.8	0.8	0.8	1.1
	12H	0.8	0.8	0.8	0.8	1.1	0.8	0.8	0.8	0.8	1.1

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 = 2789.386 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.)