



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L12-840-(L10)-XXX-DIM-UNV-OW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM 13131414.01
[TESTLAB] UL Verification Services Inc.
[ISSUEDATE] 10-11-2024
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
[LUMCAT] 4CR-xx-L12-840-(L10)-xxx-DIM-UNV-OW-WH-xx
[LUMINAIRE] Aluminum housing and reflector, no 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	907
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	80
Total Luminaire Watts	11.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.04
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	24610	24610	24610
55	7005	7005	7005
65	3178	3178	3178
75	984	984	984
85	265	265	265

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CANDELA TABULATION

	<u>0</u>
0.0	735.698
0.5	735.698
1.0	735.698
1.5	736.064
2.0	736.430
2.5	736.796
3.0	737.162
3.5	738.259
4.0	739.722
4.5	741.552
5.0	743.747
5.5	746.307
6.0	748.503
6.5	751.429
7.0	754.356
7.5	757.283
8.0	760.575
8.5	763.136
9.0	765.331
9.5	766.794
10.0	768.258
10.5	769.355
11.0	770.087
11.5	770.453
12.0	770.087
12.5	769.721
13.0	768.624
13.5	767.526
14.0	766.063
14.5	764.965
15.0	763.502
15.5	762.038
16.0	760.209
16.5	759.112
17.0	757.648
17.5	756.551
18.0	755.819
18.5	754.722
19.0	752.893
19.5	749.600
20.0	746.307
20.5	741.917
21.0	736.796
21.5	731.308
22.0	725.821
22.5	719.236
23.0	712.285
23.5	704.602
24.0	696.919
24.5	688.871
25.0	680.091
25.5	670.579
26.0	660.336
26.5	648.995

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L12-840-(L10)-XXX-DIM-UNV-OW-WH-XX_.IES****CANDELA TABULATION - (Cont.)**

27.0	636.922
27.5	623.020
28.0	609.850
28.5	595.948
29.0	582.413
29.5	568.877
30.0	554.609
30.5	539.975
31.0	524.976
31.5	509.611
32.0	494.977
32.5	479.612
33.0	463.881
33.5	448.150
34.0	431.688
34.5	415.225
35.0	398.397
35.5	380.836
36.0	362.654
36.5	343.594
37.0	323.217
37.5	301.596
38.0	279.243
38.5	256.452
39.0	233.770
39.5	211.783
40.0	190.857
40.5	171.175
41.0	152.810
41.5	135.652
42.0	119.629
42.5	104.922
43.0	91.642
43.5	79.935
44.0	70.058
44.5	61.826
45.0	54.985
45.5	49.315
46.0	44.596
46.5	40.571
47.0	37.169
47.5	34.242
48.0	31.681
48.5	29.413
49.0	27.401
49.5	25.609
50.0	23.926
50.5	22.426
51.0	21.036
51.5	19.755
52.0	18.585
52.5	17.450
53.0	16.389
53.5	15.365
54.0	14.414
54.5	13.499

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55.0	12.695
55.5	11.963
56.0	11.304
56.5	10.682
57.0	10.134
57.5	9.622
58.0	9.146
58.5	8.707
59.0	8.305
59.5	7.865
60.0	7.500
60.5	7.097
61.0	6.768
61.5	6.402
62.0	6.073
62.5	5.744
63.0	5.451
63.5	5.122
64.0	4.829
64.5	4.536
65.0	4.244
65.5	3.988
66.0	3.732
66.5	3.439
67.0	3.219
67.5	2.963
68.0	2.744
68.5	2.561
69.0	2.341
69.5	2.158
70.0	1.976
70.5	1.829
71.0	1.683
71.5	1.537
72.0	1.390
72.5	1.280
73.0	1.171
73.5	1.061
74.0	0.988
74.5	0.878
75.0	0.805
75.5	0.732
76.0	0.659
76.5	0.622
77.0	0.549
77.5	0.476
78.0	0.439
78.5	0.402
79.0	0.366
79.5	0.329
80.0	0.293
80.5	0.256
81.0	0.220
81.5	0.220
82.0	0.183
82.5	0.146

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L12-840-(L10)-XXX-DIM-UNV-OW-WH-XX_.IES****CANDELA TABULATION - (Cont.)**

83.0	0.146
83.5	0.110
84.0	0.110
84.5	0.110
85.0	0.073
85.5	0.073
86.0	0.073
86.5	0.037
87.0	0.037
87.5	0.037
88.0	0.037
88.5	0.037
89.0	0.037
89.5	0.037
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-(L10)-XXX-DIM-UNV-OW-WH-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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L12-840-(L10)-XXX-DIM-UNV-OW-WH-XX_.IES****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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L12-840-(L10)-XXX-DIM-UNV-OW-WH-XX_.IES****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	287.67	N.A.	31.70
0-30	594.68	N.A.	65.60
0-40	834.11	N.A.	92.00
0-60	901.48	N.A.	99.40
0-80	906.78	N.A.	100.00
0-90	906.89	N.A.	100.00
10-90	834.96	N.A.	92.10
20-40	546.44	N.A.	60.30
20-50	601.62	N.A.	66.30
40-70	71.70	N.A.	7.90
60-80	5.30	N.A.	0.60
70-80	0.96	N.A.	0.10
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	906.89	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	71.93
10-20	215.74
20-30	307.01
30-40	239.43
40-50	55.17
50-60	12.19
60-70	4.34
70-80	0.96
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	113	110	108	106	111	108	106	104	104	102	101	100	99	98	97	96	95	93
2	107	102	98	95	105	101	97	94	97	94	91	94	92	90	92	90	88	86
3	102	95	90	86	100	94	89	85	91	87	84	88	85	82	86	83	81	79
4	96	88	83	78	94	87	82	78	85	80	77	83	79	76	81	78	75	73
5	91	82	76	72	89	81	76	71	79	74	71	78	73	70	76	72	69	68
6	86	77	71	66	85	76	70	66	74	69	65	73	68	65	72	68	64	63
7	81	72	65	61	80	71	65	61	70	64	61	69	64	60	67	63	60	58
8	77	67	61	57	76	67	61	57	66	60	56	64	60	56	63	59	56	54
9	73	63	57	53	72	63	57	53	62	56	52	61	56	52	60	55	52	51
10	70	59	53	49	68	59	53	49	58	53	49	57	52	49	57	52	49	47

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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	8.5	9.5	8.9	9.9	10.2	8.5	9.5	8.9	9.9	10.2
	3H	8.8	9.7	9.2	10.0	10.4	8.8	9.7	9.2	10.0	10.4
	4H	8.8	9.6	9.2	9.9	10.3	8.8	9.6	9.2	9.9	10.3
	6H	8.7	9.4	9.1	9.8	10.2	8.7	9.4	9.1	9.8	10.2
	8H	8.7	9.3	9.1	9.7	10.1	8.7	9.3	9.1	9.7	10.1
	12H	8.6	9.3	9.0	9.6	10.1	8.6	9.3	9.0	9.6	10.1

UGR Viewed Endwise

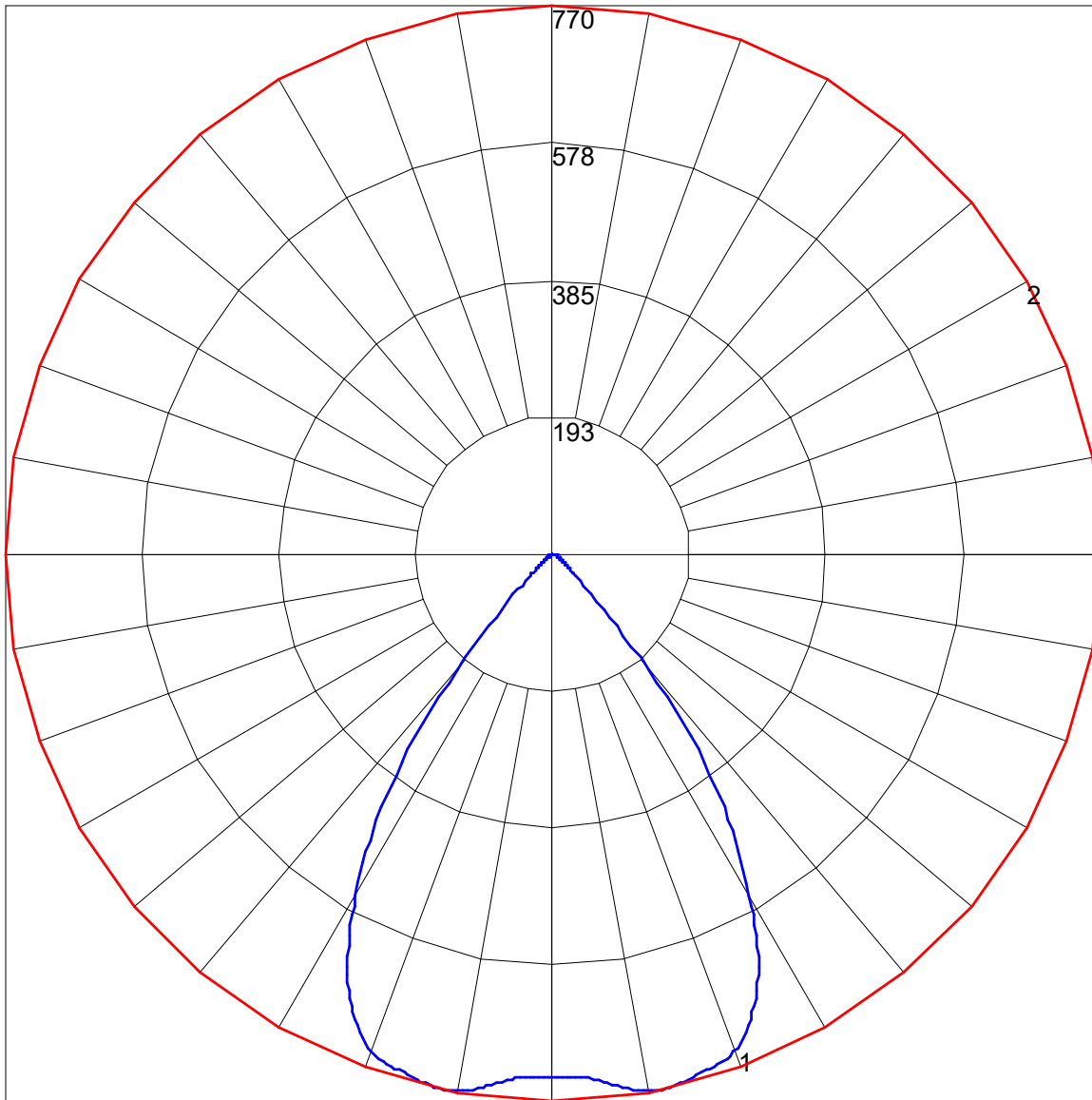
4H	2H	8.6	9.4	9.0	9.8	10.1	8.6	9.4	9.0	9.8	10.1
	3H	8.9	9.6	9.3	10.0	10.4	8.9	9.6	9.3	10.0	10.4
	4H	8.9	9.5	9.3	9.9	10.3	8.9	9.5	9.3	9.9	10.3
	6H	8.8	9.3	9.3	9.7	10.2	8.8	9.3	9.3	9.7	10.2
	8H	8.7	9.2	9.2	9.6	10.1	8.7	9.2	9.2	9.6	10.1
	12H	8.7	9.1	9.2	9.6	10.0	8.7	9.1	9.2	9.6	10.0
8H	4H	8.7	9.2	9.2	9.7	10.1	8.7	9.2	9.2	9.7	10.1
	6H	8.6	9.0	9.2	9.5	10.0	8.6	9.0	9.2	9.5	10.0
	8H	8.6	8.9	9.1	9.4	9.9	8.6	8.9	9.1	9.4	9.9
	12H	8.5	8.8	9.0	9.3	9.9	8.5	8.8	9.0	9.3	9.9
12H	4H	8.7	9.1	9.2	9.6	10.0	8.7	9.1	9.2	9.6	10.0
	6H	8.6	8.9	9.1	9.4	9.9	8.6	8.9	9.1	9.4	9.9
	8H	8.5	8.8	9.0	9.3	9.9	8.5	8.8	9.0	9.3	9.9

Maximum UGR = 10.4

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POLAR GRAPH



Maximum Candela = 770.453 Located At Horizontal Angle = 0, Vertical Angle = 11.5

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Horizontal Cone Through Vertical Angle (11.5) (Through Max. Cd.)