



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L7-840-XXX-DIM-UNV-OW-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM 13131414.01
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01/25/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L7-840-xxx-DIM-UNV-OW-CS-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	732
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
Total Luminaire Watts	8.7
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	19864	19864	19864
55	5653	5653	5653
65	2565	2565	2565
75	795	795	795
85	214	214	214

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CANDELA TABULATION

	<u>0</u>
0.0	593.809
0.5	593.809
1.0	593.809
1.5	594.104
2.0	594.399
2.5	594.695
3.0	594.990
3.5	595.876
4.0	597.057
4.5	598.533
5.0	600.305
5.5	602.372
6.0	604.144
6.5	606.506
7.0	608.868
7.5	611.230
8.0	613.888
8.5	615.955
9.0	617.727
9.5	618.908
10.0	620.089
10.5	620.975
11.0	621.565
11.5	621.861
12.0	621.565
12.5	621.270
13.0	620.384
13.5	619.498
14.0	618.317
14.5	617.431
15.0	616.250
15.5	615.069
16.0	613.593
16.5	612.707
17.0	611.526
17.5	610.640
18.0	610.049
18.5	609.163
19.0	607.687
19.5	605.030
20.0	602.372
20.5	598.829
21.0	594.695
21.5	590.266
22.0	585.836
22.5	580.521
23.0	574.911
23.5	568.710
24.0	562.509
24.5	556.013
25.0	548.926
25.5	541.249
26.0	532.981
26.5	523.827

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L7-840-XXX-DIM-UNV-OW-CS-XX_.IES****CANDELA TABULATION - (Cont.)**

27.0	514.083
27.5	502.863
28.0	492.232
28.5	481.012
29.0	470.086
29.5	459.161
30.0	447.645
30.5	435.834
31.0	423.727
31.5	411.326
32.0	399.514
32.5	387.113
33.0	374.416
33.5	361.718
34.0	348.431
34.5	335.143
35.0	321.560
35.5	307.387
36.0	292.711
36.5	277.327
37.0	260.880
37.5	243.429
38.0	225.388
38.5	206.992
39.0	188.684
39.5	170.938
40.0	154.048
40.5	138.162
41.0	123.339
41.5	109.490
42.0	96.557
42.5	84.686
43.0	73.968
43.5	64.519
44.0	56.546
44.5	49.902
45.0	44.381
45.5	39.804
46.0	35.995
46.5	32.747
47.0	30.000
47.5	27.638
48.0	25.571
48.5	23.741
49.0	22.117
49.5	20.670
50.0	19.311
50.5	18.101
51.0	16.979
51.5	15.945
52.0	15.000
52.5	14.085
53.0	13.229
53.5	12.402
54.0	11.634
54.5	10.896

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CANDELA TABULATION - (Cont.)

55.0	10.246
55.5	9.656
56.0	9.124
56.5	8.622
57.0	8.179
57.5	7.766
58.0	7.382
58.5	7.028
59.0	6.703
59.5	6.349
60.0	6.053
60.5	5.728
61.0	5.463
61.5	5.167
62.0	4.902
62.5	4.636
63.0	4.400
63.5	4.134
64.0	3.898
64.5	3.661
65.0	3.425
65.5	3.219
66.0	3.012
66.5	2.776
67.0	2.598
67.5	2.392
68.0	2.215
68.5	2.067
69.0	1.890
69.5	1.742
70.0	1.595
70.5	1.476
71.0	1.358
71.5	1.240
72.0	1.122
72.5	1.033
73.0	0.945
73.5	0.856
74.0	0.797
74.5	0.709
75.0	0.650
75.5	0.591
76.0	0.532
76.5	0.502
77.0	0.443
77.5	0.384
78.0	0.354
78.5	0.325
79.0	0.295
79.5	0.266
80.0	0.236
80.5	0.207
81.0	0.177
81.5	0.177
82.0	0.148
82.5	0.118

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CANDELA TABULATION - (Cont.)

83.0	0.118
83.5	0.089
84.0	0.089
84.5	0.089
85.0	0.059
85.5	0.059
86.0	0.059
86.5	0.030
87.0	0.030
87.5	0.030
88.0	0.030
88.5	0.030
89.0	0.030
89.5	0.030
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
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132.5	0.000
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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	232.19	N.A.	31.70
0-30	479.99	N.A.	65.60
0-40	673.24	N.A.	92.00
0-60	727.61	N.A.	99.40
0-80	731.89	N.A.	100.00
0-90	731.99	N.A.	100.00
10-90	673.93	N.A.	92.10
20-40	441.05	N.A.	60.30
20-50	485.59	N.A.	66.30
40-70	57.88	N.A.	7.90
60-80	4.28	N.A.	0.60
70-80	0.78	N.A.	0.10
80-90	0.09	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	731.99	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	58.06
10-20	174.13
20-30	247.80
30-40	193.25
40-50	44.53
50-60	9.84
60-70	3.50
70-80	0.78
80-90	0.09
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	92	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

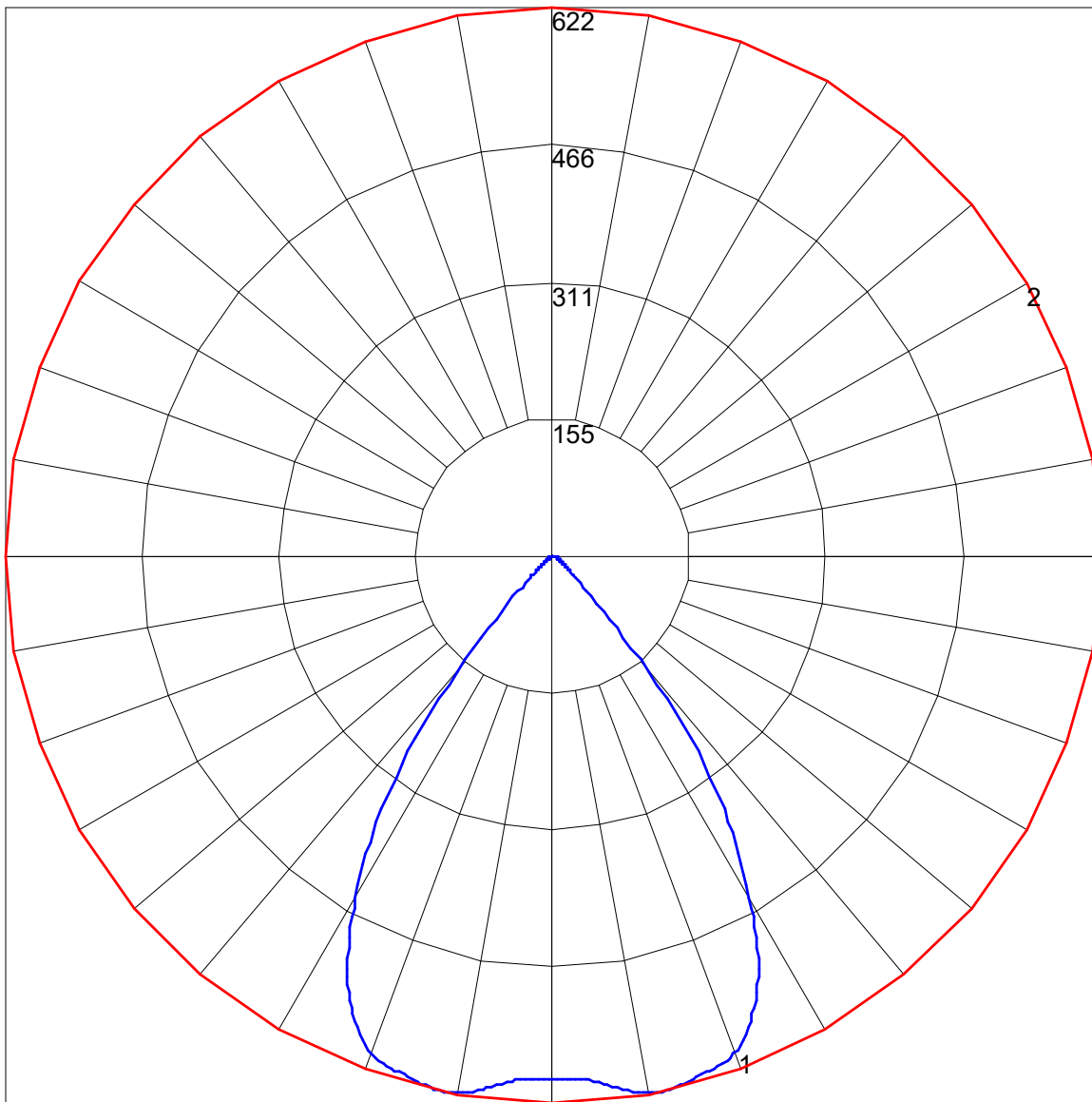
X=2H	Y=2H	7.7	8.8	8.1	9.1	9.4	7.7	8.8	8.1	9.1	9.4
	3H	8.0	8.9	8.4	9.2	9.6	8.0	8.9	8.4	9.2	9.6
	4H	8.0	8.8	8.4	9.1	9.5	8.0	8.8	8.4	9.1	9.5
	6H	7.9	8.6	8.3	9.0	9.4	7.9	8.6	8.3	9.0	9.4
	8H	7.9	8.5	8.3	8.9	9.3	7.9	8.5	8.3	8.9	9.3
	12H	7.8	8.5	8.2	8.8	9.3	7.8	8.5	8.2	8.8	9.3

UGR Viewed Endwise

4H	2H	7.8	8.6	8.2	9.0	9.3	7.8	8.6	8.2	9.0	9.3
	3H	8.1	8.8	8.5	9.2	9.6	8.1	8.8	8.5	9.2	9.6
	4H	8.1	8.7	8.5	9.1	9.5	8.1	8.7	8.5	9.1	9.5
	6H	8.0	8.5	8.5	9.0	9.4	8.0	8.5	8.5	9.0	9.4
	8H	7.9	8.4	8.4	8.9	9.3	7.9	8.4	8.4	8.9	9.3
	12H	7.9	8.3	8.4	8.8	9.2	7.9	8.3	8.4	8.8	9.2
8H	4H	7.9	8.4	8.4	8.9	9.3	7.9	8.4	8.4	8.9	9.3
	6H	7.8	8.2	8.4	8.7	9.2	7.8	8.2	8.4	8.7	9.2
	8H	7.8	8.1	8.3	8.6	9.1	7.8	8.1	8.3	8.6	9.1
	12H	7.8	8.0	8.3	8.5	9.1	7.8	8.0	8.3	8.5	9.1
12H	4H	7.9	8.3	8.4	8.8	9.2	7.9	8.3	8.4	8.8	9.2
	6H	7.8	8.1	8.3	8.6	9.1	7.8	8.1	8.3	8.6	9.1
	8H	7.8	8.0	8.3	8.5	9.1	7.8	8.0	8.3	8.5	9.1

Maximum UGR = 9.6

POLAR GRAPH



Maximum Candela = 621.861 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.)