



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L9-835-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] 04-206-2023
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
[LUMCAT] 4CR-xx-L9-835-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	929
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	87
Total Luminaire Watts	10.7
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	25209	25209	25209
55	7175	7175	7175
65	3255	3255	3255
75	1008	1008	1008
85	272	272	272

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CANDELA TABULATION

	<u>0</u>
0.0	753.618
0.5	753.618
1.0	753.618
1.5	753.993
2.0	754.368
2.5	754.742
3.0	755.117
3.5	756.241
4.0	757.740
4.5	759.614
5.0	761.862
5.5	764.486
6.0	766.734
6.5	769.732
7.0	772.730
7.5	775.728
8.0	779.101
8.5	781.724
9.0	783.973
9.5	785.472
10.0	786.971
10.5	788.095
11.0	788.844
11.5	789.219
12.0	788.844
12.5	788.470
13.0	787.345
13.5	786.221
14.0	784.722
14.5	783.598
15.0	782.099
15.5	780.600
16.0	778.726
16.5	777.602
17.0	776.103
17.5	774.979
18.0	774.229
18.5	773.105
19.0	771.231
19.5	767.858
20.0	764.486
20.5	759.989
21.0	754.742
21.5	749.121
22.0	743.500
22.5	736.754
23.0	729.634
23.5	721.764
24.0	713.895
24.5	705.650
25.0	696.656
25.5	686.913
26.0	676.420
26.5	664.803

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L9-835-XXX-DIM-UNV-OW-CS-XX_.IES****CANDELA TABULATION - (Cont.)**

27.0	652.436
27.5	638.196
28.0	624.705
28.5	610.464
29.0	596.599
29.5	582.733
30.0	568.118
30.5	553.128
31.0	537.763
31.5	522.024
32.0	507.034
32.5	491.294
33.0	475.180
33.5	459.066
34.0	442.203
34.5	425.339
35.0	408.100
35.5	390.113
36.0	371.488
36.5	351.963
37.0	331.090
37.5	308.942
38.0	286.045
38.5	262.698
39.0	239.464
39.5	216.942
40.0	195.506
40.5	175.345
41.0	156.532
41.5	138.957
42.0	122.543
42.5	107.478
43.0	93.874
43.5	81.882
44.0	71.764
44.5	63.332
45.0	56.325
45.5	50.516
46.0	45.682
46.5	41.560
47.0	38.074
47.5	35.076
48.0	32.453
48.5	30.130
49.0	28.069
49.5	26.232
50.0	24.509
50.5	22.972
51.0	21.548
51.5	20.236
52.0	19.037
52.5	17.875
53.0	16.789
53.5	15.739
54.0	14.765
54.5	13.828

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55.0	13.004
55.5	12.254
56.0	11.580
56.5	10.943
57.0	10.381
57.5	9.856
58.0	9.369
58.5	8.919
59.0	8.507
59.5	8.057
60.0	7.682
60.5	7.270
61.0	6.933
61.5	6.558
62.0	6.221
62.5	5.884
63.0	5.584
63.5	5.246
64.0	4.947
64.5	4.647
65.0	4.347
65.5	4.085
66.0	3.822
66.5	3.523
67.0	3.298
67.5	3.035
68.0	2.811
68.5	2.623
69.0	2.398
69.5	2.211
70.0	2.024
70.5	1.874
71.0	1.724
71.5	1.574
72.0	1.424
72.5	1.312
73.0	1.199
73.5	1.087
74.0	1.012
74.5	0.899
75.0	0.824
75.5	0.749
76.0	0.675
76.5	0.637
77.0	0.562
77.5	0.487
78.0	0.450
78.5	0.412
79.0	0.375
79.5	0.337
80.0	0.300
80.5	0.262
81.0	0.225
81.5	0.225
82.0	0.187
82.5	0.150

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CANDELA TABULATION - (Cont.)

83.0	0.150
83.5	0.112
84.0	0.112
84.5	0.112
85.0	0.075
85.5	0.075
86.0	0.075
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

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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
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124.5	0.000
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126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
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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	294.67	N.A.	31.70
0-30	609.17	N.A.	65.60
0-40	854.43	N.A.	92.00
0-60	923.43	N.A.	99.40
0-80	928.86	N.A.	100.00
0-90	928.98	N.A.	100.00
10-90	855.30	N.A.	92.10
20-40	559.75	N.A.	60.30
20-50	616.27	N.A.	66.30
40-70	73.45	N.A.	7.90
60-80	5.43	N.A.	0.60
70-80	0.99	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	928.98	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	73.68
10-20	220.99
20-30	314.49
30-40	245.26
40-50	56.52
50-60	12.49
60-70	4.44
70-80	0.99
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	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

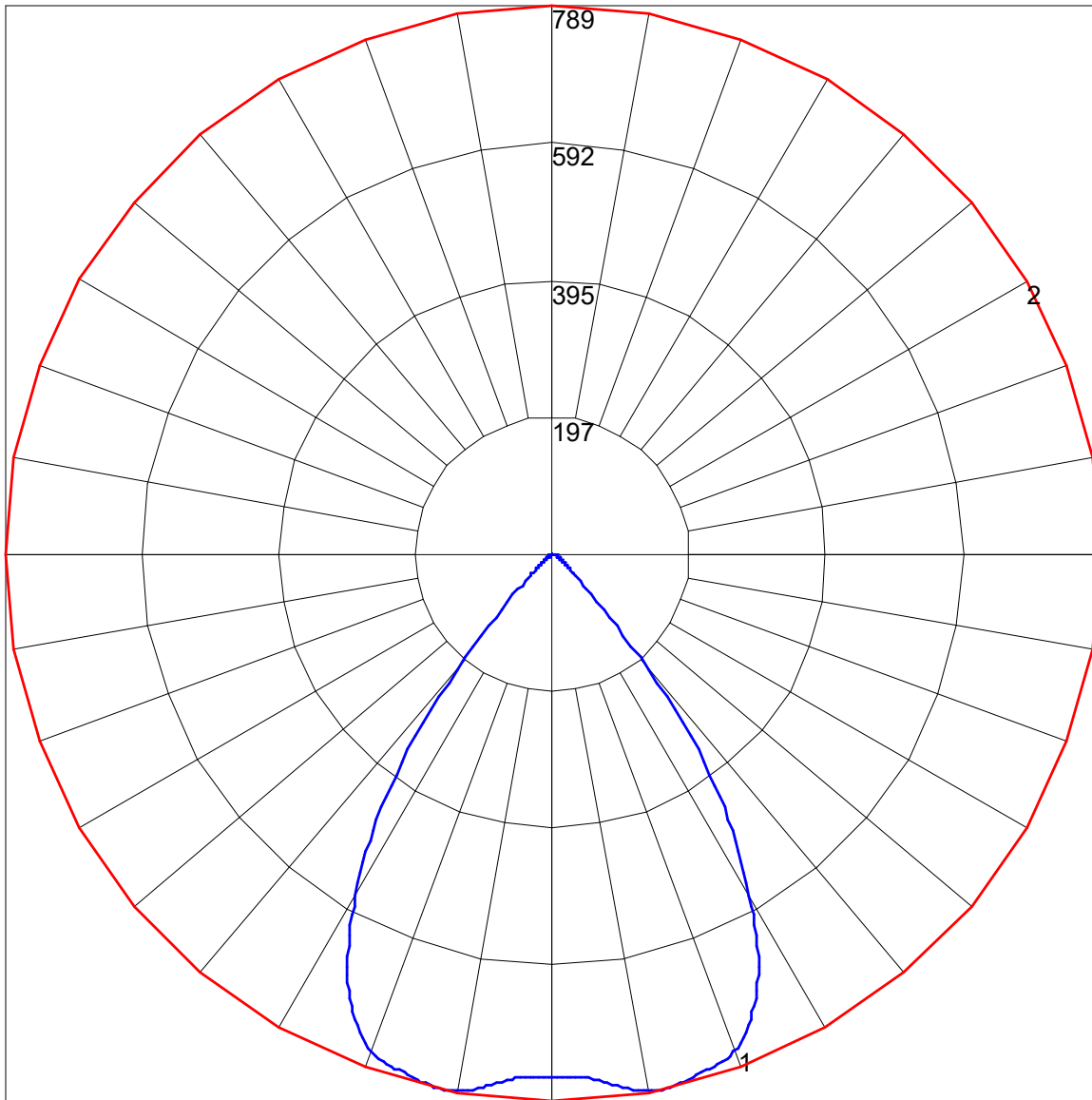
X=2H	Y=2H	8.6	9.7	9.0	10.0	10.3	8.6	9.7	9.0	10.0	10.3
	3H	8.9	9.8	9.3	10.1	10.5	8.9	9.8	9.3	10.1	10.5
	4H	8.9	9.7	9.3	10.0	10.4	8.9	9.7	9.3	10.0	10.4
	6H	8.8	9.5	9.2	9.9	10.3	8.8	9.5	9.2	9.9	10.3
	8H	8.8	9.4	9.2	9.8	10.2	8.8	9.4	9.2	9.8	10.2
	12H	8.7	9.4	9.1	9.7	10.2	8.7	9.4	9.1	9.7	10.2

UGR Viewed Endwise

4H	2H	8.7	9.5	9.1	9.9	10.2	8.7	9.5	9.1	9.9	10.2
	3H	9.0	9.7	9.4	10.1	10.5	9.0	9.7	9.4	10.1	10.5
	4H	9.0	9.6	9.4	10.0	10.4	9.0	9.6	9.4	10.0	10.4
	6H	8.9	9.4	9.4	9.9	10.3	8.9	9.4	9.4	9.9	10.3
	8H	8.8	9.3	9.3	9.7	10.2	8.8	9.3	9.3	9.7	10.2
	12H	8.8	9.2	9.3	9.7	10.1	8.8	9.2	9.3	9.7	10.1
8H	4H	8.8	9.3	9.3	9.8	10.2	8.8	9.3	9.3	9.8	10.2
	6H	8.7	9.1	9.3	9.6	10.1	8.7	9.1	9.3	9.6	10.1
	8H	8.7	9.0	9.2	9.5	10.0	8.7	9.0	9.2	9.5	10.0
	12H	8.7	8.9	9.2	9.4	10.0	8.7	8.9	9.2	9.4	10.0
12H	4H	8.8	9.2	9.3	9.7	10.1	8.8	9.2	9.3	9.7	10.1
	6H	8.7	9.0	9.2	9.5	10.0	8.7	9.0	9.2	9.5	10.0
	8H	8.7	8.9	9.2	9.4	10.0	8.7	8.9	9.2	9.4	10.0

Maximum UGR = 10.5

POLAR GRAPH



Maximum Candela = 789.219 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.)