



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L5-830-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.
[ISSUE DATE] 02-21-2024
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
[LUMCAT] 4CR-xx-L5-830-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	506
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	76
Total Luminaire Watts	6.7
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	13731	13731	13731
55	3908	3908	3908
65	1773	1773	1773
75	549	549	549
85	149	149	149

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CANDELA TABULATION

	<u>0</u>
0.0	410.474
0.5	410.474
1.0	410.474
1.5	410.679
2.0	410.883
2.5	411.087
3.0	411.291
3.5	411.903
4.0	412.720
4.5	413.740
5.0	414.965
5.5	416.394
6.0	417.618
6.5	419.251
7.0	420.884
7.5	422.517
8.0	424.354
8.5	425.783
9.0	427.008
9.5	427.824
10.0	428.641
10.5	429.253
11.0	429.661
11.5	429.865
12.0	429.661
12.5	429.457
13.0	428.845
13.5	428.232
14.0	427.416
14.5	426.804
15.0	425.987
15.5	425.171
16.0	424.150
16.5	423.538
17.0	422.721
17.5	422.109
18.0	421.701
18.5	421.088
19.0	420.068
19.5	418.231
20.0	416.394
20.5	413.944
21.0	411.087
21.5	408.025
22.0	404.963
22.5	401.289
23.0	397.411
23.5	393.125
24.0	388.838
24.5	384.348
25.0	379.449
25.5	374.142
26.0	368.427
26.5	362.099

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L5-830-XXX-DIM-UNV-OW-CS-XX_.IES****CANDELA TABULATION - (Cont.)**

27.0	355.364
27.5	347.607
28.0	340.259
28.5	332.503
29.0	324.950
29.5	317.398
30.0	309.438
30.5	301.273
31.0	292.904
31.5	284.332
32.0	276.167
32.5	267.594
33.0	258.817
33.5	250.040
34.0	240.855
34.5	231.670
35.0	222.281
35.5	212.483
36.0	202.339
36.5	191.704
37.0	180.335
37.5	168.272
38.0	155.801
38.5	143.084
39.0	130.429
39.5	118.162
40.0	106.487
40.5	95.505
41.0	85.259
41.5	75.686
42.0	66.745
42.5	58.540
43.0	51.131
43.5	44.599
44.0	39.088
44.5	34.495
45.0	30.678
45.5	27.515
46.0	24.882
46.5	22.636
47.0	20.738
47.5	19.105
48.0	17.676
48.5	16.411
49.0	15.288
49.5	14.288
50.0	13.349
50.5	12.512
51.0	11.737
51.5	11.022
52.0	10.369
52.5	9.736
53.0	9.144
53.5	8.573
54.0	8.042
54.5	7.532

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L5-830-XXX-DIM-UNV-OW-CS-XX_.IES****CANDELA TABULATION - (Cont.)**

55.0	7.083
55.5	6.675
56.0	6.307
56.5	5.960
57.0	5.654
57.5	5.368
58.0	5.103
58.5	4.858
59.0	4.633
59.5	4.388
60.0	4.184
60.5	3.960
61.0	3.776
61.5	3.572
62.0	3.388
62.5	3.205
63.0	3.041
63.5	2.858
64.0	2.694
64.5	2.531
65.0	2.368
65.5	2.225
66.0	2.082
66.5	1.919
67.0	1.796
67.5	1.653
68.0	1.531
68.5	1.429
69.0	1.306
69.5	1.204
70.0	1.102
70.5	1.021
71.0	0.939
71.5	0.857
72.0	0.776
72.5	0.714
73.0	0.653
73.5	0.592
74.0	0.551
74.5	0.490
75.0	0.449
75.5	0.408
76.0	0.367
76.5	0.347
77.0	0.306
77.5	0.265
78.0	0.245
78.5	0.225
79.0	0.204
79.5	0.184
80.0	0.163
80.5	0.143
81.0	0.122
81.5	0.122
82.0	0.102
82.5	0.082

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CANDELA TABULATION - (Cont.)

83.0	0.082
83.5	0.061
84.0	0.061
84.5	0.061
85.0	0.041
85.5	0.041
86.0	0.041
86.5	0.020
87.0	0.020
87.5	0.020
88.0	0.020
88.5	0.020
89.0	0.020
89.5	0.020
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-L5-830-XXX-DIM-UNV-OW-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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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	160.50	N.A.	31.70
0-30	331.80	N.A.	65.60
0-40	465.38	N.A.	92.00
0-60	502.97	N.A.	99.40
0-80	505.93	N.A.	100.00
0-90	505.99	N.A.	100.00
10-90	465.86	N.A.	92.10
20-40	304.88	N.A.	60.30
20-50	335.67	N.A.	66.30
40-70	40.01	N.A.	7.90
60-80	2.96	N.A.	0.60
70-80	0.54	N.A.	0.10
80-90	0.06	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	505.99	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	40.13
10-20	120.37
20-30	171.30
30-40	133.59
40-50	30.78
50-60	6.80
60-70	2.42
70-80	0.54
80-90	0.06
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

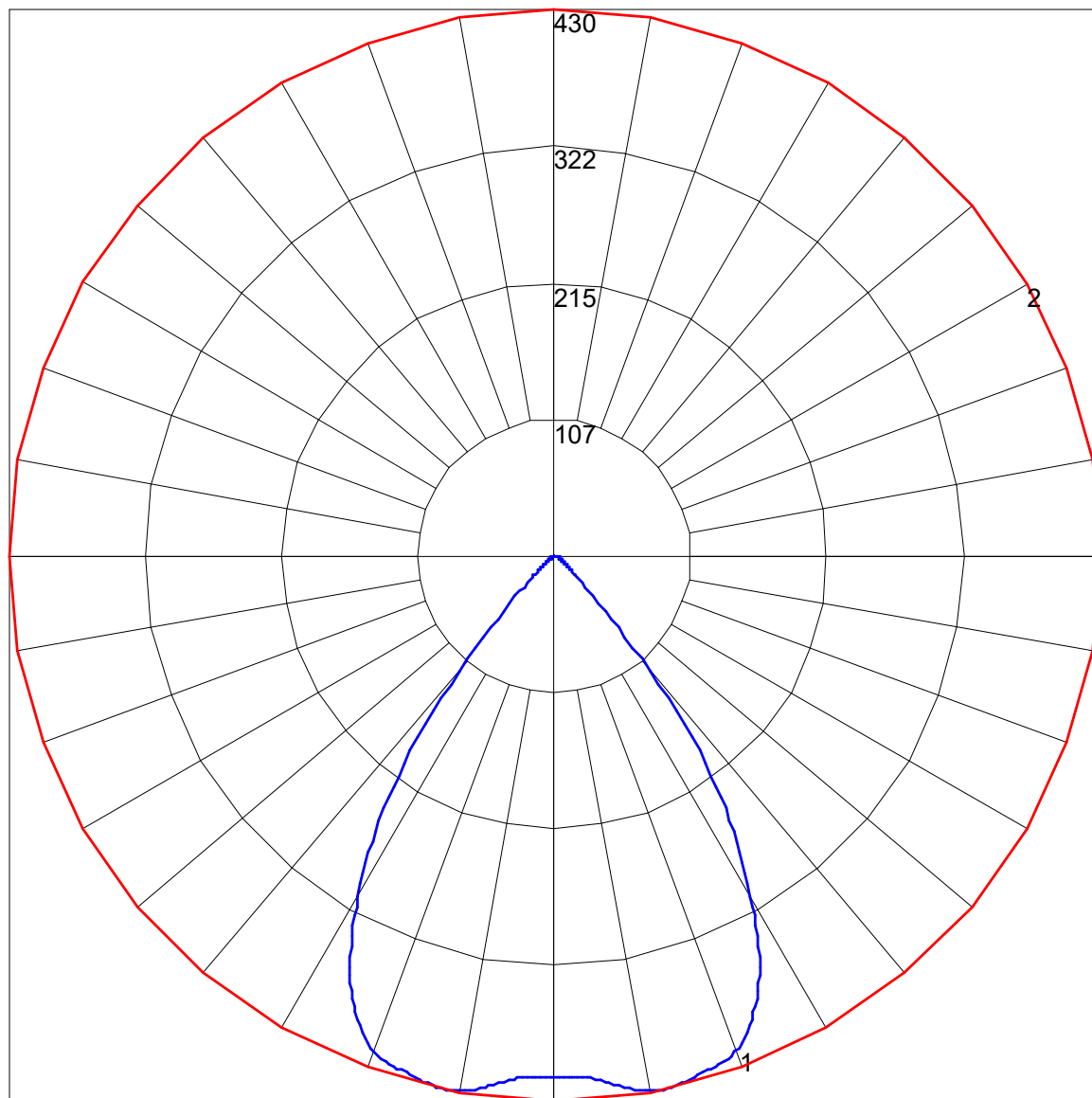
X=2H	Y=2H	6.4	7.5	6.8	7.8	8.1	6.4	7.5	6.8	7.8	8.1
	3H	6.7	7.6	7.1	7.9	8.3	6.7	7.6	7.1	7.9	8.3
	4H	6.7	7.5	7.1	7.9	8.2	6.7	7.5	7.1	7.9	8.2
	6H	6.6	7.3	7.0	7.7	8.1	6.6	7.3	7.0	7.7	8.1
	8H	6.6	7.2	7.0	7.6	8.0	6.6	7.2	7.0	7.6	8.0
	12H	6.5	7.2	6.9	7.5	8.0	6.5	7.2	6.9	7.5	8.0

UGR Viewed Endwise

4H	2H	6.5	7.3	6.9	7.7	8.1	6.5	7.3	6.9	7.7	8.1
	3H	6.8	7.5	7.2	7.9	8.3	6.8	7.5	7.2	7.9	8.3
	4H	6.8	7.4	7.2	7.8	8.2	6.8	7.4	7.2	7.8	8.2
	6H	6.7	7.2	7.2	7.7	8.1	6.7	7.2	7.2	7.7	8.1
	8H	6.6	7.1	7.1	7.6	8.0	6.6	7.1	7.1	7.6	8.0
	12H	6.6	7.0	7.1	7.5	7.9	6.6	7.0	7.1	7.5	7.9
8H	4H	6.6	7.1	7.1	7.6	8.0	6.6	7.1	7.1	7.6	8.0
	6H	6.6	6.9	7.1	7.4	7.9	6.6	6.9	7.1	7.4	7.9
	8H	6.5	6.8	7.0	7.3	7.8	6.5	6.8	7.0	7.3	7.8
	12H	6.5	6.7	7.0	7.2	7.8	6.5	6.7	7.0	7.2	7.8
12H	4H	6.6	7.0	7.1	7.5	7.9	6.6	7.0	7.1	7.5	7.9
	6H	6.5	6.8	7.0	7.3	7.8	6.5	6.8	7.0	7.3	7.8
	8H	6.5	6.7	7.0	7.2	7.8	6.5	6.7	7.0	7.2	7.8

Maximum UGR = 8.3

POLAR GRAPH



Maximum Candela = 429.865 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.)