



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L20-830-XXX-DIM-UNV-RM-BL-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM 13257153.07
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 12-04-2024
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4CR-xx-L20-830-xxx-DIM-UNV-RM-BL-xx
 [LUMINAIRE] Aluminum housing, optics, and trim 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	1575
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	66
Total Luminaire Watts	23.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.50
Spacing Criterion (90-270)	0.50
Spacing Criterion (Diagonal)	0.48
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	72789	72789	72789
55	53336	53336	53336
65	39048	39048	39048
75	19265	19265	19265
85	11442	11442	11442

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CANDELA TABULATION

	<u>0</u>
0.0	3989.566
0.5	3986.517
1.0	3977.369
1.5	3964.155
2.0	3944.843
2.5	3920.448
3.0	3889.954
3.5	3856.411
4.0	3817.786
4.5	3774.079
5.0	3725.289
5.5	3672.434
6.0	3614.496
6.5	3552.493
7.0	3485.407
7.5	3415.272
8.0	3340.055
8.5	3259.755
9.0	3173.357
9.5	3081.877
10.0	2986.330
10.5	2886.718
11.0	2782.024
11.5	2673.264
12.0	2560.438
12.5	2444.562
13.0	2326.654
13.5	2207.730
14.0	2088.805
14.5	1970.897
15.0	1854.005
15.5	1739.146
16.0	1628.353
16.5	1522.642
17.0	1422.014
17.5	1327.484
18.0	1240.069
18.5	1157.737
19.0	1082.519
19.5	1013.401
20.0	951.601
20.5	896.204
21.0	846.296
21.5	801.268
22.0	761.118
22.5	724.526
23.0	691.694
23.5	662.014
24.0	635.586
24.5	611.090
25.0	587.508
25.5	565.451
26.0	544.614
26.5	524.387

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CANDELA TABULATION - (Cont.)

27.0	505.176
27.5	486.575
28.0	468.380
28.5	450.491
29.0	432.703
29.5	415.118
30.0	398.042
30.5	381.372
31.0	365.109
31.5	349.760
32.0	335.632
32.5	322.418
33.0	310.221
33.5	299.243
34.0	289.282
34.5	280.032
35.0	271.494
35.5	263.667
36.0	256.450
36.5	249.640
37.0	243.338
37.5	237.239
38.0	231.344
38.5	225.754
39.0	220.163
39.5	214.776
40.0	209.592
40.5	204.408
41.0	199.326
41.5	194.345
42.0	189.466
42.5	184.791
43.0	180.115
43.5	175.643
44.0	171.170
44.5	166.901
45.0	162.632
45.5	158.465
46.0	154.500
46.5	150.435
47.0	146.572
47.5	142.710
48.0	138.949
48.5	135.290
49.0	131.732
49.5	128.276
50.0	125.023
50.5	121.771
51.0	118.620
51.5	115.672
52.0	112.724
52.5	109.878
53.0	107.134
53.5	104.389
54.0	101.747
54.5	99.206

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CANDELA TABULATION - (Cont.)

55.0	96.664
55.5	94.123
56.0	91.785
56.5	89.346
57.0	87.008
57.5	84.670
58.0	82.332
58.5	80.096
59.0	77.758
59.5	75.624
60.0	73.388
60.5	71.152
61.0	69.017
61.5	66.781
62.0	64.646
62.5	62.512
63.0	60.377
63.5	58.344
64.0	56.210
64.5	54.177
65.0	52.144
65.5	50.111
66.0	48.180
66.5	46.147
67.0	44.216
67.5	42.386
68.0	40.455
68.5	38.625
69.0	36.694
69.5	34.864
70.0	33.035
70.5	31.205
71.0	29.477
71.5	27.647
72.0	25.919
72.5	24.192
73.0	22.464
73.5	20.736
74.0	19.008
74.5	17.381
75.0	15.755
75.5	14.230
76.0	12.807
76.5	11.689
77.0	10.673
77.5	9.860
78.0	9.148
78.5	8.640
79.0	8.233
79.5	7.725
80.0	7.318
80.5	6.810
81.0	6.404
81.5	5.997
82.0	5.590
82.5	5.082

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CANDELA TABULATION - (Cont.)

83.0	4.676
83.5	4.371
84.0	3.964
84.5	3.558
85.0	3.151
85.5	2.744
86.0	2.439
86.5	2.033
87.0	1.728
87.5	1.321
88.0	1.016
88.5	0.712
89.0	0.508
89.5	0.305
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
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118.5	0.000
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120.0	0.000
120.5	0.000
121.0	0.000
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125.5	0.000
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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
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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	836.50	N.A.	53.10
0-30	1113.41	N.A.	70.70
0-40	1288.55	N.A.	81.80
0-60	1501.73	N.A.	95.30
0-80	1571.82	N.A.	99.80
0-90	1575.41	N.A.	100.00
10-90	1243.22	N.A.	78.90
20-40	452.06	N.A.	28.70
20-50	578.23	N.A.	36.70
40-70	265.03	N.A.	16.80
60-80	70.09	N.A.	4.40
70-80	18.24	N.A.	1.20
80-90	3.59	N.A.	0.20
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	1575.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	332.20
10-20	504.30
20-30	276.91
30-40	175.14
40-50	126.18
50-60	87.00
60-70	51.85
70-80	18.24
80-90	3.59
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	105	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	86	91	87	84	89	86	83	87	84	82	80
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75
5	93	84	78	74	91	83	78	74	82	77	73	80	76	73	78	75	72	70
6	88	80	74	70	87	79	73	69	77	73	69	76	72	68	75	71	68	67
7	85	76	70	66	83	75	69	66	74	69	65	73	68	65	71	67	64	63
8	81	72	66	62	80	71	66	62	70	65	62	69	65	62	68	64	61	60
9	78	69	63	59	77	68	63	59	67	63	59	67	62	59	66	62	59	57
10	75	66	60	57	74	65	60	57	65	60	57	64	60	56	63	59	56	55

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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	21.6	22.7	21.9	23.0	23.3	21.6	22.7	21.9	23.0	23.3
	3H	22.6	23.6	23.0	23.9	24.3	22.6	23.6	23.0	23.9	24.3
	4H	22.7	23.7	23.2	24.0	24.4	22.7	23.7	23.2	24.0	24.4
	6H	22.8	23.6	23.2	24.0	24.4	22.8	23.6	23.2	24.0	24.4
	8H	22.8	23.6	23.2	24.0	24.4	22.8	23.6	23.2	24.0	24.4
	12H	22.7	23.5	23.2	23.9	24.3	22.7	23.5	23.2	23.9	24.3

UGR Viewed Endwise

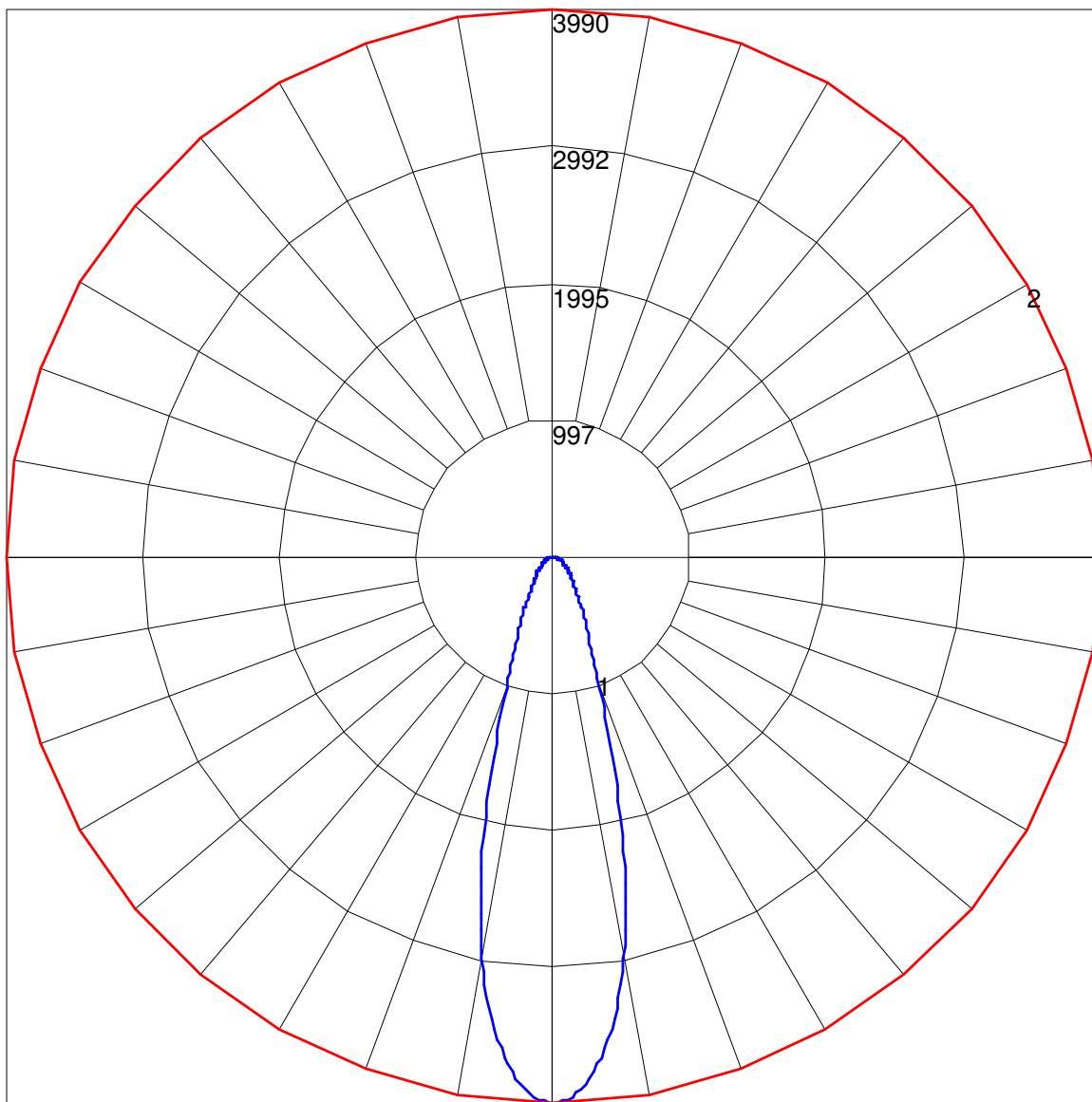
4H	2H	21.9	22.8	22.3	23.2	23.6	21.9	22.8	22.3	23.2	23.6
	3H	23.1	23.8	23.5	24.2	24.6	23.1	23.8	23.5	24.2	24.6
	4H	23.3	23.9	23.7	24.4	24.8	23.3	23.9	23.7	24.4	24.8
	6H	23.3	23.9	23.8	24.3	24.8	23.3	23.9	23.8	24.3	24.8
	8H	23.3	23.9	23.8	24.3	24.8	23.3	23.9	23.8	24.3	24.8
	12H	23.3	23.8	23.8	24.3	24.7	23.3	23.8	23.8	24.3	24.7

8H	4H	23.2	23.8	23.7	24.2	24.7	23.2	23.8	23.7	24.2	24.7
	6H	23.3	23.8	23.8	24.3	24.8	23.3	23.8	23.8	24.3	24.8
	8H	23.3	23.7	23.9	24.3	24.8	23.3	23.7	23.9	24.3	24.8
	12H	23.4	23.7	23.9	24.2	24.8	23.4	23.7	23.9	24.2	24.8

12H	4H	23.2	23.7	23.7	24.2	24.6	23.2	23.7	23.7	24.2	24.6
	6H	23.3	23.7	23.8	24.2	24.7	23.3	23.7	23.8	24.2	24.7
	8H	23.4	23.7	23.9	24.2	24.8	23.4	23.7	23.9	24.2	24.8

Maximum UGR = 24.8

POLAR GRAPH



Maximum Candela = 3989.566 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.)