



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CR-XX-L20-927-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] 10-16-2024
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
[LUMCAT] 4CR-xx-L20-937-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	1395
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	58
Total Luminaire Watts	23.9
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	37866	37866	37866
55	10777	10777	10777
65	4890	4890	4890
75	1514	1514	1514
85	410	410	410

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CANDELA TABULATION

	<u>0</u>
0.0	1131.979
0.5	1131.979
1.0	1131.979
1.5	1132.542
2.0	1133.105
2.5	1133.668
3.0	1134.231
3.5	1135.919
4.0	1138.171
4.5	1140.985
5.0	1144.363
5.5	1148.303
6.0	1151.680
6.5	1156.184
7.0	1160.687
7.5	1165.190
8.0	1170.256
8.5	1174.196
9.0	1177.573
9.5	1179.825
10.0	1182.077
10.5	1183.765
11.0	1184.891
11.5	1185.454
12.0	1184.891
12.5	1184.328
13.0	1182.640
13.5	1180.951
14.0	1178.699
14.5	1177.011
15.0	1174.759
15.5	1172.507
16.0	1169.693
16.5	1168.004
17.0	1165.753
17.5	1164.064
18.0	1162.938
18.5	1161.250
19.0	1158.435
19.5	1153.369
20.0	1148.303
20.5	1141.548
21.0	1133.668
21.5	1125.224
22.0	1116.781
22.5	1106.649
23.0	1095.954
23.5	1084.133
24.0	1072.312
24.5	1059.929
25.0	1046.419
25.5	1031.784
26.0	1016.023
26.5	998.573

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CANDELA TABULATION - (Cont.)

27.0	979.998
27.5	958.608
28.0	938.344
28.5	916.954
29.0	896.127
29.5	875.300
30.0	853.347
30.5	830.831
31.0	807.752
31.5	784.111
32.0	761.595
32.5	737.954
33.0	713.749
33.5	689.545
34.0	664.214
34.5	638.884
35.0	612.991
35.5	585.972
36.0	557.996
36.5	528.670
37.0	497.317
37.5	464.050
38.0	429.657
38.5	394.588
39.0	359.689
39.5	325.859
40.0	293.662
40.5	263.378
41.0	235.121
41.5	208.721
42.0	184.066
42.5	161.438
43.0	141.005
43.5	122.992
44.0	107.794
44.5	95.129
45.0	84.603
45.5	75.878
46.0	68.617
46.5	62.425
47.0	57.190
47.5	52.687
48.0	48.747
48.5	45.257
49.0	42.161
49.5	39.403
50.0	36.813
50.5	34.505
51.0	32.366
51.5	30.396
52.0	28.595
52.5	26.850
53.0	25.218
53.5	23.642
54.0	22.178
54.5	20.771

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CANDELA TABULATION - (Cont.)

55.0	19.532
55.5	18.407
56.0	17.393
56.5	16.436
57.0	15.592
57.5	14.804
58.0	14.072
58.5	13.397
59.0	12.778
59.5	12.102
60.0	11.539
60.5	10.920
61.0	10.414
61.5	9.851
62.0	9.344
62.5	8.837
63.0	8.387
63.5	7.881
64.0	7.430
64.5	6.980
65.0	6.530
65.5	6.136
66.0	5.742
66.5	5.291
67.0	4.953
67.5	4.559
68.0	4.222
68.5	3.940
69.0	3.603
69.5	3.321
70.0	3.040
70.5	2.814
71.0	2.589
71.5	2.364
72.0	2.139
72.5	1.970
73.0	1.801
73.5	1.632
74.0	1.520
74.5	1.351
75.0	1.238
75.5	1.126
76.0	1.013
76.5	0.957
77.0	0.844
77.5	0.732
78.0	0.675
78.5	0.619
79.0	0.563
79.5	0.507
80.0	0.450
80.5	0.394
81.0	0.338
81.5	0.338
82.0	0.281
82.5	0.225

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CANDELA TABULATION - (Cont.)

83.0	0.225
83.5	0.169
84.0	0.169
84.5	0.169
85.0	0.113
85.5	0.113
86.0	0.113
86.5	0.056
87.0	0.056
87.5	0.056
88.0	0.056
88.5	0.056
89.0	0.056
89.5	0.056
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
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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
119.0	0.000
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124.5	0.000
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127.0	0.000
127.5	0.000
128.0	0.000
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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
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145.0	0.000
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146.0	0.000
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147.5	0.000
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150.5	0.000
151.0	0.000
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154.5	0.000
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157.5	0.000
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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

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	442.62	N.A.	31.70
0-30	915.00	N.A.	65.60
0-40	1283.4	N.A.	92.00
0-60	1387.05	N.A.	99.40
0-80	1395.21	N.A.	100.00
0-90	1395.38	N.A.	100.00
10-90	1284.71	N.A.	92.10
20-40	840.78	N.A.	60.30
20-50	925.68	N.A.	66.30
40-70	110.33	N.A.	7.90
60-80	8.16	N.A.	0.60
70-80	1.48	N.A.	0.10
80-90	0.18	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	1395.38	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	110.67
10-20	331.94
20-30	472.39
30-40	368.40
40-50	84.89
50-60	18.76
60-70	6.67
70-80	1.48
80-90	0.18
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	101	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	89	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	75	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	82	72	66	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	65	60	56	64	59	56	54
9	73	63	57	53	72	63	57	53	62	56	53	61	56	52	60	55	52	51
10	70	59	53	49	69	59	53	49	58	53	49	57	52	49	57	52	49	47

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UGR TABLE - CORRECTED

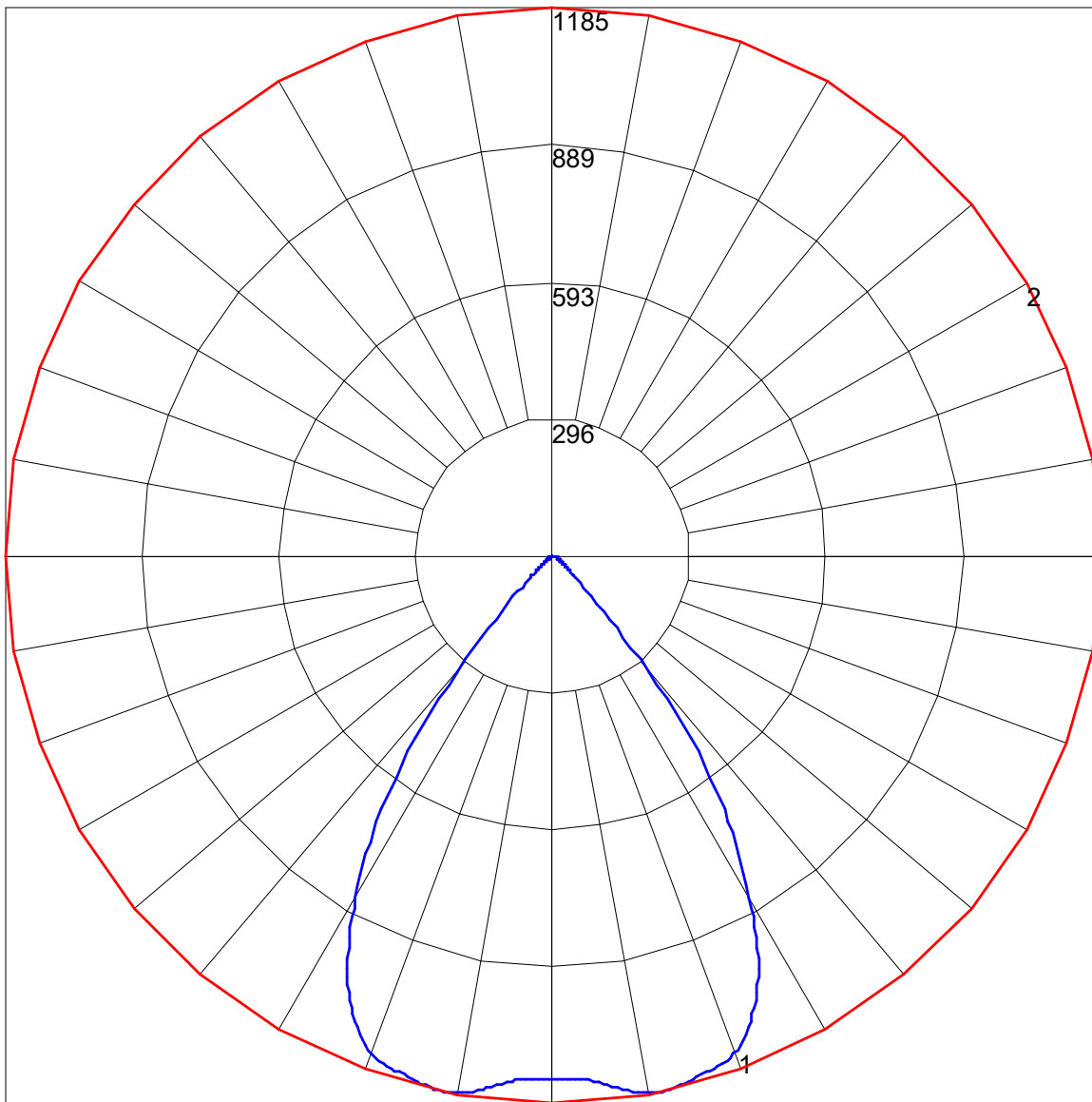
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	10.0	11.0	10.4	11.4	11.7	10.0	11.0	10.4	11.4	11.7
	3H	10.3	11.2	10.7	11.5	11.9	10.3	11.2	10.7	11.5	11.9
	4H	10.3	11.1	10.7	11.4	11.8	10.3	11.1	10.7	11.4	11.8
	6H	10.2	10.9	10.6	11.3	11.7	10.2	10.9	10.6	11.3	11.7
	8H	10.2	10.8	10.6	11.2	11.6	10.2	10.8	10.6	11.2	11.6
	12H	10.1	10.8	10.5	11.1	11.6	10.1	10.8	10.5	11.1	11.6
4H	2H	10.1	10.9	10.5	11.3	11.6	10.1	10.9	10.5	11.3	11.6
	3H	10.4	11.1	10.8	11.5	11.9	10.4	11.1	10.8	11.5	11.9
	4H	10.4	11.0	10.8	11.4	11.8	10.4	11.0	10.8	11.4	11.8
	6H	10.3	10.8	10.8	11.2	11.7	10.3	10.8	10.8	11.2	11.7
	8H	10.2	10.7	10.7	11.1	11.6	10.2	10.7	10.7	11.1	11.6
	12H	10.2	10.6	10.7	11.1	11.5	10.2	10.6	10.7	11.1	11.5
8H	4H	10.2	10.7	10.7	11.2	11.6	10.2	10.7	10.7	11.2	11.6
	6H	10.1	10.5	10.7	11.0	11.5	10.1	10.5	10.7	11.0	11.5
	8H	10.1	10.4	10.6	10.9	11.4	10.1	10.4	10.6	10.9	11.4
	12H	10.0	10.3	10.5	10.8	11.4	10.0	10.3	10.5	10.8	11.4
12H	4H	10.2	10.6	10.7	11.1	11.5	10.2	10.6	10.7	11.1	11.5
	6H	10.1	10.4	10.6	10.9	11.4	10.1	10.4	10.6	10.9	11.4
	8H	10.0	10.3	10.5	10.8	11.4	10.0	10.3	10.5	10.8	11.4

Maximum UGR = 11.9

POLAR GRAPH



Maximum Candela = 1185.454 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.)