



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L25-935-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] 01/04/2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L25-935-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	2033
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	67
Total Luminaire Watts	30.1187
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	55161	55161	55161
55	15700	15700	15700
65	7123	7123	7123
75	2206	2206	2206
85	596	596	596

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CANDELA TABULATION

	<u>0</u>
0.0	1649.020
0.5	1649.020
1.0	1649.020
1.5	1649.840
2.0	1650.660
2.5	1651.480
3.0	1652.300
3.5	1654.760
4.0	1658.040
4.5	1662.140
5.0	1667.060
5.5	1672.800
6.0	1677.720
6.5	1684.280
7.0	1690.840
7.5	1697.400
8.0	1704.780
8.5	1710.520
9.0	1715.440
9.5	1718.720
10.0	1722.000
10.5	1724.460
11.0	1726.100
11.5	1726.920
12.0	1726.100
12.5	1725.280
13.0	1722.820
13.5	1720.360
14.0	1717.080
14.5	1714.620
15.0	1711.340
15.5	1708.060
16.0	1703.960
16.5	1701.500
17.0	1698.220
17.5	1695.760
18.0	1694.120
18.5	1691.660
19.0	1687.560
19.5	1680.180
20.0	1672.800
20.5	1662.960
21.0	1651.480
21.5	1639.180
22.0	1626.880
22.5	1612.120
23.0	1596.540
23.5	1579.320
24.0	1562.100
24.5	1544.060
25.0	1524.380
25.5	1503.060
26.0	1480.100
26.5	1454.680

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CANDELA TABULATION - (Cont.)

27.0	1427.620
27.5	1396.460
28.0	1366.940
28.5	1335.780
29.0	1305.440
29.5	1275.100
30.0	1243.120
30.5	1210.320
31.0	1176.700
31.5	1142.260
32.0	1109.460
32.5	1075.020
33.0	1039.760
33.5	1004.500
34.0	967.600
34.5	930.700
35.0	892.980
35.5	853.620
36.0	812.866
36.5	770.144
37.0	724.470
37.5	676.008
38.0	625.906
38.5	574.820
39.0	523.980
39.5	474.698
40.0	427.794
40.5	383.678
41.0	342.514
41.5	304.056
42.0	268.140
42.5	235.176
43.0	205.410
43.5	179.170
44.0	157.030
44.5	138.580
45.0	123.246
45.5	110.536
46.0	99.958
46.5	90.938
47.0	83.312
47.5	76.752
48.0	71.012
48.5	65.928
49.0	61.418
49.5	57.400
50.0	53.628
50.5	50.266
51.0	47.150
51.5	44.280
52.0	41.656
52.5	39.114
53.0	36.736
53.5	34.440
54.0	32.308
54.5	30.258

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CANDELA TABULATION - (Cont.)

55.0	28.454
55.5	26.814
56.0	25.338
56.5	23.944
57.0	22.714
57.5	21.566
58.0	20.500
58.5	19.516
59.0	18.614
59.5	17.630
60.0	16.810
60.5	15.908
61.0	15.170
61.5	14.350
62.0	13.612
62.5	12.874
63.0	12.218
63.5	11.480
64.0	10.824
64.5	10.168
65.0	9.512
65.5	8.938
66.0	8.364
66.5	7.708
67.0	7.216
67.5	6.642
68.0	6.150
68.5	5.740
69.0	5.248
69.5	4.838
70.0	4.428
70.5	4.100
71.0	3.772
71.5	3.444
72.0	3.116
72.5	2.870
73.0	2.624
73.5	2.378
74.0	2.214
74.5	1.968
75.0	1.804
75.5	1.640
76.0	1.476
76.5	1.394
77.0	1.230
77.5	1.066
78.0	0.984
78.5	0.902
79.0	0.820
79.5	0.738
80.0	0.656
80.5	0.574
81.0	0.492
81.5	0.492
82.0	0.410
82.5	0.328

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CANDELA TABULATION - (Cont.)

83.0	0.328
83.5	0.246
84.0	0.246
84.5	0.246
85.0	0.164
85.5	0.164
86.0	0.164
86.5	0.082
87.0	0.082
87.5	0.082
88.0	0.082
88.5	0.082
89.0	0.082
89.5	0.082
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
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120.0	0.000
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124.5	0.000
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127.0	0.000
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128.0	0.000
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129.0	0.000
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134.5	0.000
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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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L25-935-XXX-DIM-UNV-OW-CS-XX_.IES****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
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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	644.78	N.A.	31.70
0-30	1332.94	N.A.	65.60
0-40	1869.6	N.A.	92.00
0-60	2020.6	N.A.	99.40
0-80	2032.48	N.A.	100.00
0-90	2032.74	N.A.	100.00
10-90	1871.52	N.A.	92.10
20-40	1224.82	N.A.	60.30
20-50	1348.49	N.A.	66.30
40-70	160.72	N.A.	7.90
60-80	11.88	N.A.	0.60
70-80	2.16	N.A.	0.10
80-90	0.26	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	2032.74	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	161.22
10-20	483.56
20-30	688.15
30-40	536.67
40-50	123.67
50-60	27.33
60-70	9.72
70-80	2.16
80-90	0.26
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	91	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	70	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

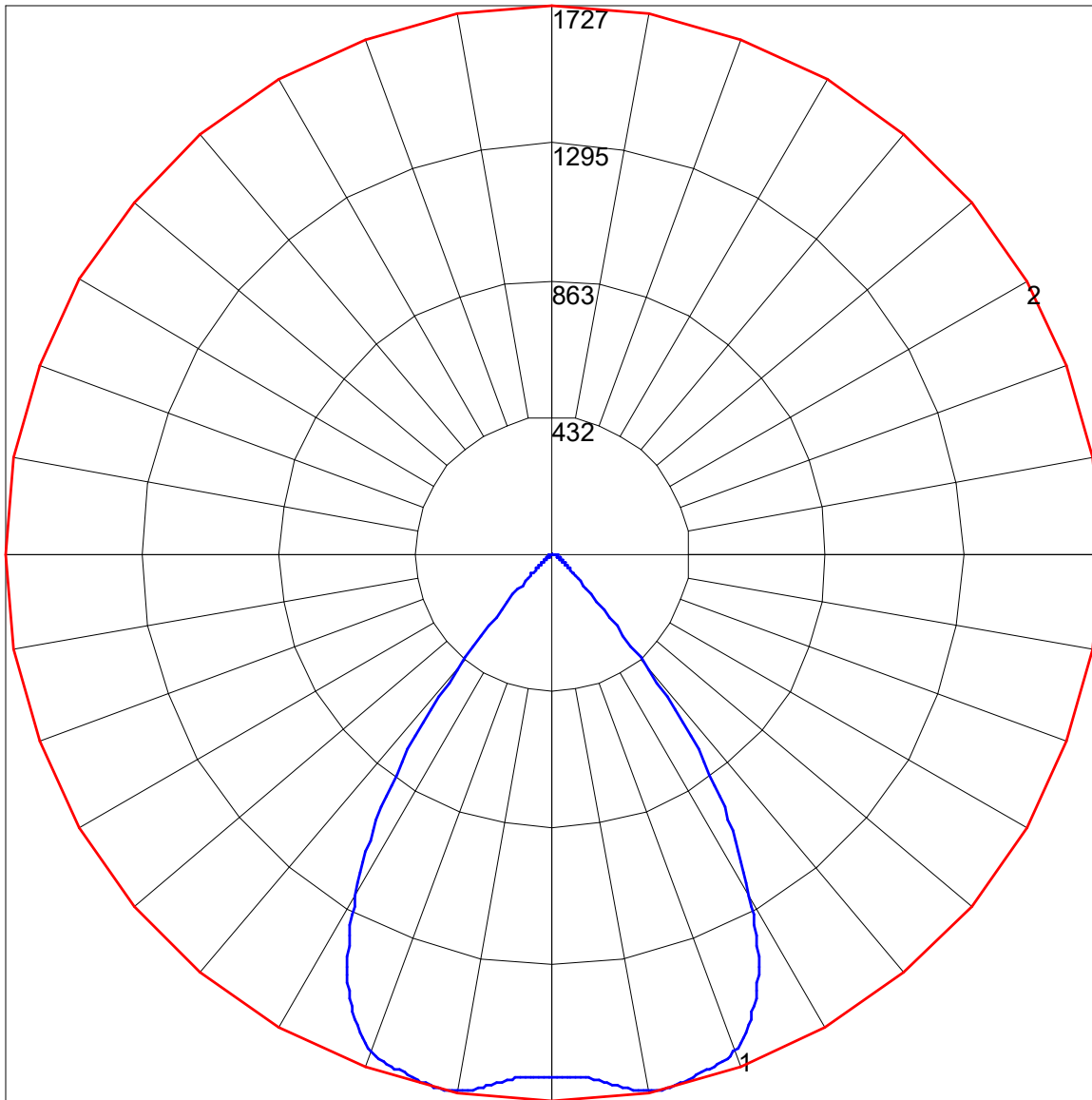
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	11.3	12.3	11.7	12.7	13.0	11.3	12.3	11.7	12.7	13.0
	3H	11.6	12.5	12.0	12.8	13.2	11.6	12.5	12.0	12.8	13.2
	4H	11.6	12.4	12.0	12.7	13.1	11.6	12.4	12.0	12.7	13.1
	6H	11.5	12.2	11.9	12.6	13.0	11.5	12.2	11.9	12.6	13.0
	8H	11.5	12.1	11.9	12.5	12.9	11.5	12.1	11.9	12.5	12.9
	12H	11.4	12.1	11.8	12.4	12.9	11.4	12.1	11.8	12.4	12.9
4H	2H	11.4	12.2	11.8	12.6	12.9	11.4	12.2	11.8	12.6	12.9
	3H	11.7	12.4	12.1	12.8	13.2	11.7	12.4	12.1	12.8	13.2
	4H	11.7	12.3	12.1	12.7	13.1	11.7	12.3	12.1	12.7	13.1
	6H	11.6	12.1	12.1	12.5	13.0	11.6	12.1	12.1	12.5	13.0
	8H	11.5	12.0	12.0	12.4	12.9	11.5	12.0	12.0	12.4	12.9
	12H	11.5	11.9	12.0	12.4	12.8	11.5	11.9	12.0	12.4	12.8
8H	4H	11.5	12.0	12.0	12.5	12.9	11.5	12.0	12.0	12.5	12.9
	6H	11.4	11.8	12.0	12.3	12.8	11.4	11.8	12.0	12.3	12.8
	8H	11.4	11.7	11.9	12.2	12.7	11.4	11.7	11.9	12.2	12.7
	12H	11.3	11.6	11.8	12.1	12.7	11.3	11.6	11.8	12.1	12.7
12H	4H	11.5	11.9	12.0	12.4	12.8	11.5	11.9	12.0	12.4	12.8
	6H	11.4	11.7	11.9	12.2	12.7	11.4	11.7	11.9	12.2	12.7
	8H	11.3	11.6	11.8	12.1	12.7	11.3	11.6	11.8	12.1	12.7

Maximum UGR = 13.2

POLAR GRAPH



Maximum Candela = 1726.92 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.)