



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L9-840-XXX-DIM-UNV-OM-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 13131414.06
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 04-26-2022
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L9-840-xxx-DIM-UNV-OM-CS-xx
 [LUMINAIRE] Aluminum cylinder housing and reflector, no lens enclosure
 [LAMP] One white LED
 [SEARCH_SOURCETYPE] LED
 [SEARCH_APPLICATION] Indoor, Downlight
 [SEARCH_MOUNTING] Surface, Suspended, Wall

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	907
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	10.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.66
Spacing Criterion (90-270)	0.66
Spacing Criterion (Diagonal)	0.66
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	6254	6254	6254
55	1880	1880	1880
65	624	624	624
75	278	278	278
85	138	138	138

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CANDELA TABULATION

	<u>0</u>
0.0	2046.904
0.5	2046.904
1.0	2046.526
1.5	2046.147
2.0	2046.147
2.5	2043.117
3.0	2037.815
3.5	2032.514
4.0	2026.076
4.5	2019.638
5.0	2012.063
5.5	2001.460
6.0	1988.205
6.5	1968.512
7.0	1945.411
7.5	1921.553
8.0	1895.801
8.5	1867.019
9.0	1835.965
9.5	1803.397
10.0	1768.934
10.5	1732.957
11.0	1695.844
11.5	1658.352
12.0	1620.482
12.5	1581.854
13.0	1543.604
13.5	1505.734
14.0	1468.999
14.5	1433.022
15.0	1397.424
15.5	1362.204
16.0	1326.985
16.5	1291.765
17.0	1256.924
17.5	1222.462
18.0	1188.379
18.5	1154.674
19.0	1119.833
19.5	1084.613
20.0	1048.257
20.5	1011.523
21.0	974.031
21.5	935.782
22.0	896.775
22.5	855.875
23.0	813.839
23.5	770.666
24.0	725.979
24.5	680.534
25.0	634.332
25.5	587.373
26.0	540.413
26.5	493.075

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CANDELA TABULATION - (Cont.)

27.0	446.494
27.5	401.049
28.0	357.839
28.5	316.295
29.0	278.084
29.5	242.902
30.0	211.166
30.5	182.044
31.0	155.837
31.5	132.396
32.0	112.513
32.5	95.623
33.0	81.687
33.5	70.136
34.0	60.707
34.5	52.867
35.0	46.808
35.5	42.264
36.0	38.779
36.5	36.015
37.0	33.515
37.5	31.243
38.0	29.236
38.5	27.532
39.0	25.979
39.5	24.578
40.0	23.290
40.5	22.116
41.0	21.018
41.5	19.958
42.0	18.973
42.5	18.064
43.0	17.193
43.5	16.360
44.0	15.565
44.5	14.807
45.0	13.974
45.5	13.141
46.0	12.384
46.5	11.664
47.0	11.020
47.5	10.339
48.0	9.733
48.5	9.127
49.0	8.559
49.5	8.029
50.0	7.461
50.5	6.930
51.0	6.400
51.5	5.870
52.0	5.378
52.5	4.999
53.0	4.658
53.5	4.317
54.0	3.976
54.5	3.711

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CANDELA TABULATION - (Cont.)

55.0	3.408
55.5	3.143
56.0	2.916
56.5	2.651
57.0	2.424
57.5	2.272
58.0	2.121
58.5	1.969
59.0	1.818
59.5	1.704
60.0	1.591
60.5	1.515
61.0	1.401
61.5	1.325
62.0	1.250
62.5	1.174
63.0	1.098
63.5	1.023
64.0	0.947
64.5	0.909
65.0	0.833
65.5	0.795
66.0	0.757
66.5	0.720
67.0	0.644
67.5	0.606
68.0	0.568
68.5	0.530
69.0	0.530
69.5	0.492
70.0	0.454
70.5	0.417
71.0	0.379
71.5	0.379
72.0	0.341
72.5	0.341
73.0	0.303
73.5	0.265
74.0	0.265
74.5	0.227
75.0	0.227
75.5	0.227
76.0	0.189
76.5	0.189
77.0	0.189
77.5	0.151
78.0	0.151
78.5	0.151
79.0	0.114
79.5	0.114
80.0	0.114
80.5	0.114
81.0	0.076
81.5	0.076
82.0	0.076
82.5	0.076

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CANDELA TABULATION - (Cont.)

83.0	0.076
83.5	0.038
84.0	0.038
84.5	0.038
85.0	0.038
85.5	0.038
86.0	0.038
86.5	0.038
87.0	0.038
87.5	0.038
88.0	0.038
88.5	0.038
89.0	0.000
89.5	0.000
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
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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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
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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

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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	570.97	N.A.	62.90
0-30	849.80	N.A.	93.70
0-40	891.61	N.A.	98.30
0-60	905.88	N.A.	99.90
0-80	907.03	N.A.	100.00
0-90	907.09	N.A.	100.00
10-90	722.70	N.A.	79.70
20-40	320.64	N.A.	35.30
20-50	331.60	N.A.	36.60
40-70	15.17	N.A.	1.70
60-80	1.15	N.A.	0.10
70-80	0.26	N.A.	0.00
80-90	0.05	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	907.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	184.39
10-20	386.58
20-30	278.84
30-40	41.81
40-50	10.95
50-60	3.32
60-70	0.89
70-80	0.26
80-90	0.05
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	114	112	110	108	112	110	108	106	106	105	103	102	101	100	99	98	97	96
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91
3	106	101	97	93	104	99	96	93	97	94	91	94	92	90	92	90	88	87
4	102	96	91	88	100	95	91	87	93	89	86	91	88	85	89	86	84	83
5	98	91	87	83	97	90	86	83	89	85	82	87	84	81	86	83	81	79
6	94	87	82	79	93	87	82	79	85	81	78	84	80	78	83	80	77	76
7	91	84	79	75	90	83	78	75	82	78	75	81	77	74	80	76	74	73
8	88	80	75	72	87	80	75	72	79	75	72	78	74	71	77	74	71	70
9	85	77	72	69	84	77	72	69	76	72	69	75	71	68	74	71	68	67
10	82	74	69	66	81	74	69	66	73	69	66	72	68	66	72	68	66	65

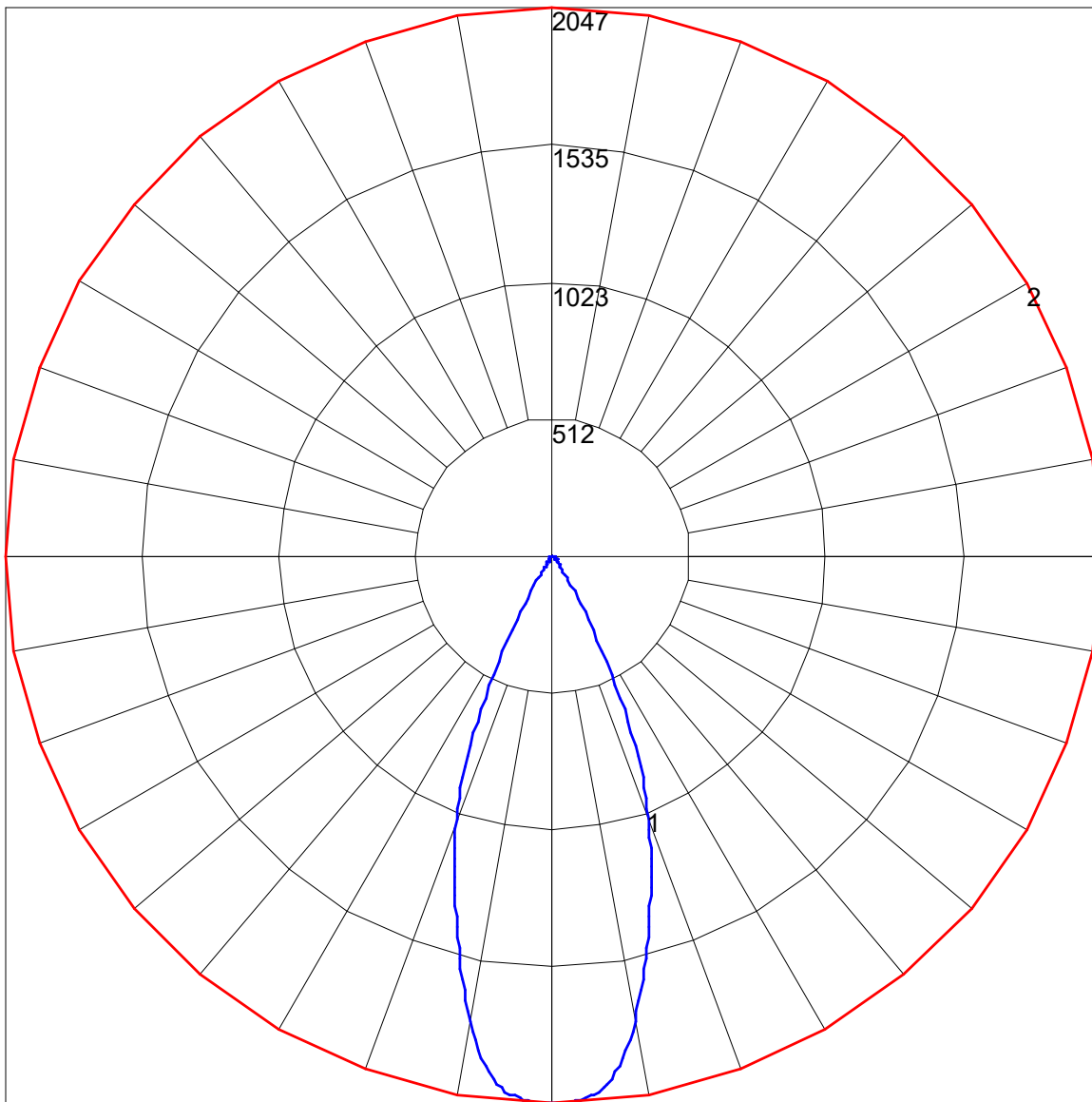
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UGR TABLE - CORRECTED

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	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
	3H	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
	4H	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
	6H	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
	8H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	12H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4H	2H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	3H	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
	4H	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
	6H	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
	8H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	12H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8H	4H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	6H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	8H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	12H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12H	4H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	6H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	8H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Maximum UGR = 0.2

POLAR GRAPH



Maximum Candela = 2046.904 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.)