



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L9-835-XXX-DIM-UNV-RW-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM 13257153.03
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 06-29-2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4CR-xx-L9-835-xxx-DIM-UNV-RW-CS-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	944
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	10.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.88
Spacing Criterion (90-270)	0.88
Spacing Criterion (Diagonal)	0.80
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	33833	33833	33833
55	26772	26772	26772
65	20012	20012	20012
75	10419	10419	10419
85	6315	6315	6315

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CANDELA TABULATION

	<u>0</u>
0.0	1124.604
0.5	1124.604
1.0	1124.025
1.5	1123.445
2.0	1123.445
2.5	1122.285
3.0	1120.546
3.5	1118.228
4.0	1115.909
4.5	1113.590
5.0	1110.112
5.5	1107.213
6.0	1103.735
6.5	1099.677
7.0	1095.620
7.5	1091.562
8.0	1087.504
8.5	1082.866
9.0	1077.649
9.5	1073.012
10.0	1067.794
10.5	1061.997
11.0	1055.621
11.5	1049.244
12.0	1042.288
12.5	1035.332
13.0	1027.796
13.5	1019.680
14.0	1010.984
14.5	1002.289
15.0	992.434
15.5	982.579
16.0	971.565
16.5	960.551
17.0	948.957
17.5	936.784
18.0	924.030
18.5	910.118
19.0	895.626
19.5	879.974
20.0	863.742
20.5	846.931
21.0	828.961
21.5	810.411
22.0	790.121
22.5	769.832
23.0	748.384
23.5	726.355
24.0	703.167
24.5	679.980
25.0	656.212
25.5	631.286
26.0	605.779
26.5	580.273

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CANDELA TABULATION - (Cont.)

27.0	554.940
27.5	529.491
28.0	503.811
28.5	478.247
29.0	452.102
29.5	425.784
30.0	399.698
30.5	374.018
31.0	348.685
31.5	324.222
32.0	300.687
32.5	278.426
33.0	257.789
33.5	238.660
34.0	220.863
34.5	204.574
35.0	189.791
35.5	176.227
36.0	163.937
36.5	152.923
37.0	143.126
37.5	134.373
38.0	126.431
38.5	119.359
39.0	113.156
39.5	107.707
40.0	102.838
40.5	98.606
41.0	94.838
41.5	91.476
42.0	88.461
42.5	85.795
43.0	83.360
43.5	81.215
44.0	79.186
44.5	77.331
45.0	75.592
45.5	73.911
46.0	72.346
46.5	70.781
47.0	69.331
47.5	67.882
48.0	66.433
48.5	65.042
49.0	63.650
49.5	62.259
50.0	60.926
50.5	59.650
51.0	58.317
51.5	57.042
52.0	55.824
52.5	54.549
53.0	53.332
53.5	52.114
54.0	50.897
54.5	49.680

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CANDELA TABULATION - (Cont.)

55.0	48.520
55.5	47.361
56.0	46.202
56.5	45.042
57.0	43.883
57.5	42.781
58.0	41.622
58.5	40.521
59.0	39.419
59.5	38.376
60.0	37.274
60.5	36.173
61.0	35.071
61.5	34.028
62.0	32.927
62.5	31.883
63.0	30.840
63.5	29.796
64.0	28.753
64.5	27.709
65.0	26.724
65.5	25.738
66.0	24.753
66.5	23.709
67.0	22.782
67.5	21.854
68.0	20.869
68.5	19.941
69.0	19.014
69.5	18.086
70.0	17.217
70.5	16.289
71.0	15.420
71.5	14.492
72.0	13.623
72.5	12.753
73.0	11.884
73.5	11.014
74.0	10.203
74.5	9.333
75.0	8.521
75.5	7.768
76.0	7.014
76.5	6.435
77.0	5.913
77.5	5.449
78.0	5.101
78.5	4.811
79.0	4.580
79.5	4.348
80.0	4.058
80.5	3.826
81.0	3.594
81.5	3.362
82.0	3.072
82.5	2.840

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CANDELA TABULATION - (Cont.)

83.0	2.667
83.5	2.435
84.0	2.203
84.5	1.971
85.0	1.739
85.5	1.565
86.0	1.333
86.5	1.159
87.0	0.928
87.5	0.754
88.0	0.580
88.5	0.406
89.0	0.232
89.5	0.174
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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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
145.5	0.000
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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	380.38	N.A.	40.30
0-30	673.37	N.A.	71.40
0-40	802.28	N.A.	85.00
0-60	905.32	N.A.	95.90
0-80	941.64	N.A.	99.80
0-90	943.65	N.A.	100.00
10-90	839.04	N.A.	88.90
20-40	421.90	N.A.	44.70
20-50	481.46	N.A.	51.00
40-70	129.61	N.A.	13.70
60-80	36.32	N.A.	3.80
70-80	9.76	N.A.	1.00
80-90	2.01	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	943.65	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	104.61
10-20	275.77
20-30	292.99
30-40	128.91
40-50	59.56
50-60	43.49
60-70	26.56
70-80	9.76
80-90	2.01
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	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92
2	107	102	97	94	105	100	96	93	97	93	91	94	91	89	91	89	87	85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	85	83	80	78
4	96	88	82	78	94	87	81	77	84	80	76	82	78	75	81	77	74	73
5	91	82	76	71	89	81	75	71	79	74	71	78	73	70	76	72	69	68
6	86	77	71	66	85	76	70	66	75	70	66	73	69	65	72	68	65	63
7	82	72	66	62	81	72	66	62	70	65	61	69	65	61	68	64	61	59
8	78	68	62	58	77	68	62	58	67	61	58	66	61	57	65	60	57	56
9	75	65	59	55	73	64	58	54	63	58	54	62	58	54	61	57	54	53
10	71	61	55	52	70	61	55	51	60	55	51	59	55	51	59	54	51	50

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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	18.7	19.8	19.1	20.1	20.4	18.7	19.8	19.1	20.1	20.4
	3H	19.7	20.7	20.1	21.0	21.4	19.7	20.7	20.1	21.0	21.4
	4H	19.9	20.8	20.3	21.2	21.6	19.9	20.8	20.3	21.2	21.6
	6H	19.9	20.8	20.4	21.2	21.5	19.9	20.8	20.4	21.2	21.5
	8H	19.9	20.7	20.4	21.1	21.5	19.9	20.7	20.4	21.1	21.5
	12H	19.9	20.7	20.4	21.1	21.5	19.9	20.7	20.4	21.1	21.5

UGR Viewed Endwise

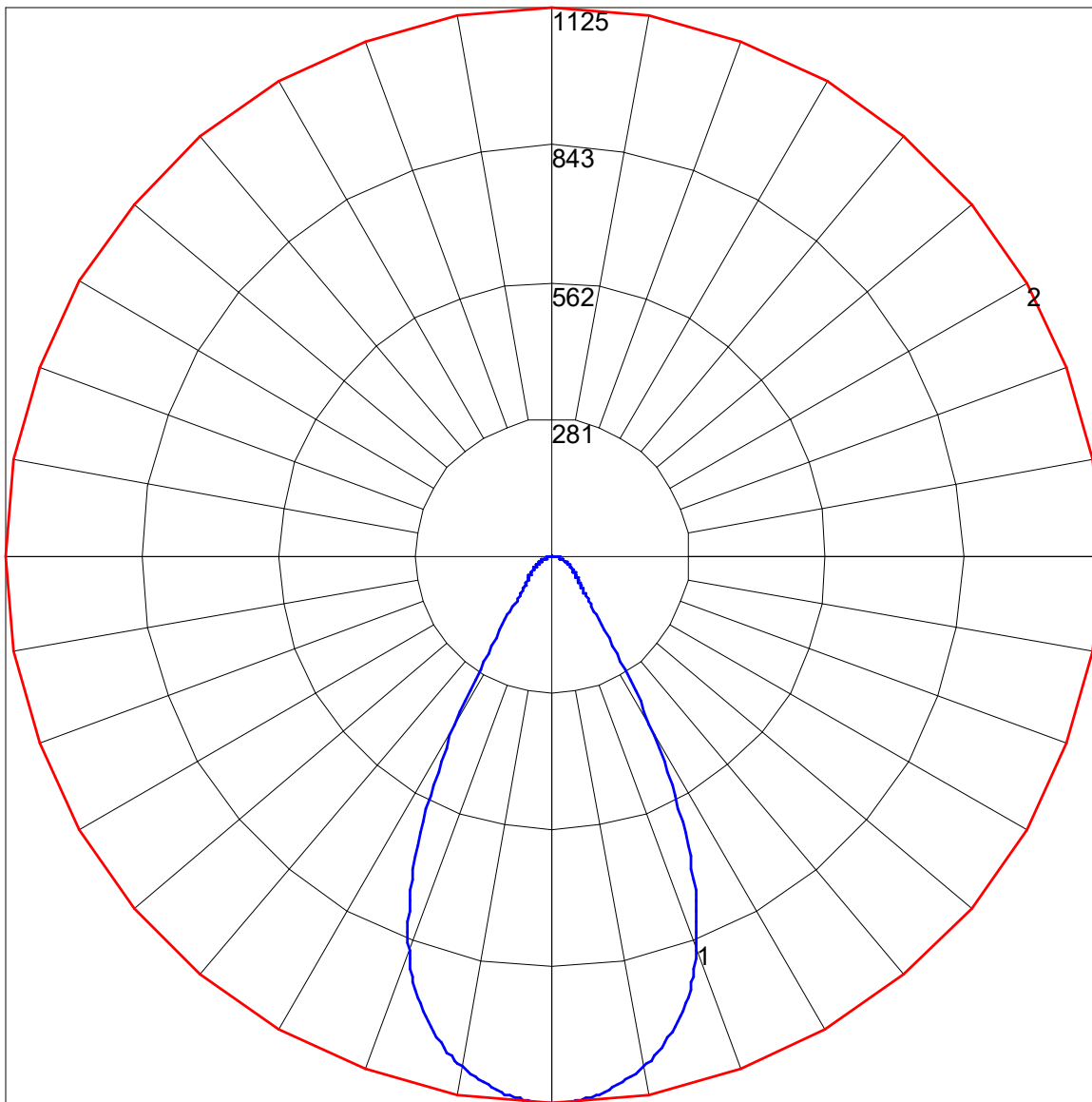
4H	2H	19.0	19.9	19.4	20.3	20.7	19.0	19.9	19.4	20.3	20.7
	3H	20.2	20.9	20.6	21.4	21.8	20.2	20.9	20.6	21.4	21.8
	4H	20.4	21.1	20.9	21.5	22.0	20.4	21.1	20.9	21.5	22.0
	6H	20.5	21.1	21.0	21.5	22.0	20.5	21.1	21.0	21.5	22.0
	8H	20.5	21.0	21.0	21.5	22.0	20.5	21.0	21.0	21.5	22.0
	12H	20.5	21.0	21.0	21.5	21.9	20.5	21.0	21.0	21.5	21.9

8H	4H	20.4	21.0	20.9	21.4	21.9	20.4	21.0	20.9	21.4	21.9
	6H	20.6	21.0	21.1	21.5	22.0	20.6	21.0	21.1	21.5	22.0
	8H	20.6	21.0	21.1	21.5	22.0	20.6	21.0	21.1	21.5	22.0
	12H	20.6	20.9	21.1	21.4	22.0	20.6	20.9	21.1	21.4	22.0

12H	4H	20.4	20.8	20.9	21.3	21.8	20.4	20.8	20.9	21.3	21.8
	6H	20.5	20.9	21.1	21.4	21.9	20.5	20.9	21.1	21.4	21.9
	8H	20.6	20.9	21.1	21.4	22.0	20.6	20.9	21.1	21.4	22.0

Maximum UGR = 22.0

POLAR GRAPH



Maximum Candela = 1124.604 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.)