



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-L12-835-XXX-DIM-UNV-LS-OF-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 13257153.10
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 25 JAN 2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4CR-L12-835-xxx-DIM-UNV-LS-OF-WH-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	1480
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	72
Total Luminaire Watts	20.4844
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.26
Spacing Criterion (90-270)	0.26
Spacing Criterion (Diagonal)	0.26
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	42967	42967	42967
55	34761	34761	34761
65	27708	27708	27708
75	22010	22010	22010
85	10894	10894	10894

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CANDELA TABULATION

	<u>0</u>
0.0	13230
0.5	13190
1.0	13050
1.5	12830
2.0	12530
2.5	12140
3.0	11690
3.5	11180
4.0	10610
4.5	9999
5.0	9369
5.5	8720
6.0	8063
6.5	7412
7.0	6775
7.5	6158
8.0	5567
8.5	5007
9.0	4481
9.5	3995
10.0	3550
10.5	3146
11.0	2784
11.5	2459
12.0	2170
12.5	1917
13.0	1696
13.5	1503
14.0	1338
14.5	1196
15.0	1075
15.5	971
16.0	881
16.5	806
17.0	740
17.5	684
18.0	636
18.5	593
19.0	556
19.5	524
20.0	495
20.5	469
21.0	446
21.5	425
22.0	406
22.5	388
23.0	371
23.5	355
24.0	340
24.5	326
25.0	313
25.5	300
26.0	287
26.5	276

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CANDELA TABULATION - (Cont.)

27.0	265
27.5	254
28.0	244
28.5	235
29.0	226
29.5	218
30.0	210
30.5	203
31.0	197
31.5	191
32.0	185
32.5	179
33.0	174
33.5	169
34.0	165
34.5	161
35.0	156
35.5	152
36.0	149
36.5	145
37.0	141
37.5	138
38.0	135
38.5	132
39.0	128
39.5	126
40.0	122
40.5	120
41.0	117
41.5	114
42.0	111
42.5	108
43.0	106
43.5	104
44.0	101
44.5	99
45.0	96
45.5	94
46.0	92
46.5	90
47.0	88
47.5	86
48.0	84
48.5	83
49.0	81
49.5	79
50.0	78
50.5	76
51.0	74
51.5	73
52.0	71
52.5	70
53.0	68
53.5	67
54.0	66
54.5	64

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CANDELA TABULATION - (Cont.)

55.0	63
55.5	61
56.0	60
56.5	59
57.0	57
57.5	56
58.0	55
58.5	53
59.0	52
59.5	51
60.0	49
60.5	48
61.0	47
61.5	46
62.0	44
62.5	43
63.0	42
63.5	41
64.0	40
64.5	38
65.0	37
65.5	36
66.0	35
66.5	34
67.0	33
67.5	32
68.0	31
68.5	30
69.0	29
69.5	28
70.0	27
70.5	26
71.0	25
71.5	24
72.0	23
72.5	22
73.0	21
73.5	20
74.0	19
74.5	19
75.0	18
75.5	17
76.0	16
76.5	15
77.0	14
77.5	14
78.0	13
78.5	12
79.0	12
79.5	11
80.0	10
80.5	9
81.0	9
81.5	8
82.0	7
82.5	7

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CANDELA TABULATION - (Cont.)

83.0	6
83.5	5
84.0	5
84.5	4
85.0	3
85.5	3
86.0	2
86.5	2
87.0	2
87.5	1
88.0	1
88.5	1
89.0	1
89.5	0
90.0	0
90.5	0
91.0	0
91.5	0
92.0	0
92.5	0
93.0	0
93.5	0
94.0	0
94.5	0
95.0	0
95.5	0
96.0	0
96.5	0
97.0	0
97.5	0
98.0	0
98.5	0
99.0	0
99.5	0
100.0	0
100.5	0
101.0	0
101.5	0
102.0	0
102.5	0
103.0	0
103.5	0
104.0	0
104.5	0
105.0	0
105.5	0
106.0	0
106.5	0
107.0	0
107.5	0
108.0	0
108.5	0
109.0	0
109.5	0
110.0	0
110.5	0

CANDELA TABULATION - (Cont.)

111.0	0
111.5	0
112.0	0
112.5	0
113.0	0
113.5	0
114.0	0
114.5	0
115.0	0
115.5	0
116.0	0
116.5	0
117.0	0
117.5	0
118.0	0
118.5	0
119.0	0
119.5	0
120.0	0
120.5	0
121.0	0
121.5	0
122.0	0
122.5	0
123.0	0
123.5	0
124.0	0
124.5	0
125.0	0
125.5	0
126.0	0
126.5	0
127.0	0
127.5	0
128.0	0
128.5	0
129.0	0
129.5	0
130.0	0
130.5	0
131.0	0
131.5	0
132.0	0
132.5	0
133.0	0
133.5	0
134.0	0
134.5	0
135.0	0
135.5	0
136.0	0
136.5	0
137.0	0
137.5	0
138.0	0
138.5	0

CANDELA TABULATION - (Cont.)

139.0	0
139.5	0
140.0	0
140.5	0
141.0	0
141.5	0
142.0	0
142.5	0
143.0	0
143.5	0
144.0	0
144.5	0
145.0	0
145.5	0
146.0	0
146.5	0
147.0	0
147.5	0
148.0	0
148.5	0
149.0	0
149.5	0
150.0	0
150.5	0
151.0	0
151.5	0
152.0	0
152.5	0
153.0	0
153.5	0
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154.5	0
155.0	0
155.5	0
156.0	0
156.5	0
157.0	0
157.5	0
158.0	0
158.5	0
159.0	0
159.5	0
160.0	0
160.5	0
161.0	0
161.5	0
162.0	0
162.5	0
163.0	0
163.5	0
164.0	0
164.5	0
165.0	0
165.5	0
166.0	0
166.5	0

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CANDELA TABULATION - (Cont.)

167.0	0
167.5	0
168.0	0
168.5	0
169.0	0
169.5	0
170.0	0
170.5	0
171.0	0
171.5	0
172.0	0
172.5	0
173.0	0
173.5	0
174.0	0
174.5	0
175.0	0
175.5	0
176.0	0
176.5	0
177.0	0
177.5	0
178.0	0
178.5	0
179.0	0
179.5	0
180.0	0

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1042.92	N.A.	70.50
0-30	1189.31	N.A.	80.30
0-40	1288.46	N.A.	87.00
0-60	1419.82	N.A.	95.90
0-80	1475.94	N.A.	99.70
0-90	1480.34	N.A.	100.00
10-90	787.68	N.A.	53.20
20-40	245.54	N.A.	16.60
20-50	320.66	N.A.	21.70
40-70	168.54	N.A.	11.40
60-80	56.12	N.A.	3.80
70-80	18.95	N.A.	1.30
80-90	4.40	N.A.	0.30
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	1480.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	692.66
10-20	350.26
20-30	146.38
30-40	99.15
40-50	75.12
50-60	56.24
60-70	37.17
70-80	18.95
80-90	4.40
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	104	103	102	101	100	98	98	97	95
2	110	105	102	99	107	104	101	98	101	98	96	98	96	94	95	93	92	90
3	105	100	96	93	104	99	95	92	96	93	90	94	91	89	92	89	88	86
4	102	96	91	88	100	94	90	87	92	89	86	91	88	85	89	86	84	83
5	98	92	87	84	97	91	86	83	89	85	83	88	84	82	86	83	81	80
6	95	88	84	80	94	88	83	80	86	82	80	85	82	79	84	81	79	77
7	93	85	81	78	91	85	81	77	84	80	77	83	79	77	82	79	76	75
8	90	83	78	75	89	82	78	75	81	78	75	81	77	75	80	77	74	73
9	88	81	76	73	87	80	76	73	79	76	73	79	75	73	78	75	73	72
10	86	79	74	72	85	78	74	71	78	74	71	77	73	71	76	73	71	70

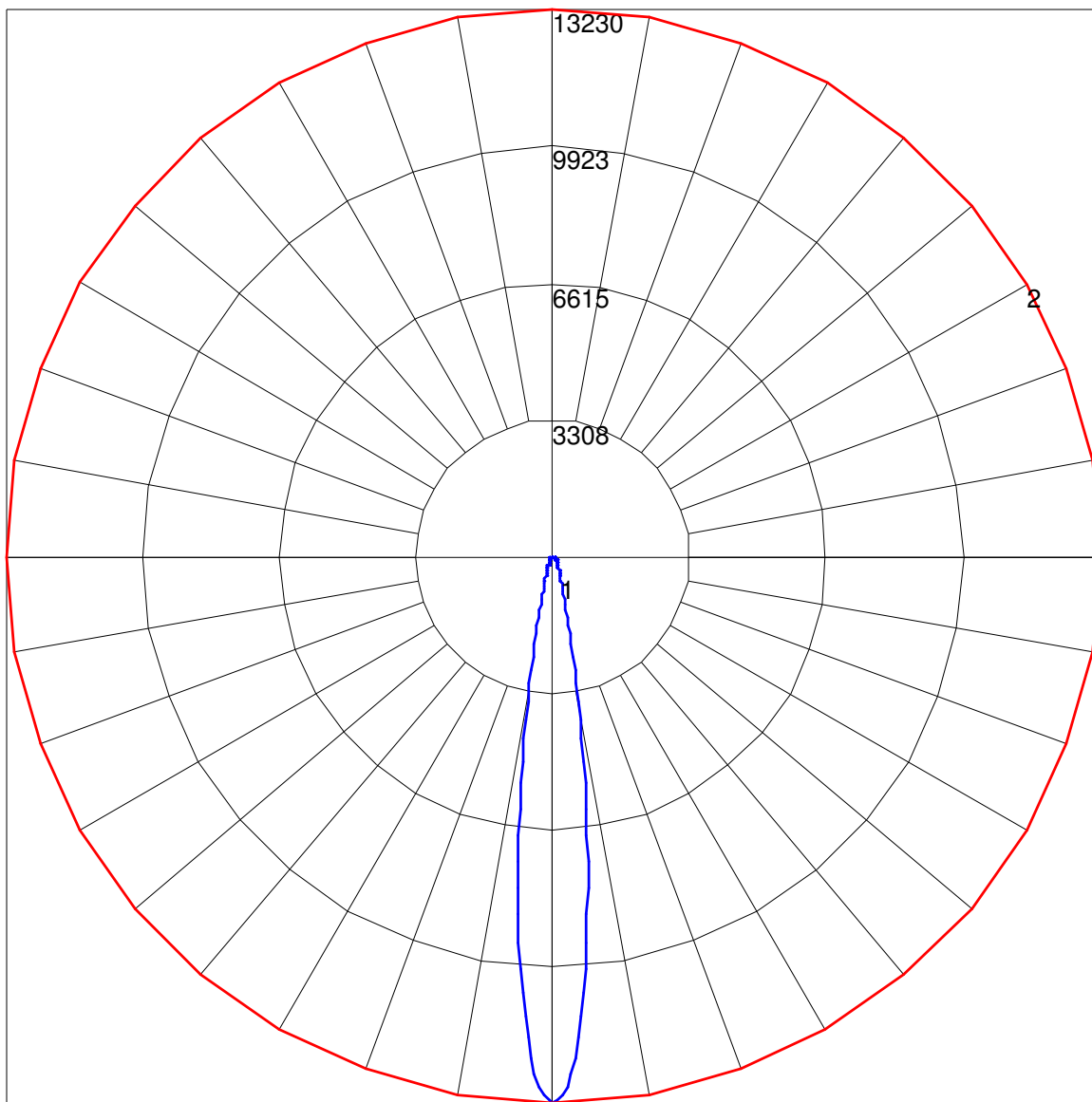
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UGR TABLE - CORRECTED

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	19.1	20.1	19.4	20.5	20.8	19.1	20.1	19.4	20.5	20.8
	3H	20.4	21.4	20.8	21.7	22.1	20.4	21.4	20.8	21.7	22.1
	4H	20.9	21.7	21.3	22.1	22.5	20.9	21.7	21.3	22.1	22.5
	6H	21.2	22.0	21.6	22.4	22.7	21.2	22.0	21.6	22.4	22.7
	8H	21.2	22.0	21.7	22.4	22.8	21.2	22.0	21.7	22.4	22.8
	12H	21.2	22.0	21.7	22.4	22.8	21.2	22.0	21.7	22.4	22.8
4H	2H	19.4	20.3	19.8	20.7	21.1	19.4	20.3	19.8	20.7	21.1
	3H	21.0	21.7	21.4	22.1	22.5	21.0	21.7	21.4	22.1	22.5
	4H	21.6	22.2	22.0	22.6	23.1	21.6	22.2	22.0	22.6	23.1
	6H	22.0	22.5	22.4	23.0	23.4	22.0	22.5	22.4	23.0	23.4
	8H	22.1	22.6	22.6	23.0	23.5	22.1	22.6	22.6	23.0	23.5
	12H	22.1	22.6	22.6	23.1	23.5	22.1	22.6	22.6	23.1	23.5
8H	4H	21.7	22.2	22.2	22.7	23.1	21.7	22.2	22.2	22.7	23.1
	6H	22.2	22.6	22.7	23.1	23.6	22.2	22.6	22.7	23.1	23.6
	8H	22.4	22.7	22.9	23.3	23.8	22.4	22.7	22.9	23.3	23.8
	12H	22.4	22.8	23.0	23.3	23.9	22.4	22.8	23.0	23.3	23.9
12H	4H	21.7	22.1	22.2	22.6	23.1	21.7	22.1	22.2	22.6	23.1
	6H	22.2	22.6	22.7	23.1	23.6	22.2	22.6	22.7	23.1	23.6
	8H	22.4	22.7	22.9	23.2	23.8	22.4	22.7	22.9	23.2	23.8

Maximum UGR = 23.9

POLAR GRAPH



Maximum Candela = 13230 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.)