



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-L15-835-XXX-DIM-UNV-OS-CS-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 13255206.01  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 02/19/2021  
 [MANUFAC] H E Williams Inc  
 [LUMCAT] 4CR-L15-835-xxx-DIM-UNV-OS-CS-xx  
 [LUMINAIRE] Aluminum cylinder housing and reflector, no 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	1326
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	50
Total Luminaire Watts	26.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.14
Spacing Criterion (90-270)	0.14
Spacing Criterion (Diagonal)	0.16
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	5541	5541	5541
55	2049	2049	2049
65	927	927	927
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>
0.0	25851.320
0.5	25739.892
1.0	25034.181
1.5	23994.185
2.0	22372.287
2.5	20143.725
3.0	17878.020
3.5	15438.983
4.0	12975.184
4.5	10745.383
5.0	8800.344
5.5	7235.398
6.0	6020.832
6.5	5057.598
7.0	4286.268
7.5	3689.508
8.0	3212.844
8.5	2831.512
9.0	2529.418
9.5	2285.514
10.0	2083.706
10.5	1919.040
11.0	1780.373
11.5	1660.279
12.0	1558.755
12.5	1470.851
13.0	1391.613
13.5	1322.280
14.0	1261.614
14.5	1207.138
15.0	1158.852
15.5	1116.757
16.0	1078.376
16.5	1044.948
17.0	1013.996
17.5	987.996
18.0	965.710
18.5	944.663
19.0	927.329
19.5	912.472
20.0	898.853
20.5	887.711
21.0	877.806
21.5	867.901
22.0	859.234
22.5	849.330
23.0	840.663
23.5	833.235
24.0	820.854
24.5	798.568
25.0	765.140
25.5	720.568
26.0	666.092
26.5	602.950

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**CANDELA TABULATION - (Cont.)**

27.0	528.664
27.5	443.236
28.0	355.332
28.5	276.094
29.0	210.475
29.5	155.999
30.0	111.428
30.5	78.000
31.0	55.714
31.5	45.809
32.0	40.857
32.5	38.381
33.0	35.905
33.5	33.428
34.0	30.952
34.5	29.714
35.0	28.476
35.5	27.238
36.0	26.000
36.5	26.000
37.0	24.762
37.5	23.524
38.0	22.286
38.5	22.286
39.0	21.048
39.5	19.809
40.0	18.571
40.5	18.571
41.0	17.333
41.5	16.095
42.0	16.095
42.5	14.857
43.0	14.857
43.5	13.619
44.0	13.619
44.5	12.381
45.0	12.381
45.5	11.143
46.0	9.905
46.5	9.905
47.0	8.667
47.5	8.667
48.0	7.429
48.5	7.429
49.0	6.190
49.5	6.190
50.0	6.190
50.5	6.190
51.0	4.952
51.5	4.952
52.0	4.952
52.5	4.952
53.0	3.714
53.5	3.714
54.0	3.714
54.5	3.714

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CANDELA TABULATION - (Cont.)

55.0	3.714
55.5	3.714
56.0	3.714
56.5	2.476
57.0	2.476
57.5	2.476
58.0	2.476
58.5	2.476
59.0	2.476
59.5	2.476
60.0	2.476
60.5	2.476
61.0	2.476
61.5	1.238
62.0	1.238
62.5	1.238
63.0	1.238
63.5	1.238
64.0	1.238
64.5	1.238
65.0	1.238
65.5	1.238
66.0	1.238
66.5	1.238
67.0	1.238
67.5	1.238
68.0	1.238
68.5	1.238
69.0	1.238
69.5	1.238
70.0	1.238
70.5	0.000
71.0	0.000
71.5	0.000
72.0	0.000
72.5	0.000
73.0	0.000
73.5	0.000
74.0	0.000
74.5	0.000
75.0	0.000
75.5	0.000
76.0	0.000
76.5	0.000
77.0	0.000
77.5	0.000
78.0	0.000
78.5	0.000
79.0	0.000
79.5	0.000
80.0	0.000
80.5	0.000
81.0	0.000
81.5	0.000
82.0	0.000
82.5	0.000

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CANDELA TABULATION - (Cont.)

83.0	0.000
83.5	0.000
84.0	0.000
84.5	0.000
85.0	0.000
85.5	0.000
86.0	0.000
86.5	0.000
87.0	0.000
87.5	0.000
88.0	0.000
88.5	0.000
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

IES INDOOR REPORT  
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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

IES INDOOR REPORT  
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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
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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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1005.21	N.A.	75.80
0-30	1291.21	N.A.	97.40
0-40	1312.39	N.A.	99.00
0-60	1324.71	N.A.	99.90
0-80	1326.12	N.A.	100.00
0-90	1326.12	N.A.	100.00
10-90	661.95	N.A.	49.90
20-40	307.18	N.A.	23.20
20-50	316.23	N.A.	23.80
40-70	13.70	N.A.	1.00
60-80	1.41	N.A.	0.10
70-80	0.03	N.A.	0.00
80-90	0.00	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	1326.12	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	664.17
10-20	341.04
20-30	286.00
30-40	21.18
40-50	9.05
50-60	3.27
60-70	1.38
70-80	0.03
80-90	0.00
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	115	113	112	110	113	111	110	108	107	106	105	104	103	102	100	100	99	97
2	112	108	106	103	110	107	104	102	104	102	100	101	99	98	98	97	96	94
3	109	104	101	98	107	103	100	97	101	98	96	98	96	95	96	95	93	92
4	106	101	97	94	104	100	96	94	98	95	93	96	93	92	94	92	91	89
5	103	97	94	91	102	97	93	90	95	92	90	94	91	89	92	90	88	87
6	100	94	91	88	99	94	90	88	93	89	87	91	89	87	90	88	86	85
7	98	92	88	85	97	91	88	85	90	87	85	89	86	84	88	86	84	83
8	96	90	86	83	95	89	85	83	88	85	83	87	84	82	87	84	82	81
9	93	87	84	81	93	87	83	81	86	83	81	85	83	81	85	82	80	79
10	91	85	82	79	91	85	82	79	84	81	79	84	81	79	83	81	79	78

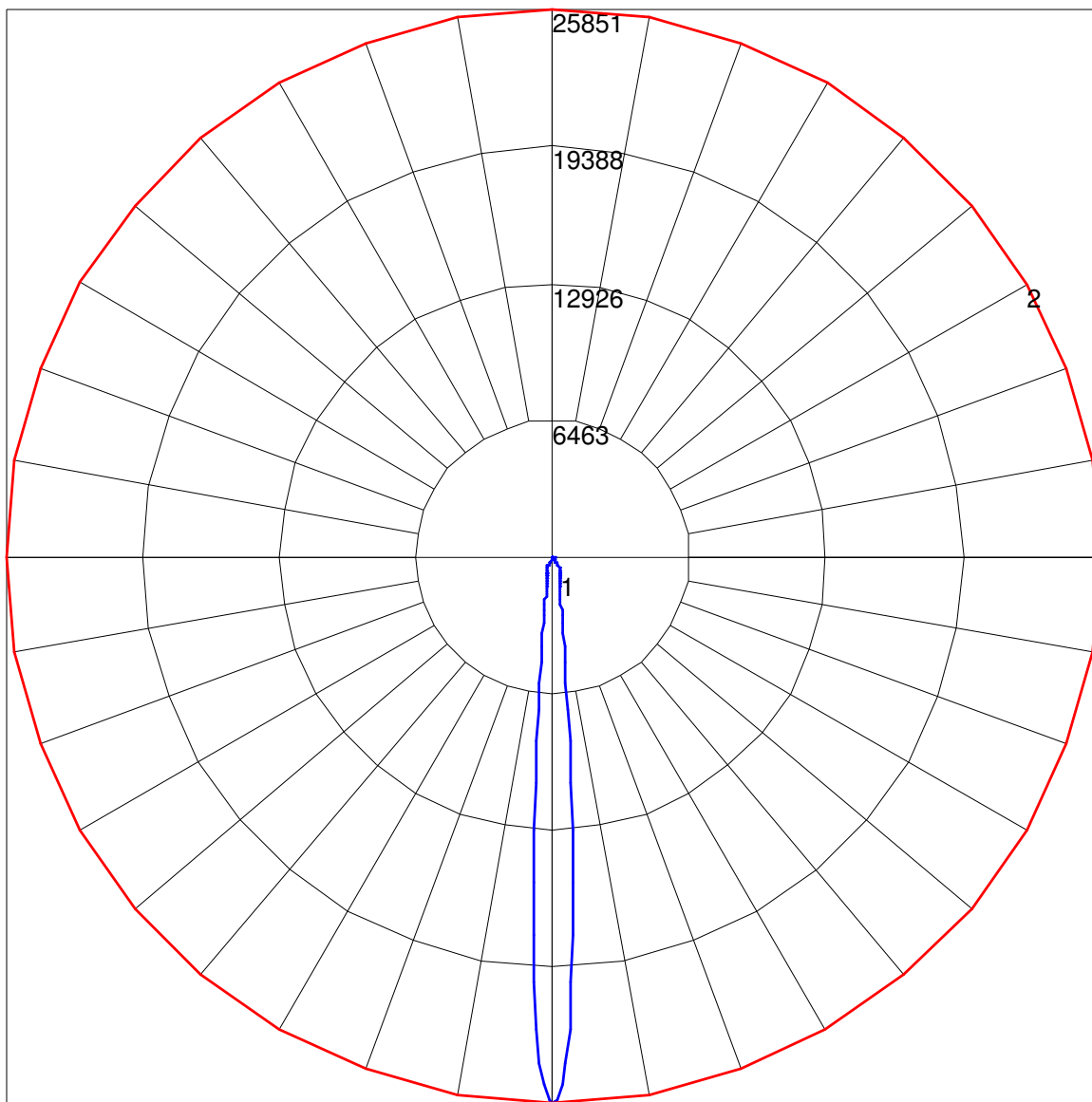
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**UGR TABLE - CORRECTED**

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	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	3H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	4H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	6H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	8H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	12H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
4H	2H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	3H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	4H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	6H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	8H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	12H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
8H	4H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	6H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	8H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	12H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
12H	4H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	6H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	8H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4

Maximum UGR = 1.4

POLAR GRAPH



Maximum Candela = 25851.32 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.)