



IES INDOOR REPORT
PHOTOMETRIC FILENAME : HM4DR-TL-L10-840-DIM-UNV-LW-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12316380.07
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 12-18-2024
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] HM4DR-TL-L10-840-DIM-UNV-LW-OF-WH
 [LUMINAIRE] Black formed aluminum housing, white reflector, clear patterned glass lens enclosure
 [MORE] One white LED
 [LAMP] One white LED
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Commercial, Corridor, Hotel, Industrial, Office, Downlight
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1002
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	69
Total Luminaire Watts	14.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.35 ft (Diameter)
Luminous Width (90-270)	0.35 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	27642	27642	27642
55	22714	22714	22714
65	16617	16617	16617
75	11503	11503	11503
85	6271	6271	6271

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CANDELA TABULATION

	<u>0</u>
0.0	703.641
0.5	703.419
1.0	702.974
1.5	702.381
2.0	701.789
2.5	701.122
3.0	700.232
3.5	699.714
4.0	699.343
4.5	699.121
5.0	698.824
5.5	698.528
6.0	698.306
6.5	698.009
7.0	697.787
7.5	697.639
8.0	697.565
8.5	697.342
9.0	697.120
9.5	696.675
10.0	696.379
10.5	695.860
11.0	695.341
11.5	694.674
12.0	693.933
12.5	693.044
13.0	692.007
13.5	690.821
14.0	689.339
14.5	687.560
15.0	685.411
15.5	682.817
16.0	679.927
16.5	676.518
17.0	672.813
17.5	668.663
18.0	663.772
18.5	658.733
19.0	653.249
19.5	647.098
20.0	640.354
20.5	633.018
21.0	625.088
21.5	616.566
22.0	607.155
22.5	597.150
23.0	586.405
23.5	574.844
24.0	562.394
24.5	549.129
25.0	534.753
25.5	519.709
26.0	503.628
26.5	486.583

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CANDELA TABULATION - (Cont.)

27.0	468.946
27.5	450.568
28.0	431.893
28.5	413.144
29.0	394.765
29.5	376.757
30.0	359.417
30.5	343.113
31.0	327.847
31.5	313.915
32.0	301.243
32.5	289.831
33.0	279.678
33.5	270.637
34.0	262.559
34.5	255.445
35.0	248.998
35.5	243.143
36.0	237.956
36.5	233.065
37.0	228.619
37.5	224.469
38.0	220.615
38.5	216.910
39.0	213.501
39.5	210.166
40.0	207.054
40.5	203.941
41.0	200.977
41.5	198.087
42.0	195.345
42.5	192.603
43.0	189.861
43.5	187.119
44.0	184.377
44.5	181.635
45.0	178.893
45.5	176.151
46.0	173.409
46.5	170.667
47.0	167.777
47.5	164.887
48.0	161.997
48.5	159.033
49.0	155.994
49.5	152.956
50.0	149.992
50.5	146.953
51.0	143.915
51.5	140.876
52.0	137.912
52.5	134.948
53.0	131.910
53.5	128.797
54.0	125.611
54.5	122.424

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CANDELA TABULATION - (Cont.)

55.0	119.237
55.5	116.051
56.0	112.938
56.5	109.900
57.0	106.862
57.5	103.823
58.0	100.859
58.5	97.969
59.0	95.079
59.5	92.263
60.0	89.521
60.5	86.779
61.0	84.111
61.5	81.517
62.0	78.923
62.5	76.330
63.0	73.855
63.5	71.394
64.0	68.978
64.5	66.600
65.0	64.273
65.5	62.005
66.0	59.767
66.5	57.588
67.0	55.461
67.5	53.372
68.0	51.348
68.5	49.370
69.0	47.391
69.5	45.479
70.0	43.619
70.5	41.789
71.0	40.003
71.5	38.261
72.0	36.579
72.5	34.919
73.0	33.303
73.5	31.732
74.0	30.191
74.5	28.701
75.0	27.249
75.5	25.841
76.0	24.463
76.5	23.121
77.0	21.839
77.5	20.565
78.0	19.334
78.5	18.141
79.0	16.970
79.5	15.844
80.0	14.740
80.5	13.665
81.0	12.606
81.5	11.575
82.0	10.568
82.5	9.589

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CANDELA TABULATION - (Cont.)

83.0	8.619
83.5	7.677
84.0	6.759
84.5	5.862
85.0	5.002
85.5	4.172
86.0	3.379
86.5	2.631
87.0	1.971
87.5	1.423
88.0	0.993
88.5	0.630
89.0	0.393
89.5	0.267
90.0	0.185
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
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128.0	0.000
128.5	0.000
129.0	0.000
129.5	0.000
130.0	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
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	258.46	N.A.	25.80
0-30	495.76	N.A.	49.50
0-40	657.40	N.A.	65.60
0-60	901.73	N.A.	90.00
0-80	995.40	N.A.	99.40
0-90	1001.66	N.A.	100.00
10-90	935.01	N.A.	93.30
20-40	398.93	N.A.	39.80
20-50	536.71	N.A.	53.60
40-70	308.60	N.A.	30.80
60-80	93.66	N.A.	9.40
70-80	29.40	N.A.	2.90
80-90	6.26	N.A.	0.60
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1001.67	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	66.65
10-20	191.81
20-30	237.30
30-40	161.64
40-50	137.77
50-60	106.57
60-70	64.27
70-80	29.40
80-90	6.26
90-100	0.01
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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	79	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	51
7	74	62	55	50	72	61	54	49	60	54	49	59	53	49	58	52	49	47
8	69	58	51	46	68	57	50	45	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37

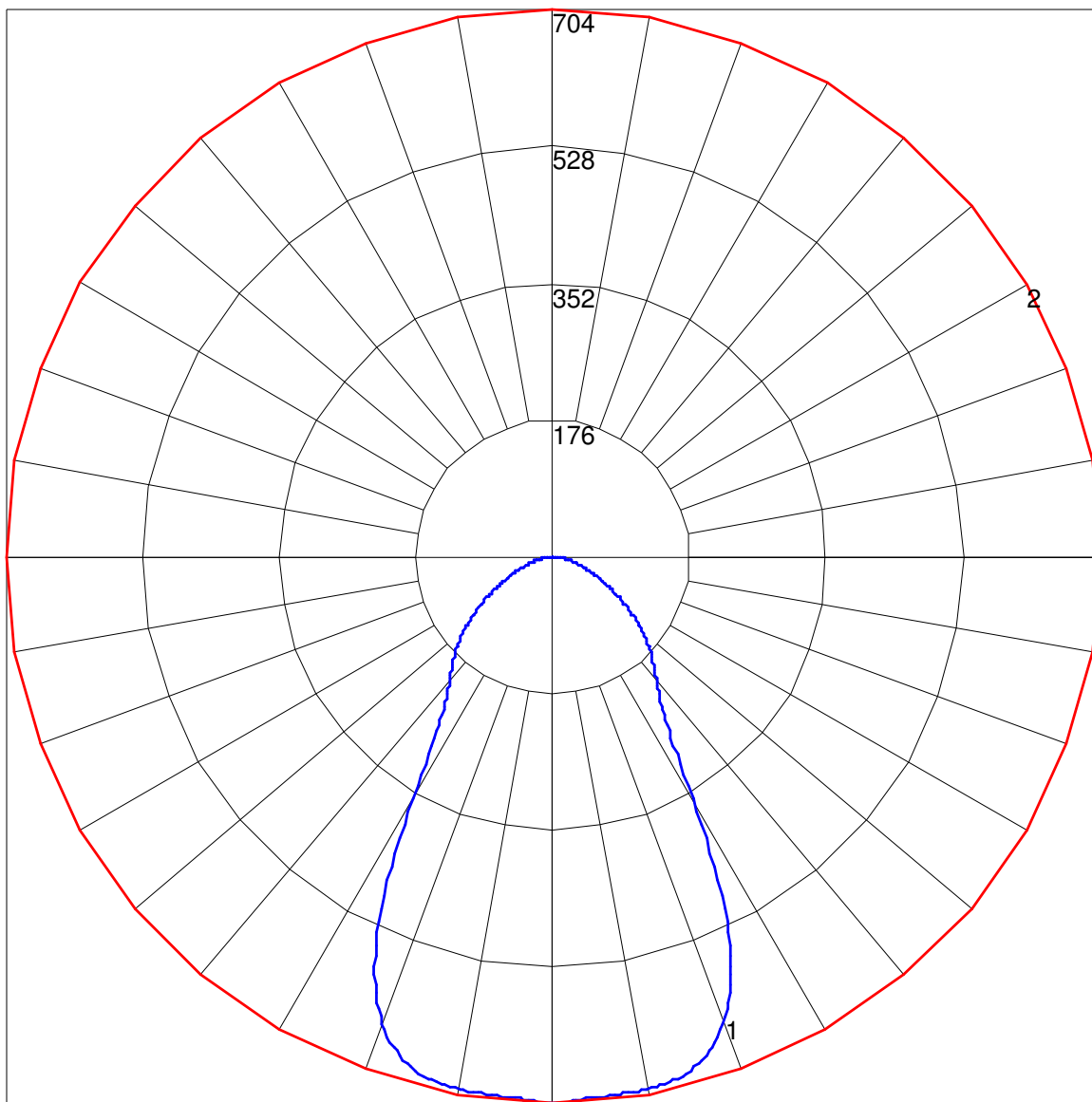
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UGR TABLE - CORRECTED

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	20.6	22.0	21.0	22.3	22.6	20.6	22.0	21.0	22.3	22.6
	3H	21.7	22.9	22.1	23.3	23.6	21.7	22.9	22.1	23.3	23.6
	4H	22.1	23.2	22.5	23.6	23.9	22.1	23.2	22.5	23.6	23.9
	6H	22.3	23.3	22.7	23.7	24.1	22.3	23.3	22.7	23.7	24.1
	8H	22.3	23.3	22.8	23.7	24.1	22.3	23.3	22.8	23.7	24.1
	12H	22.3	23.3	22.8	23.7	24.1	22.3	23.3	22.8	23.7	24.1
4H	2H	21.0	22.1	21.4	22.5	22.8	21.0	22.1	21.4	22.5	22.8
	3H	22.3	23.2	22.7	23.6	24.0	22.3	23.2	22.7	23.6	24.0
	4H	22.7	23.6	23.1	24.0	24.4	22.7	23.6	23.1	24.0	24.4
	6H	23.0	23.8	23.5	24.2	24.7	23.0	23.8	23.5	24.2	24.7
	8H	23.1	23.8	23.6	24.2	24.7	23.1	23.8	23.6	24.2	24.7
	12H	23.1	23.7	23.6	24.2	24.7	23.1	23.7	23.6	24.2	24.7
8H	4H	22.8	23.5	23.3	24.0	24.4	22.8	23.5	23.3	24.0	24.4
	6H	23.2	23.8	23.7	24.3	24.8	23.2	23.8	23.7	24.3	24.8
	8H	23.3	23.8	23.9	24.4	24.8	23.3	23.8	23.9	24.4	24.8
	12H	23.4	23.9	23.9	24.3	24.9	23.4	23.9	23.9	24.3	24.9
12H	4H	22.8	23.4	23.3	23.9	24.4	22.8	23.4	23.3	23.9	24.4
	6H	23.2	23.7	23.8	24.2	24.7	23.2	23.7	23.8	24.2	24.7
	8H	23.4	23.8	23.9	24.3	24.9	23.4	23.8	23.9	24.3	24.9

Maximum UGR = 24.9

POLAR GRAPH



Maximum Candela = 703.641 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.)