



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HM6DR-TL-L60-835-DIM-UNV-LW-OF-WH-AD_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12326812.11
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] AUGUST 2022
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] HM6DR-TL-L60-835-DIM-UNV-LW-OF-WH-AD
 [LUMINAIRE] Black formed aluminum housing, white reflector, frosted pl
 [MORE] astic lens enclosure
 [LAMP] One white LED
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Healthcare, Office, Downlight
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4673
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	61
Total Luminaire Watts	76.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.94
Spacing Criterion (90-270)	0.94
Spacing Criterion (Diagonal)	1.02
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.46 ft (Diameter)
Luminous Width (90-270)	0.46 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	83540	83540	83540
55	76138	76138	76138
65	75444	75444	75444
75	78779	78779	78779
85	64344	64344	64344

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CANDELA TABULATION

	<u>0</u>
0.0	2630.282
0.5	2629.577
1.0	2627.813
1.5	2624.639
2.0	2620.055
2.5	2614.412
3.0	2607.711
3.5	2600.304
4.0	2591.840
4.5	2583.023
5.0	2574.206
5.5	2564.331
6.0	2553.751
6.5	2542.818
7.0	2530.827
7.5	2518.483
8.0	2505.434
8.5	2491.679
9.0	2477.572
9.5	2462.760
10.0	2447.594
10.5	2431.724
11.0	2415.148
11.5	2397.514
12.0	2379.527
12.5	2360.483
13.0	2341.085
13.5	2320.630
14.0	2299.469
14.5	2277.956
15.0	2255.384
15.5	2232.460
16.0	2209.183
16.5	2185.554
17.0	2161.924
17.5	2137.942
18.0	2113.960
18.5	2089.625
19.0	2065.643
19.5	2041.308
20.0	2016.620
20.5	1992.285
21.0	1967.245
21.5	1941.852
22.0	1916.107
22.5	1889.656
23.0	1862.852
23.5	1835.696
24.0	1808.187
24.5	1780.325
25.0	1752.463
25.5	1724.602
26.0	1696.740
26.5	1669.231

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HM6DR-TL-L60-835-DIM-UNV-LW-OF-WH-AD_.IES****CANDELA TABULATION - (Cont.)**

27.0	1642.075
27.5	1614.919
28.0	1588.468
28.5	1562.017
29.0	1536.624
29.5	1511.231
30.0	1486.543
30.5	1462.208
31.0	1437.874
31.5	1414.244
32.0	1390.614
32.5	1367.338
33.0	1344.061
33.5	1321.489
34.0	1298.565
34.5	1276.699
35.0	1255.186
35.5	1233.672
36.0	1212.511
36.5	1191.703
37.0	1171.601
37.5	1151.851
38.0	1132.453
38.5	1113.409
39.0	1095.069
39.5	1077.083
40.0	1059.449
40.5	1042.167
41.0	1025.591
41.5	1009.368
42.0	993.498
42.5	977.980
43.0	962.814
43.5	948.002
44.0	933.189
44.5	919.082
45.0	904.975
45.5	891.221
46.0	877.819
46.5	864.417
47.0	851.015
47.5	838.319
48.0	825.270
48.5	812.573
49.0	800.229
49.5	788.238
50.0	776.247
50.5	764.609
51.0	752.970
51.5	741.685
52.0	730.399
52.5	719.466
53.0	708.533
53.5	698.658
54.0	689.135
54.5	679.260

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55.0	669.033
55.5	658.805
56.0	648.930
56.5	639.408
57.0	631.296
57.5	622.126
58.0	612.604
58.5	603.434
59.0	594.265
59.5	585.095
60.0	575.925
60.5	567.108
61.0	558.291
61.5	549.474
62.0	540.657
62.5	531.840
63.0	523.023
63.5	514.559
64.0	505.742
64.5	496.925
65.0	488.461
65.5	479.644
66.0	470.827
66.5	462.010
67.0	453.193
67.5	444.729
68.0	435.912
68.5	427.447
69.0	418.630
69.5	410.166
70.0	401.349
70.5	392.885
71.0	384.420
71.5	375.603
72.0	367.139
72.5	358.322
73.0	349.470
73.5	340.441
74.0	331.236
74.5	321.855
75.0	312.368
75.5	302.740
76.0	292.900
76.5	282.884
77.0	272.656
77.5	262.252
78.0	251.601
78.5	240.774
79.0	229.841
79.5	218.661
80.0	207.340
80.5	195.878
81.0	184.240
81.5	172.425
82.0	160.434
82.5	148.266

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CANDELA TABULATION - (Cont.)

83.0	135.958
83.5	123.579
84.0	111.059
84.5	98.503
85.0	85.913
85.5	73.357
86.0	60.908
86.5	49.022
87.0	38.477
87.5	29.907
88.0	22.466
88.5	15.871
89.0	10.016
89.5	5.608
90.0	2.857
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**PHOTOMETRIC FILENAME : HM6DR-TL-L60-835-DIM-UNV-LW-OF-WH-AD_.IES****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**PHOTOMETRIC FILENAME : HM6DR-TL-L60-835-DIM-UNV-LW-OF-WH-AD_.IES****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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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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Zone	Lumens	%Lamp	%Fixt
0-20	872.03	N.A.	18.70
0-30	1675.28	N.A.	35.80
0-40	2461.87	N.A.	52.70
0-60	3763.26	N.A.	80.50
0-80	4573.61	N.A.	97.90
0-90	4672.96	N.A.	100.00
10-90	4431.28	N.A.	94.80
20-40	1589.84	N.A.	34.00
20-50	2290.79	N.A.	49.00
40-70	1784.98	N.A.	38.20
60-80	810.34	N.A.	17.30
70-80	326.76	N.A.	7.00
80-90	99.36	N.A.	2.10
90-110	0.08	N.A.	0.00
90-120	0.08	N.A.	0.00
90-130	0.08	N.A.	0.00
90-150	0.08	N.A.	0.00
90-180	0.08	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	4673.04	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	241.68
10-20	630.35
20-30	803.26
30-40	786.59
40-50	700.94
50-60	600.45
60-70	483.59
70-80	326.76
80-90	99.36
90-100	0.08
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	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	77	83	79	76	80	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	46	71	59	51	46	58	50	45	56	50	45	54	49	44	42
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	45	40	38
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	59	47	39	34	45	39	34	44	38	34	43	38	33	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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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

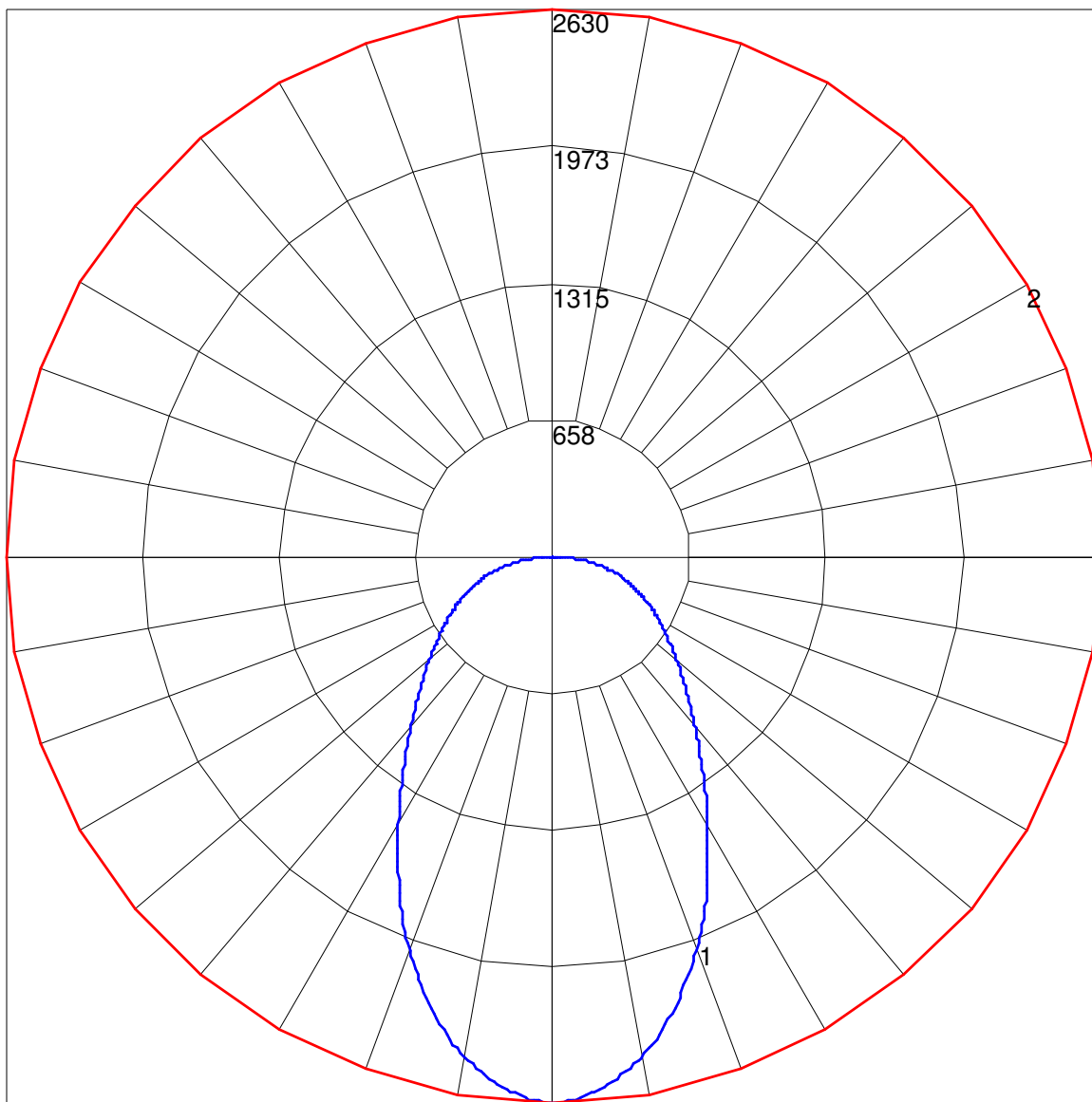
X=2H	Y=2H	25.8	27.3	26.1	27.6	27.9	25.8	27.3	26.1	27.6	27.9
	3H	27.9	29.3	28.2	29.6	30.0	27.9	29.3	28.2	29.6	30.0
	4H	28.8	30.1	29.2	30.5	30.8	28.8	30.1	29.2	30.5	30.8
	6H	29.5	30.8	29.9	31.1	31.5	29.5	30.8	29.9	31.1	31.5
	8H	29.8	31.0	30.2	31.4	31.8	29.8	31.0	30.2	31.4	31.8
	12H	29.9	31.1	30.4	31.5	31.9	29.9	31.1	30.4	31.5	31.9

UGR Viewed Endwise

4H	2H	26.4	27.8	26.8	28.1	28.5	26.4	27.8	26.8	28.1	28.5
	3H	28.8	29.9	29.2	30.3	30.7	28.8	29.9	29.2	30.3	30.7
	4H	29.9	30.9	30.3	31.3	31.7	29.9	30.9	30.3	31.3	31.7
	6H	30.8	31.7	31.2	32.1	32.6	30.8	31.7	31.2	32.1	32.6
	8H	31.1	31.9	31.6	32.4	32.8	31.1	31.9	31.6	32.4	32.8
	12H	31.3	32.1	31.8	32.5	33.0	31.3	32.1	31.8	32.5	33.0
8H	4H	30.3	31.1	30.8	31.6	32.0	30.3	31.1	30.8	31.6	32.0
	6H	31.4	32.0	31.9	32.5	33.0	31.4	32.0	31.9	32.5	33.0
	8H	31.8	32.4	32.3	32.9	33.4	31.8	32.4	32.3	32.9	33.4
	12H	32.1	32.6	32.6	33.1	33.7	32.1	32.6	32.6	33.1	33.7
12H	4H	30.3	31.1	30.8	31.6	32.0	30.3	31.1	30.8	31.6	32.0
	6H	31.5	32.1	32.0	32.5	33.1	31.5	32.1	32.0	32.5	33.1
	8H	31.9	32.5	32.4	33.0	33.5	31.9	32.5	32.4	33.0	33.5

Maximum UGR = 33.7

POLAR GRAPH



Maximum Candela = 2630.282 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.)