



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HM6DR-TL-L60-835-DIM-UNV-RW-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12326812.12
 [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-RW-OF-WH
 [LUMINAIRE] Black formed aluminum housing, white reflector, clear glas
 [MORE] s patterned 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	5690
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
Total Luminaire Watts	76.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.04
Spacing Criterion (90-270)	1.04
Spacing Criterion (Diagonal)	0.94
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.48 ft (Diameter)
Luminous Width (90-270)	0.48 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	76820	76820	76820
55	64064	64064	64064
65	45197	45197	45197
75	27687	27687	27687
85	21835	21835	21835

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CANDELA TABULATION

	<u>0</u>
0.0	4208.679
0.5	4204.742
1.0	4200.805
1.5	4196.868
2.0	4188.994
2.5	4177.183
3.0	4165.372
3.5	4149.623
4.0	4133.875
4.5	4122.064
5.0	4106.316
5.5	4090.568
6.0	4074.820
6.5	4059.072
7.0	4043.324
7.5	4027.576
8.0	4007.891
8.5	3992.142
9.0	3976.394
9.5	3956.709
10.0	3940.961
10.5	3921.670
11.0	3902.772
11.5	3883.874
12.0	3864.977
12.5	3846.473
13.0	3827.575
13.5	3807.890
14.0	3788.598
14.5	3769.701
15.0	3751.984
15.5	3733.874
16.0	3716.157
16.5	3698.834
17.0	3682.692
17.5	3666.551
18.0	3650.802
18.5	3635.842
19.0	3620.881
19.5	3605.527
20.0	3589.779
20.5	3572.849
21.0	3553.558
21.5	3531.511
22.0	3506.707
22.5	3479.148
23.0	3449.227
23.5	3415.368
24.0	3378.360
24.5	3337.809
25.0	3292.927
25.5	3244.502
26.0	3190.564
26.5	3131.509

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CANDELA TABULATION - (Cont.)

27.0	3068.517
27.5	3000.012
28.0	2927.177
28.5	2848.043
29.0	2764.578
29.5	2674.027
30.0	2577.963
30.5	2476.388
31.0	2370.876
31.5	2263.001
32.0	2153.158
32.5	2044.103
33.0	1936.228
33.5	1831.897
34.0	1731.897
34.5	1637.802
35.0	1551.975
35.5	1473.234
36.0	1403.943
36.5	1342.525
37.0	1288.588
37.5	1242.525
38.0	1201.973
38.5	1166.147
39.0	1135.044
39.5	1107.485
40.0	1082.288
40.5	1059.453
41.0	1038.193
41.5	1018.902
42.0	1001.185
42.5	984.256
43.0	968.114
43.5	952.760
44.0	938.193
44.5	924.413
45.0	910.240
45.5	896.854
46.0	883.075
46.5	869.689
47.0	855.909
47.5	842.129
48.0	827.956
48.5	813.783
49.0	800.397
49.5	786.617
50.0	772.050
50.5	757.090
51.0	741.735
51.5	726.381
52.0	711.027
52.5	695.278
53.0	679.924
53.5	664.963
54.0	648.428
54.5	631.892

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CANDELA TABULATION - (Cont.)

55.0	615.751
55.5	599.215
56.0	583.073
56.5	566.931
57.0	550.790
57.5	534.648
58.0	519.293
58.5	503.545
59.0	488.191
59.5	473.230
60.0	458.270
60.5	443.309
61.0	428.742
61.5	414.569
62.0	400.395
62.5	386.616
63.0	372.836
63.5	359.057
64.0	346.064
64.5	332.679
65.0	320.080
65.5	307.088
66.0	294.883
66.5	282.678
67.0	270.867
67.5	259.056
68.0	247.639
68.5	236.221
69.0	225.591
69.5	214.568
70.0	204.332
70.5	194.095
71.0	184.253
71.5	174.804
72.0	165.355
72.5	156.694
73.0	148.426
73.5	140.945
74.0	133.465
74.5	126.772
75.0	120.079
75.5	114.174
76.0	108.268
76.5	103.150
77.0	98.426
77.5	93.701
78.0	88.977
78.5	84.252
79.0	79.922
79.5	75.591
80.0	71.260
80.5	66.929
81.0	62.599
81.5	58.662
82.0	54.331
82.5	50.394

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CANDELA TABULATION - (Cont.)

83.0	46.457
83.5	42.914
84.0	38.977
84.5	35.433
85.0	31.890
85.5	28.347
86.0	24.803
86.5	21.260
87.0	18.110
87.5	14.567
88.0	11.811
88.5	9.449
89.0	7.480
89.5	5.512
90.0	3.937
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
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
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130.0	0.000
130.5	0.000
131.0	0.000
131.5	0.000
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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

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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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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	1446.19	N.A.	25.40
0-30	2923.63	N.A.	51.40
0-40	3945.83	N.A.	69.40
0-60	5200.24	N.A.	91.40
0-80	5653.09	N.A.	99.40
0-90	5689.4	N.A.	100.00
10-90	5302.79	N.A.	93.20
20-40	2499.64	N.A.	43.90
20-50	3204.9	N.A.	56.30
40-70	1574.02	N.A.	27.70
60-80	452.85	N.A.	8.00
70-80	133.24	N.A.	2.30
80-90	36.32	N.A.	0.60
90-110	0.11	N.A.	0.00
90-120	0.11	N.A.	0.00
90-130	0.11	N.A.	0.00
90-150	0.11	N.A.	0.00
90-180	0.11	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	5689.51	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	386.61
10-20	1059.57
20-30	1477.45
30-40	1022.2
40-50	705.25
50-60	549.15
60-70	319.61
70-80	133.24
80-90	36.32
90-100	0.11
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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59	58
6	79	68	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38

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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

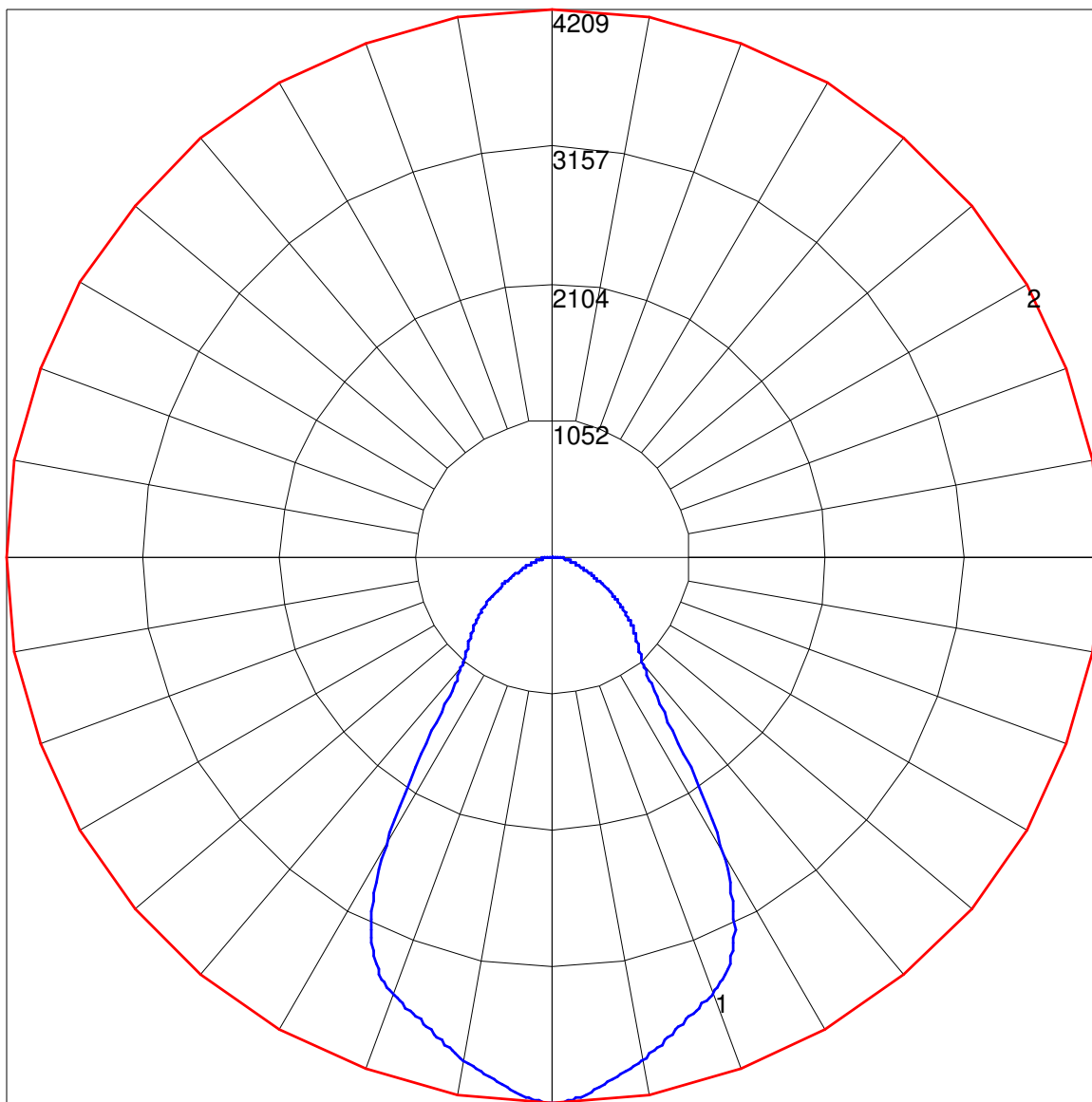
X=2H	Y=2H	23.9	25.3	24.3	25.6	25.9	23.9	25.3	24.3	25.6	25.9
	3H	24.9	26.1	25.3	26.4	26.8	24.9	26.1	25.3	26.4	26.8
	4H	25.2	26.3	25.6	26.6	27.0	25.2	26.3	25.6	26.6	27.0
	6H	25.3	26.4	25.8	26.7	27.1	25.3	26.4	25.8	26.7	27.1
	8H	25.4	26.4	25.8	26.8	27.2	25.4	26.4	25.8	26.8	27.2
	12H	25.4	26.3	25.9	26.7	27.2	25.4	26.3	25.9	26.7	27.2

UGR Viewed Endwise

4H	2H	24.3	25.4	24.7	25.7	26.1	24.3	25.4	24.7	25.7	26.1
	3H	25.4	26.3	25.8	26.7	27.1	25.4	26.3	25.8	26.7	27.1
	4H	25.8	26.6	26.2	27.0	27.4	25.8	26.6	26.2	27.0	27.4
	6H	26.0	26.7	26.5	27.2	27.6	26.0	26.7	26.5	27.2	27.6
	8H	26.1	26.7	26.6	27.2	27.7	26.1	26.7	26.6	27.2	27.7
	12H	26.2	26.7	26.6	27.2	27.7	26.2	26.7	26.6	27.2	27.7
8H	4H	25.8	26.5	26.3	26.9	27.4	25.8	26.5	26.3	26.9	27.4
	6H	26.2	26.7	26.7	27.2	27.7	26.2	26.7	26.7	27.2	27.7
	8H	26.3	26.8	26.8	27.3	27.8	26.3	26.8	26.8	27.3	27.8
	12H	26.4	26.8	26.9	27.3	27.9	26.4	26.8	26.9	27.3	27.9
12H	4H	25.8	26.4	26.3	26.9	27.4	25.8	26.4	26.3	26.9	27.4
	6H	26.2	26.7	26.7	27.1	27.7	26.2	26.7	26.7	27.1	27.7
	8H	26.3	26.8	26.9	27.3	27.8	26.3	26.8	26.9	27.3	27.8

Maximum UGR = 27.9

POLAR GRAPH



Maximum Candela = 4208.679 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.)