

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HM6DR-TL-L15-835-DIM-UNV-LW-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 6-16-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.

[LUMCAT] HM6DR-TL-L15-835-DIM-UNV-LW-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	1529
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	81
Total Luminaire Watts	18.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.08
Spacing Criterion (Diagonal)	0.98
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	25410	25410	25410
55	21154	21154	21154
65	16071	16071	16071
75	11655	11655	11655
85	7595	7595	7595

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CANDELA TABULATION

	<u>0</u>
0.0	972.315
0.5	972.119
1.0	971.336
1.5	970.161
2.0	968.693
2.5	966.735
3.0	964.778
3.5	962.526
4.0	960.470
4.5	958.415
5.0	956.947
5.5	955.576
6.0	954.304
6.5	953.031
7.0	951.661
7.5	950.388
8.0	949.116
8.5	947.941
9.0	946.766
9.5	945.787
10.0	944.809
10.5	944.025
11.0	943.340
11.5	942.949
12.0	942.263
12.5	941.578
13.0	940.599
13.5	939.327
14.0	937.761
14.5	935.999
15.0	934.139
15.5	931.790
16.0	929.244
16.5	926.699
17.0	924.154
17.5	921.511
18.0	918.673
18.5	915.442
19.0	911.820
19.5	907.807
20.0	903.206
20.5	898.214
21.0	892.047
21.5	884.706
22.0	876.385
22.5	866.988
23.0	856.710
23.5	845.551
24.0	833.217
24.5	819.904
25.0	805.515
25.5	790.538
26.0	774.582
26.5	757.942

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CANDELA TABULATION - (Cont.)

27.0	740.224
27.5	722.017
28.0	702.831
28.5	682.568
29.0	661.523
29.5	639.400
30.0	616.690
30.5	593.295
31.0	569.900
31.5	546.309
32.0	523.404
32.5	501.477
33.0	480.431
33.5	460.756
34.0	442.647
34.5	426.201
35.0	411.518
35.5	398.010
36.0	386.166
36.5	375.300
37.0	365.609
37.5	356.897
38.0	348.968
38.5	341.725
39.0	334.873
39.5	328.706
40.0	322.735
40.5	317.155
41.0	311.967
41.5	306.877
42.0	301.982
42.5	297.480
43.0	292.879
43.5	288.376
44.0	283.971
44.5	279.664
45.0	275.259
45.5	271.050
46.0	266.743
46.5	262.436
47.0	258.031
47.5	253.724
48.0	249.319
48.5	244.914
49.0	240.509
49.5	235.908
50.0	231.504
50.5	227.001
51.0	222.498
51.5	217.897
52.0	213.296
52.5	208.696
53.0	204.095
53.5	199.494
54.0	195.089
54.5	190.587

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CANDELA TABULATION - (Cont.)

55.0	185.888
55.5	181.287
56.0	176.687
56.5	172.380
57.0	168.073
57.5	163.570
58.0	159.067
58.5	154.662
59.0	150.355
59.5	146.048
60.0	141.937
60.5	137.825
61.0	133.812
61.5	129.799
62.0	125.981
62.5	122.163
63.0	118.444
63.5	114.724
64.0	111.102
64.5	107.578
65.0	104.054
65.5	100.628
66.0	97.212
66.5	93.854
67.0	90.536
67.5	87.286
68.0	84.095
68.5	80.894
69.0	77.791
69.5	74.717
70.0	71.732
70.5	68.844
71.0	66.015
71.5	63.274
72.0	60.631
72.5	58.067
73.0	55.571
73.5	53.123
74.0	50.774
74.5	48.474
75.0	46.213
75.5	44.030
76.0	41.886
76.5	39.781
77.0	37.736
77.5	35.729
78.0	33.781
78.5	31.872
79.0	30.002
79.5	28.201
80.0	26.410
80.5	24.677
81.0	22.964
81.5	21.261
82.0	19.597
82.5	17.943

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CANDELA TABULATION - (Cont.)

83.0	16.328
83.5	14.742
84.0	13.176
84.5	11.639
85.0	10.141
85.5	8.692
86.0	7.293
86.5	5.942
87.0	4.630
87.5	3.534
88.0	2.702
88.5	1.977
89.0	1.370
89.5	0.861
90.0	0.548
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
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133.5	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
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149.0	0.000
149.5	0.000
150.0	0.000
150.5	0.000
151.0	0.000
151.5	0.000
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152.5	0.000
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153.5	0.000
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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	354.18	N.A.	23.20
0-30	715.95	N.A.	46.80
0-40	984.20	N.A.	64.40
0-60	1362.97	N.A.	89.20
0-80	1516.38	N.A.	99.20
0-90	1528.51	N.A.	100.00
10-90	1437.52	N.A.	94.00
20-40	630.02	N.A.	41.20
20-50	842.58	N.A.	55.10
40-70	482.49	N.A.	31.60
60-80	153.42	N.A.	10.00
70-80	49.70	N.A.	3.30
80-90	12.12	N.A.	0.80
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1528.52	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	90.99
10-20	263.19
20-30	361.76
30-40	268.25
40-50	212.56
50-60	166.20
60-70	103.72
70-80	49.70
80-90	12.12
90-100	0.02
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	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	78
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	77	74	70	69
4	89	79	71	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	51	50
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38
10	61	49	42	37	60	49	42	37	48	42	37	47	41	37	46	41	37	35

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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

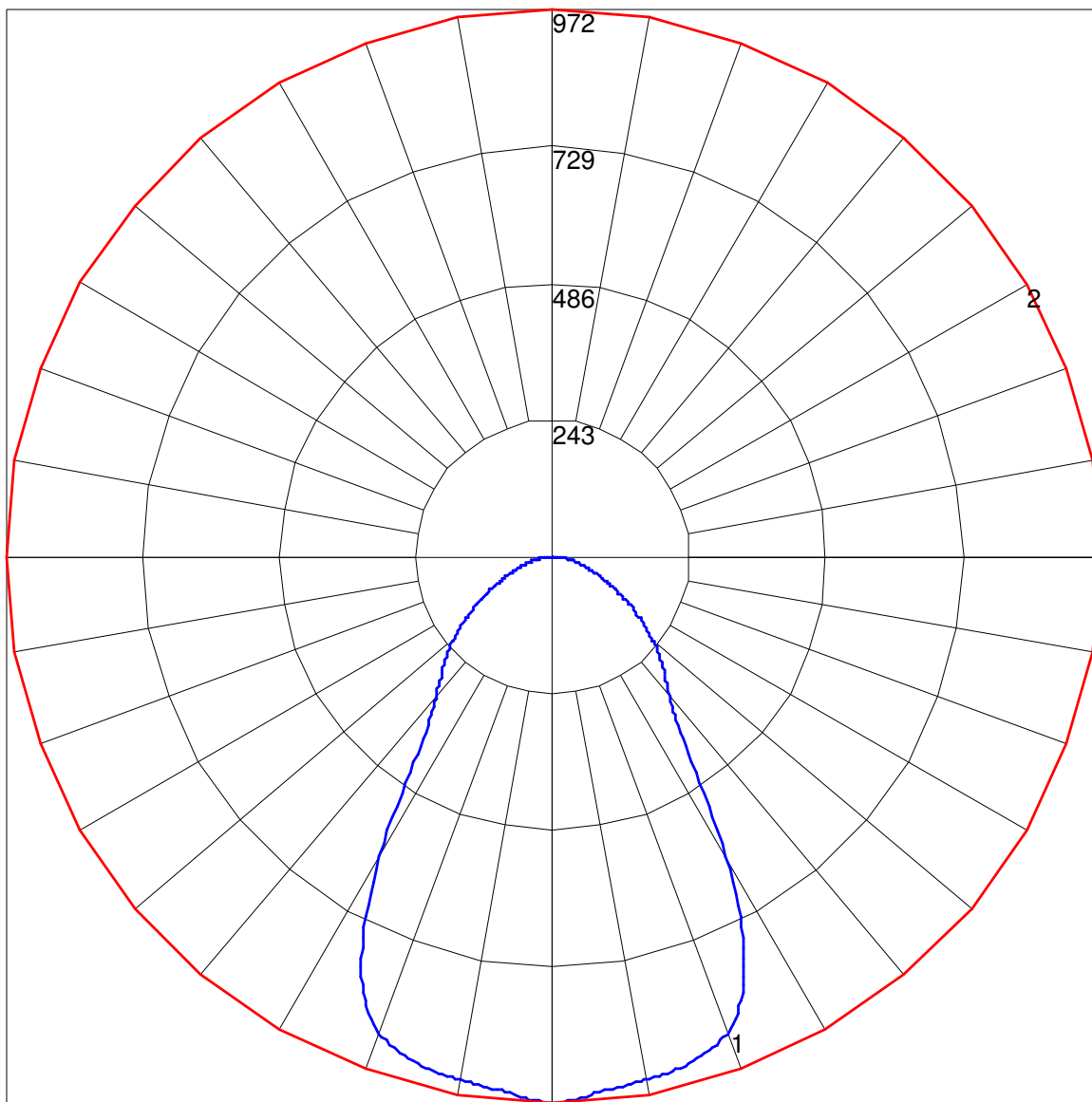
X=2H	Y=2H	20.5	21.9	20.9	22.2	22.5	20.5	21.9	20.9	22.2	22.5
	3H	21.7	23.0	22.1	23.3	23.6	21.7	23.0	22.1	23.3	23.6
	4H	22.1	23.3	22.5	23.6	24.0	22.1	23.3	22.5	23.6	24.0
	6H	22.4	23.4	22.8	23.8	24.2	22.4	23.4	22.8	23.8	24.2
	8H	22.5	23.5	22.9	23.9	24.3	22.5	23.5	22.9	23.9	24.3
	12H	22.5	23.5	22.9	23.8	24.3	22.5	23.5	22.9	23.8	24.3

UGR Viewed Endwise

4H	2H	20.9	22.1	21.3	22.4	22.8	20.9	22.1	21.3	22.4	22.8
	3H	22.3	23.3	22.7	23.7	24.1	22.3	23.3	22.7	23.7	24.1
	4H	22.8	23.7	23.3	24.1	24.5	22.8	23.7	23.3	24.1	24.5
	6H	23.2	23.9	23.7	24.4	24.8	23.2	23.9	23.7	24.4	24.8
	8H	23.3	24.0	23.7	24.4	24.9	23.3	24.0	23.7	24.4	24.9
	12H	23.4	24.0	23.8	24.5	24.9	23.4	24.0	23.8	24.5	24.9
8H	4H	23.0	23.7	23.4	24.1	24.6	23.0	23.7	23.4	24.1	24.6
	6H	23.4	24.0	23.9	24.5	25.0	23.4	24.0	23.9	24.5	25.0
	8H	23.6	24.1	24.1	24.6	25.1	23.6	24.1	24.1	24.6	25.1
	12H	23.7	24.2	24.2	24.7	25.2	23.7	24.2	24.2	24.7	25.2
12H	4H	23.0	23.6	23.5	24.1	24.5	23.0	23.6	23.5	24.1	24.5
	6H	23.5	24.0	24.0	24.4	25.0	23.5	24.0	24.0	24.4	25.0
	8H	23.7	24.1	24.2	24.6	25.2	23.7	24.1	24.2	24.6	25.2

Maximum UGR = 25.2

POLAR GRAPH



Maximum Candela = 972.315 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.)