



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HS6DR-TL-L60-835-DIM-UNV-RW-OF-WH-AD_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12326812.16
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] AUGUST 2022
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] HS6DR-TL-L60-835-DIM-UNV-RW-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	4380
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	58
Total Luminaire Watts	76.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.20
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	84281	84281	84281
55	61318	61318	61318
65	46430	46430	46430
75	27445	27445	27445
85	20727	20727	20727

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CANDELA TABULATION

	<u>0</u>
0.0	2207.424
0.5	2207.424
1.0	2206.399
1.5	2204.691
2.0	2202.641
2.5	2200.249
3.0	2197.174
3.5	2193.758
4.0	2190.341
4.5	2187.266
5.0	2183.850
5.5	2180.775
6.0	2177.358
6.5	2173.942
7.0	2170.184
7.5	2166.084
8.0	2162.326
8.5	2158.226
9.0	2153.784
9.5	2149.343
10.0	2144.560
10.5	2139.777
11.0	2134.310
11.5	2128.844
12.0	2123.036
12.5	2116.886
13.0	2110.394
13.5	2103.903
14.0	2096.728
14.5	2089.212
15.0	2081.354
15.5	2073.496
16.0	2065.296
16.5	2057.096
17.0	2049.238
17.5	2040.697
18.0	2032.497
18.5	2023.956
19.0	2015.073
19.5	2006.190
20.0	1997.307
20.5	1987.741
21.0	1978.174
21.5	1967.583
22.0	1956.650
22.5	1944.351
23.0	1931.710
23.5	1918.385
24.0	1904.036
24.5	1889.344
25.0	1873.970
25.5	1858.254
26.0	1841.855
26.5	1825.455

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CANDELA TABULATION - (Cont.)

27.0	1808.373
27.5	1791.290
28.0	1773.866
28.5	1756.441
29.0	1739.017
29.5	1720.909
30.0	1702.802
30.5	1684.011
31.0	1665.220
31.5	1645.404
32.0	1625.930
32.5	1605.430
33.0	1584.589
33.5	1563.407
34.0	1541.541
34.5	1519.334
35.0	1496.443
35.5	1473.552
36.0	1449.636
36.5	1426.062
37.0	1401.805
37.5	1377.547
38.0	1352.948
38.5	1328.349
39.0	1303.409
39.5	1278.126
40.0	1252.844
40.5	1227.220
41.0	1201.596
41.5	1176.313
42.0	1150.689
42.5	1125.065
43.0	1099.783
43.5	1074.159
44.0	1048.877
44.5	1023.594
45.0	998.653
45.5	973.713
46.0	949.114
46.5	924.856
47.0	900.941
47.5	877.366
48.0	854.134
48.5	831.243
49.0	809.036
49.5	787.170
50.0	766.329
50.5	745.830
51.0	726.356
51.5	707.906
52.0	689.799
52.5	671.691
53.0	654.267
53.5	637.184
54.0	620.785
54.5	604.727

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HS6DR-TL-L60-835-DIM-UNV-RW-OF-WH-AD_.IES****CANDELA TABULATION - (Cont.)**

55.0	589.352
55.5	575.003
56.0	560.654
56.5	546.304
57.0	531.955
57.5	518.289
58.0	504.964
58.5	491.640
59.0	478.657
59.5	465.674
60.0	453.033
60.5	440.392
61.0	427.750
61.5	415.451
62.0	403.151
62.5	390.510
63.0	378.211
63.5	365.911
64.0	353.611
64.5	341.278
65.0	328.807
65.5	316.474
66.0	304.106
66.5	291.943
67.0	279.780
67.5	267.720
68.0	255.830
68.5	244.077
69.0	232.495
69.5	221.118
70.0	209.912
70.5	199.013
71.0	188.388
71.5	178.002
72.0	167.957
72.5	158.459
73.0	149.644
73.5	141.308
74.0	133.518
74.5	126.104
75.0	119.032
75.5	112.472
76.0	106.323
76.5	100.924
77.0	96.039
77.5	91.222
78.0	86.507
78.5	81.894
79.0	77.453
79.5	73.046
80.0	68.775
80.5	64.573
81.0	60.473
81.5	56.441
82.0	52.478
82.5	48.549

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HS6DR-TL-L60-835-DIM-UNV-RW-OF-WH-AD_.IES****CANDELA TABULATION - (Cont.)**

83.0	44.722
83.5	40.998
84.0	37.377
84.5	33.755
85.0	30.271
85.5	26.820
86.0	23.472
86.5	20.226
87.0	17.049
87.5	13.905
88.0	11.172
88.5	8.917
89.0	6.970
89.5	5.364
90.0	3.895
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 : HS6DR-TL-L60-835-DIM-UNV-RW-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
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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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HS6DR-TL-L60-835-DIM-UNV-RW-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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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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Zone	Lumens	%Lamp	%Fixt
0-20	793.99	N.A.	18.10
0-30	1653.31	N.A.	37.70
0-40	2583.45	N.A.	59.00
0-60	3886.4	N.A.	88.70
0-80	4344.9	N.A.	99.20
0-90	4379.71	N.A.	100.00
10-90	4172.46	N.A.	95.30
20-40	1789.47	N.A.	40.90
20-50	2560.06	N.A.	58.50
40-70	1628.38	N.A.	37.20
60-80	458.50	N.A.	10.50
70-80	133.07	N.A.	3.00
80-90	34.81	N.A.	0.80
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	4379.82	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	207.25
10-20	586.73
20-30	859.33
30-40	930.14
40-50	770.59
50-60	532.36
60-70	325.43
70-80	133.07
80-90	34.81
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	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88
2	102	95	89	84	100	93	88	83	90	85	82	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42
8	66	53	45	40	64	53	45	40	51	45	40	50	44	40	49	43	39	38
9	62	49	42	36	60	49	41	36	48	41	36	47	40	36	46	40	36	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31

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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	24.4	25.9	24.8	26.2	26.5	24.4	25.9	24.8	26.2	26.5
	3H	25.5	26.8	25.9	27.2	27.5	25.5	26.8	25.9	27.2	27.5
	4H	25.8	27.0	26.2	27.4	27.7	25.8	27.0	26.2	27.4	27.7
	6H	26.0	27.1	26.4	27.5	27.9	26.0	27.1	26.4	27.5	27.9
	8H	26.0	27.1	26.4	27.5	27.9	26.0	27.1	26.4	27.5	27.9
	12H	26.1	27.1	26.5	27.5	27.9	26.1	27.1	26.5	27.5	27.9

UGR Viewed Endwise

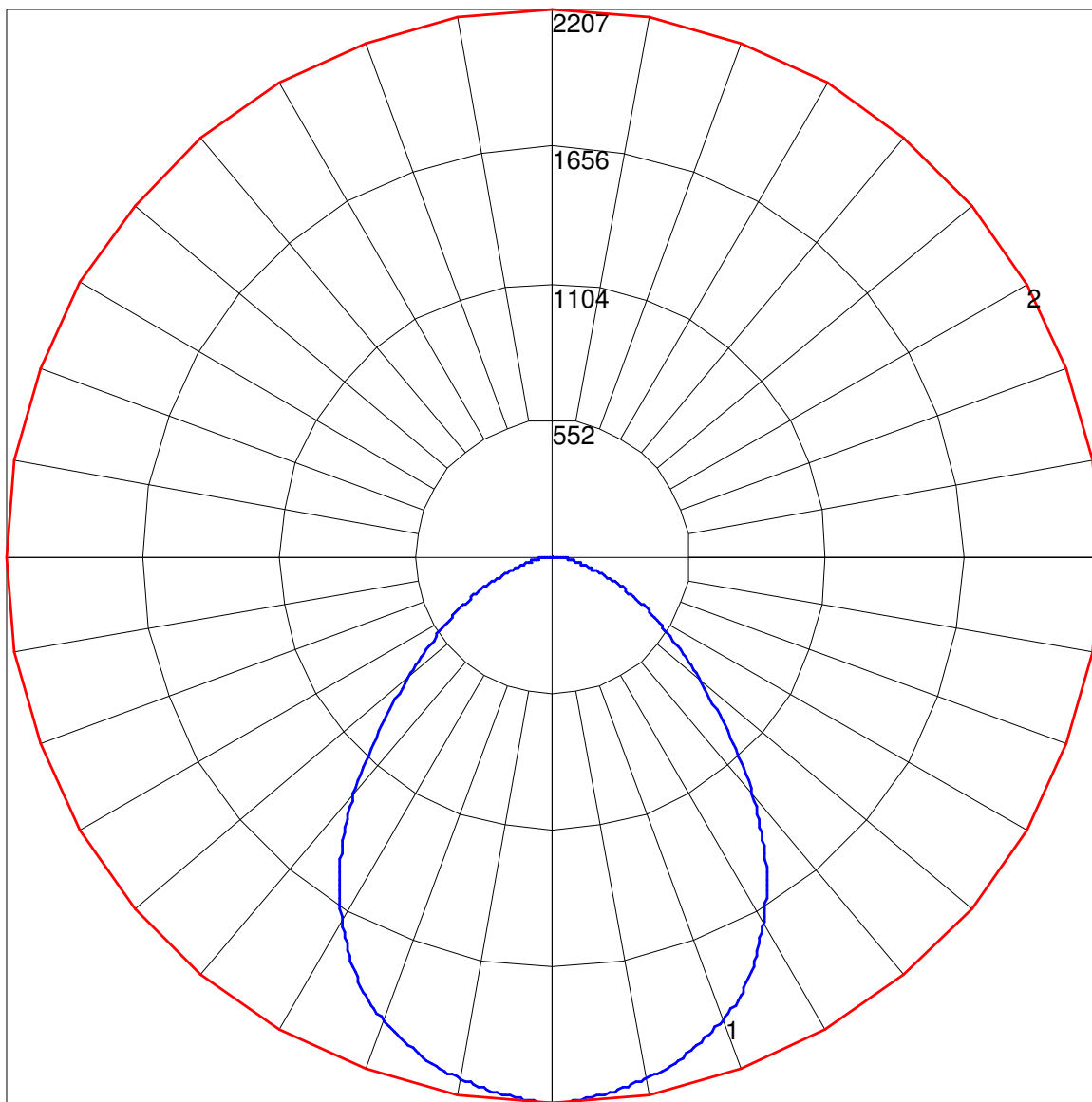
4H	2H	24.8	26.1	25.2	26.4	26.8	24.8	26.1	25.2	26.4	26.8
	3H	26.1	27.1	26.5	27.5	27.9	26.1	27.1	26.5	27.5	27.9
	4H	26.4	27.3	26.9	27.8	28.2	26.4	27.3	26.9	27.8	28.2
	6H	26.7	27.5	27.2	27.9	28.4	26.7	27.5	27.2	27.9	28.4
	8H	26.8	27.5	27.2	28.0	28.4	26.8	27.5	27.2	28.0	28.4
	12H	26.9	27.5	27.3	28.0	28.4	26.9	27.5	27.3	28.0	28.4

8H	4H	26.5	27.3	27.0	27.7	28.2	26.5	27.3	27.0	27.7	28.2
	6H	26.9	27.5	27.4	28.0	28.4	26.9	27.5	27.4	28.0	28.4
	8H	27.0	27.5	27.5	28.1	28.5	27.0	27.5	27.5	28.1	28.5
	12H	27.1	27.6	27.6	28.1	28.6	27.1	27.6	27.6	28.1	28.6

12H	4H	26.5	27.2	27.0	27.7	28.1	26.5	27.2	27.0	27.7	28.1
	6H	26.9	27.4	27.4	27.9	28.4	26.9	27.4	27.4	27.9	28.4
	8H	27.1	27.5	27.6	28.0	28.6	27.1	27.5	27.6	28.0	28.6

Maximum UGR = 28.6

POLAR GRAPH



Maximum Candela = 2207.424 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.)