



IES INDOOR REPORT

PHOTOMETRIC FILENAME : HS6DR-TL-L60-950-DIM-UNV-RW-OF-WH-PD_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM 12326812.16
[TESTLAB] UL Verification Services Inc.
[ISSUEDATE] 03/09/2023
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
[LUMCAT] HS6DR-TL-L60-950-DIM-UNV-RW-OF-WH-PD
[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	3854
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	51
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	74160	74160	74160
55	53954	53954	53954
65	40854	40854	40854
75	24149	24149	24149
85	18237	18237	18237

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CANDELA TABULATION

	<u>0</u>
0.0	1942.332
0.5	1942.332
1.0	1941.430
1.5	1939.927
2.0	1938.123
2.5	1936.018
3.0	1933.313
3.5	1930.307
4.0	1927.300
4.5	1924.595
5.0	1921.589
5.5	1918.883
6.0	1915.877
6.5	1912.870
7.0	1909.564
7.5	1905.956
8.0	1902.649
8.5	1899.042
9.0	1895.134
9.5	1891.226
10.0	1887.017
10.5	1882.808
11.0	1877.998
11.5	1873.188
12.0	1868.077
12.5	1862.666
13.0	1856.954
13.5	1851.243
14.0	1844.929
14.5	1838.316
15.0	1831.401
15.5	1824.487
16.0	1817.272
16.5	1810.057
17.0	1803.143
17.5	1795.627
18.0	1788.412
18.5	1780.897
19.0	1773.080
19.5	1765.264
20.0	1757.448
20.5	1749.030
21.0	1740.613
21.5	1731.294
22.0	1721.674
22.5	1710.851
23.0	1699.728
23.5	1688.004
24.0	1675.377
24.5	1662.451
25.0	1648.923
25.5	1635.094
26.0	1620.664
26.5	1606.234

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CANDELA TABULATION - (Cont.)

27.0	1591.203
27.5	1576.172
28.0	1560.840
28.5	1545.508
29.0	1530.176
29.5	1514.243
30.0	1498.310
30.5	1481.776
31.0	1465.241
31.5	1447.805
32.0	1430.670
32.5	1412.632
33.0	1394.294
33.5	1375.655
34.0	1356.415
34.5	1336.875
35.0	1316.733
35.5	1296.591
36.0	1275.548
36.5	1254.805
37.0	1233.460
37.5	1212.116
38.0	1190.471
38.5	1168.826
39.0	1146.881
39.5	1124.634
40.0	1102.388
40.5	1079.841
41.0	1057.295
41.5	1035.048
42.0	1012.502
42.5	989.955
43.0	967.709
43.5	945.162
44.0	922.916
44.5	900.669
45.0	878.724
45.5	856.778
46.0	835.133
46.5	813.789
47.0	792.745
47.5	772.002
48.0	751.560
48.5	731.418
49.0	711.878
49.5	692.638
50.0	674.300
50.5	656.262
51.0	639.127
51.5	622.893
52.0	606.960
52.5	591.027
53.0	575.695
53.5	560.664
54.0	546.234
54.5	532.104

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HS6DR-TL-L60-950-DIM-UNV-RW-OF-WH-PD_.IES****CANDELA TABULATION - (Cont.)**

55.0	518.576
55.5	505.950
56.0	493.324
56.5	480.698
57.0	468.072
57.5	456.047
58.0	444.322
58.5	432.598
59.0	421.174
59.5	409.750
60.0	398.627
60.5	387.504
61.0	376.381
61.5	365.559
62.0	354.736
62.5	343.613
63.0	332.791
63.5	321.968
64.0	311.146
64.5	300.293
65.0	289.321
65.5	278.468
66.0	267.585
66.5	256.883
67.0	246.181
67.5	235.569
68.0	225.107
68.5	214.766
69.0	204.575
69.5	194.564
70.0	184.703
70.5	175.113
71.0	165.764
71.5	156.625
72.0	147.787
72.5	139.429
73.0	131.673
73.5	124.338
74.0	117.484
74.5	110.960
75.0	104.737
75.5	98.965
76.0	93.554
76.5	88.804
77.0	84.505
77.5	80.267
78.0	76.118
78.5	72.060
79.0	68.151
79.5	64.273
80.0	60.516
80.5	56.818
81.0	53.210
81.5	49.663
82.0	46.176
82.5	42.719

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HS6DR-TL-L60-950-DIM-UNV-RW-OF-WH-PD_.IES****CANDELA TABULATION - (Cont.)**

83.0	39.352
83.5	36.075
84.0	32.888
84.5	29.702
85.0	26.635
85.5	23.599
86.0	20.653
86.5	17.797
87.0	15.001
87.5	12.235
88.0	9.830
88.5	7.846
89.0	6.133
89.5	4.720
90.0	3.427
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-L60-950-DIM-UNV-RW-OF-WH-PD_.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 : HS6DR-TL-L60-950-DIM-UNV-RW-OF-WH-PD_.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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HS6DR-TL-L60-950-DIM-UNV-RW-OF-WH-PD_.IES****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	698.63	N.A.	18.10
0-30	1454.76	N.A.	37.70
0-40	2273.2	N.A.	59.00
0-60	3419.68	N.A.	88.70
0-80	3823.12	N.A.	99.20
0-90	3853.75	N.A.	100.00
10-90	3671.38	N.A.	95.30
20-40	1574.57	N.A.	40.90
20-50	2252.62	N.A.	58.50
40-70	1432.82	N.A.	37.20
60-80	403.44	N.A.	10.50
70-80	117.09	N.A.	3.00
80-90	30.63	N.A.	0.80
90-110	0.09	N.A.	0.00
90-120	0.09	N.A.	0.00
90-130	0.09	N.A.	0.00
90-150	0.09	N.A.	0.00
90-180	0.09	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3853.84	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	182.37
10-20	516.27
20-30	756.13
30-40	818.44
40-50	678.05
50-60	468.43
60-70	286.35
70-80	117.09
80-90	30.63
90-100	0.09
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

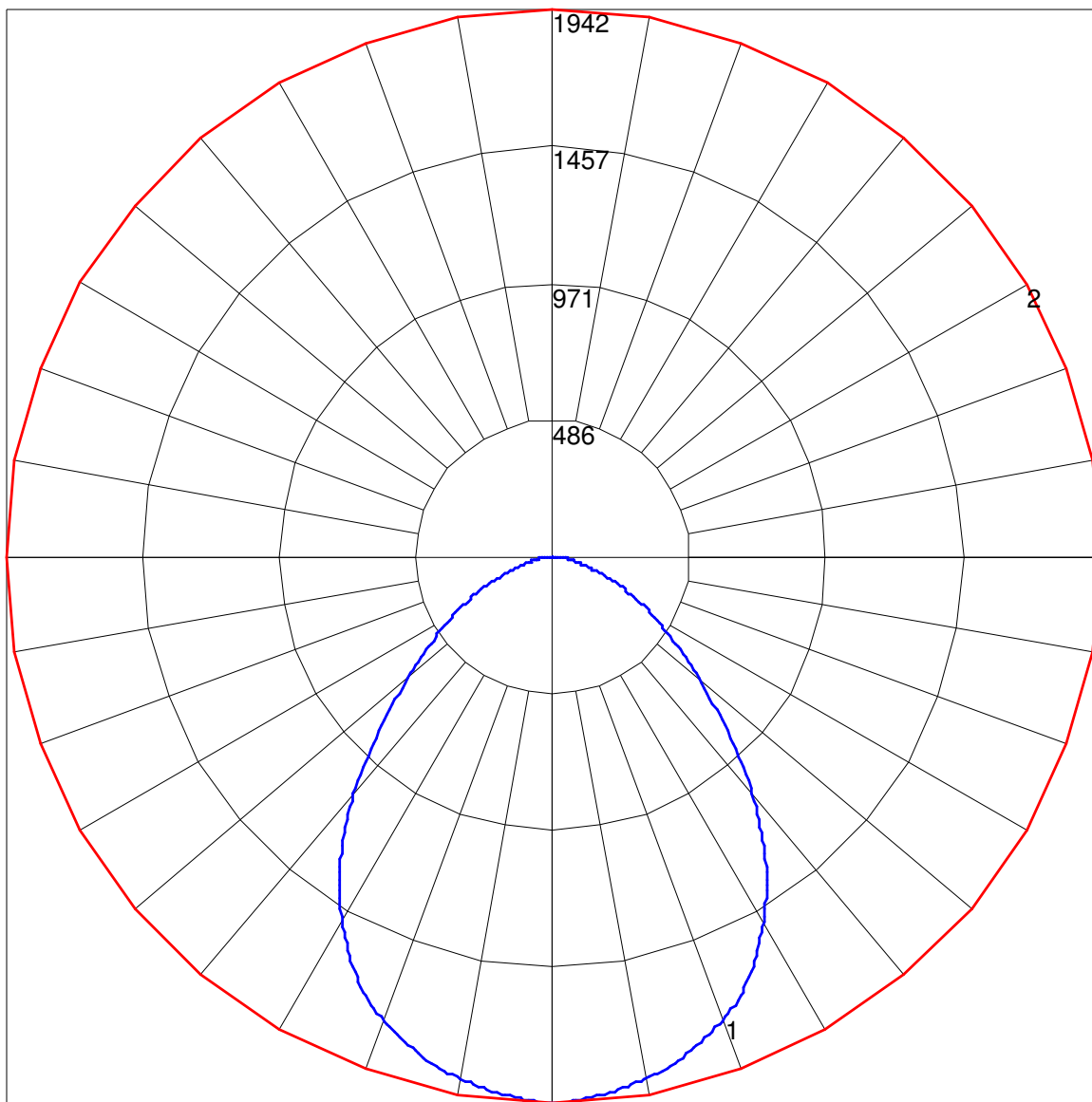
X=2H	Y=2H	24.0	25.5	24.4	25.8	26.1	24.0	25.5	24.4	25.8	26.1
	3H	25.1	26.4	25.5	26.8	27.1	25.1	26.4	25.5	26.8	27.1
	4H	25.4	26.6	25.8	27.0	27.3	25.4	26.6	25.8	27.0	27.3
	6H	25.6	26.7	26.0	27.1	27.5	25.6	26.7	26.0	27.1	27.5
	8H	25.6	26.7	26.0	27.1	27.5	25.6	26.7	26.0	27.1	27.5
	12H	25.7	26.7	26.1	27.1	27.5	25.7	26.7	26.1	27.1	27.5

UGR Viewed Endwise

4H	2H	24.4	25.7	24.8	26.0	26.4	24.4	25.7	24.8	26.0	26.4
	3H	25.7	26.7	26.1	27.1	27.5	25.7	26.7	26.1	27.1	27.5
	4H	26.0	26.9	26.5	27.4	27.8	26.0	26.9	26.5	27.4	27.8
	6H	26.3	27.1	26.8	27.5	28.0	26.3	27.1	26.8	27.5	28.0
	8H	26.4	27.1	26.9	27.6	28.0	26.4	27.1	26.9	27.6	28.0
	12H	26.5	27.1	26.9	27.6	28.0	26.5	27.1	26.9	27.6	28.0
8H	4H	26.1	26.9	26.6	27.3	27.8	26.1	26.9	26.6	27.3	27.8
	6H	26.5	27.1	27.0	27.6	28.0	26.5	27.1	27.0	27.6	28.0
	8H	26.6	27.1	27.1	27.7	28.1	26.6	27.1	27.1	27.7	28.1
	12H	26.7	27.2	27.2	27.7	28.2	26.7	27.2	27.2	27.7	28.2
12H	4H	26.1	26.8	26.6	27.3	27.7	26.1	26.8	26.6	27.3	27.7
	6H	26.5	27.0	27.0	27.5	28.0	26.5	27.0	27.0	27.5	28.0
	8H	26.7	27.1	27.2	27.6	28.2	26.7	27.1	27.2	27.6	28.2

Maximum UGR = 28.2

POLAR GRAPH



Maximum Candela = 1942.332 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.)