



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6DR-TL-L20-835-DIM-UNV-OM-OF-SPC_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]GEN FROM 12326812.04
[TESTLAB] UL Verification Services Inc.
[ISSUE DATE] 12-02-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
[LUMCAT] 6DR-TL-L20-835-DIM-UNV-OM-OF-SPC
[LUMINAIRE] Black formed aluminum housing, specular reflector, no lens
[MORE] 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	2023
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	19.1077
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.68
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.50 ft (Diameter)
Luminous Width (90-270)	0.50 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	3651	3651	3651
55	1344	1344	1344
65	529	529	529
75	237	237	237
85	192	192	192

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CANDELA TABULATION

	<u>0</u>
0.0	4093.946
0.5	4100.067
1.0	4112.309
1.5	4119.451
2.0	4136.794
2.5	4143.935
3.0	4156.177
3.5	4159.237
4.0	4150.056
4.5	4101.088
5.0	4052.119
5.5	4000.091
6.0	3916.437
6.5	3832.783
7.0	3744.028
7.5	3644.051
8.0	3527.751
8.5	3408.391
9.0	3284.951
9.5	3164.571
10.0	3053.372
10.5	2955.436
11.0	2870.761
11.5	2798.329
12.0	2726.917
12.5	2656.525
13.0	2589.194
13.5	2525.944
14.0	2468.814
14.5	2417.805
15.0	2371.898
15.5	2328.030
16.0	2285.183
16.5	2240.296
17.0	2194.388
17.5	2148.480
18.0	2106.653
18.5	2069.927
19.0	2032.181
19.5	1993.414
20.0	1950.567
20.5	1904.659
21.0	1857.731
21.5	1809.783
22.0	1758.775
22.5	1709.807
23.0	1657.778
23.5	1604.729
24.0	1549.640
24.5	1494.551
25.0	1440.482
25.5	1386.412
26.0	1336.424
26.5	1288.476

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CANDELA TABULATION - (Cont.)

27.0	1243.589
27.5	1200.741
28.0	1161.975
28.5	1127.289
29.0	1094.644
29.5	1063.018
30.0	1023.232
30.5	973.447
31.0	916.318
31.5	853.475
32.0	789.714
32.5	725.546
33.0	661.377
33.5	594.046
34.0	525.694
34.5	463.362
35.0	403.478
35.5	346.960
36.0	292.585
36.5	243.923
37.0	204.034
37.5	175.980
38.0	160.881
38.5	150.679
39.0	140.478
39.5	129.664
40.0	118.136
40.5	105.894
41.0	94.162
41.5	83.246
42.0	73.962
42.5	66.617
43.0	60.904
43.5	56.517
44.0	52.845
44.5	49.886
45.0	47.132
45.5	44.786
46.0	42.541
46.5	40.501
47.0	38.460
47.5	36.522
48.0	34.584
48.5	32.645
49.0	30.707
49.5	28.973
50.0	27.341
50.5	25.708
51.0	24.178
51.5	22.648
52.0	21.118
52.5	19.791
53.0	18.465
53.5	17.241
54.0	16.119
54.5	15.099

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CANDELA TABULATION - (Cont.)

55.0	14.078
55.5	13.262
56.0	12.344
56.5	11.630
57.0	10.916
57.5	10.202
58.0	9.590
58.5	8.978
59.0	8.467
59.5	7.957
60.0	7.447
60.5	6.937
61.0	6.529
61.5	6.121
62.0	5.815
62.5	5.509
63.0	5.101
63.5	4.897
64.0	4.591
64.5	4.285
65.0	4.081
65.5	3.775
66.0	3.571
66.5	3.367
67.0	3.163
67.5	2.958
68.0	2.856
68.5	2.652
69.0	2.448
69.5	2.346
70.0	2.244
70.5	2.040
71.0	1.938
71.5	1.836
72.0	1.734
72.5	1.632
73.0	1.530
73.5	1.428
74.0	1.326
74.5	1.224
75.0	1.122
75.5	1.122
76.0	1.020
76.5	0.918
77.0	0.918
77.5	0.816
78.0	0.816
78.5	0.714
79.0	0.714
79.5	0.612
80.0	0.612
80.5	0.510
81.0	0.510
81.5	0.510
82.0	0.408
82.5	0.408

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CANDELA TABULATION - (Cont.)

83.0	0.408
83.5	0.306
84.0	0.306
84.5	0.306
85.0	0.306
85.5	0.204
86.0	0.204
86.5	0.204
87.0	0.204
87.5	0.204
88.0	0.102
88.5	0.102
89.0	0.102
89.5	0.102
90.0	0.102
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
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128.0	0.000
128.5	0.000
129.0	0.000
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130.0	0.000
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131.0	0.000
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133.0	0.000
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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
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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	1020.95	N.A.	50.50
0-30	1682.28	N.A.	83.20
0-40	1962.13	N.A.	97.00
0-60	2017.13	N.A.	99.70
0-80	2022.66	N.A.	100.00
0-90	2022.98	N.A.	100.00
10-90	1670.23	N.A.	82.60
20-40	941.18	N.A.	46.50
20-50	982.66	N.A.	48.60
40-70	59.22	N.A.	2.90
60-80	5.54	N.A.	0.30
70-80	1.31	N.A.	0.10
80-90	0.31	N.A.	0.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2022.98	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	352.74
10-20	668.21
20-30	661.33
30-40	279.85
40-50	41.48
50-60	13.51
60-70	4.23
70-80	1.31
80-90	0.31
90-100	0.00
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	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89
3	104	99	94	91	103	97	93	90	95	91	89	92	90	87	90	88	86	84
4	100	93	88	84	98	92	88	84	90	86	83	88	85	82	86	83	81	80
5	96	88	83	79	94	87	82	79	86	81	78	84	80	77	82	79	77	75
6	92	84	78	75	90	83	78	74	81	77	74	80	76	73	79	75	73	72
7	88	80	74	70	87	79	74	70	78	73	70	77	73	70	75	72	69	68
8	84	76	70	67	83	75	70	67	74	70	66	73	69	66	72	69	66	65
9	81	72	67	63	80	72	67	63	71	66	63	70	66	63	69	65	63	62
10	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	63	60	59

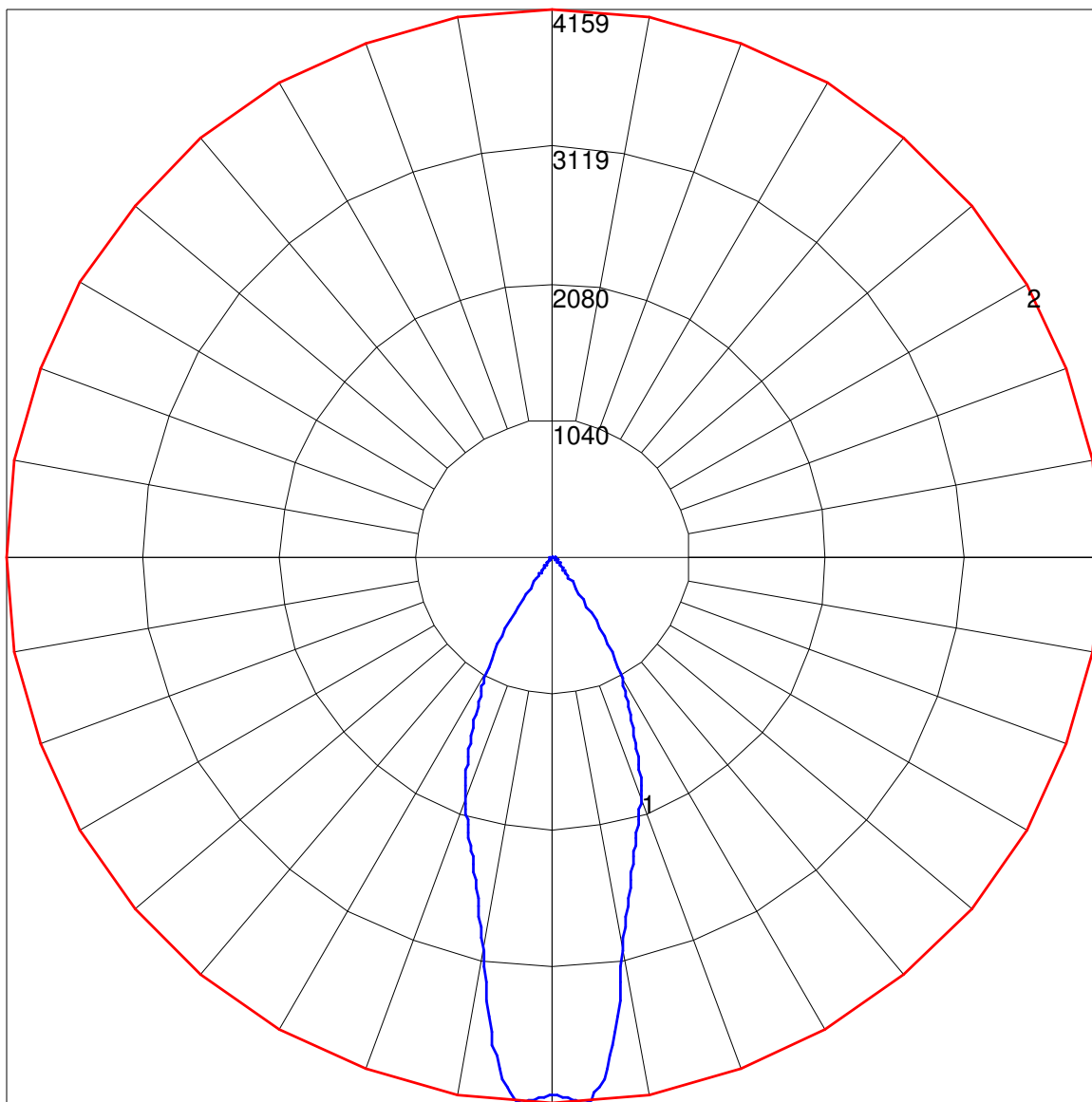
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UGR TABLE - CORRECTED

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											
X=2H Y=2H		UGR Viewed Crosswise					UGR Viewed Endwise				
		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	3H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	4H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	6H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	8H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	12H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
4H	2H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	3H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	4H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	6H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	8H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	12H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
8H	4H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	6H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	8H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	12H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
12H	4H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	6H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	8H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

Maximum UGR = 2.5

POLAR GRAPH



Maximum Candela = 4159.237 Located At Horizontal Angle = 0, Vertical Angle = 3.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)