



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6DR-TL-L20-835-DIM-UNV-SW-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 12326812.11
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 10/01/2019
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 6DR-TL-L20-835-DIM-UNV-SW-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	1325
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	69
Total Luminaire Watts	19.0874
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.94
Spacing Criterion (90-270)	0.94
Spacing Criterion (Diagonal)	1.02
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	23687	23687	23687
55	21588	21588	21588
65	21392	21392	21392
75	22337	22337	22337
85	18244	18244	18244

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CANDELA TABULATION

	<u>0</u>
0.0	745.80
0.5	745.60
1.0	745.10
1.5	744.20
2.0	742.90
2.5	741.30
3.0	739.40
3.5	737.30
4.0	734.90
4.5	732.40
5.0	729.90
5.5	727.10
6.0	724.10
6.5	721.00
7.0	717.60
7.5	714.10
8.0	710.40
8.5	706.50
9.0	702.50
9.5	698.30
10.0	694.00
10.5	689.50
11.0	684.80
11.5	679.80
12.0	674.70
12.5	669.30
13.0	663.80
13.5	658.00
14.0	652.00
14.5	645.90
15.0	639.50
15.5	633.00
16.0	626.40
16.5	619.70
17.0	613.00
17.5	606.20
18.0	599.40
18.5	592.50
19.0	585.70
19.5	578.80
20.0	571.80
20.5	564.90
21.0	557.80
21.5	550.60
22.0	543.30
22.5	535.80
23.0	528.20
23.5	520.50
24.0	512.70
24.5	504.80
25.0	496.90
25.5	489.00
26.0	481.10
26.5	473.30

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CANDELA TABULATION - (Cont.)

27.0	465.60
27.5	457.90
28.0	450.40
28.5	442.90
29.0	435.70
29.5	428.50
30.0	421.50
30.5	414.60
31.0	407.70
31.5	401.00
32.0	394.30
32.5	387.70
33.0	381.10
33.5	374.70
34.0	368.20
34.5	362.00
35.0	355.90
35.5	349.80
36.0	343.80
36.5	337.90
37.0	332.20
37.5	326.60
38.0	321.10
38.5	315.70
39.0	310.50
39.5	305.40
40.0	300.40
40.5	295.50
41.0	290.80
41.5	286.20
42.0	281.70
42.5	277.30
43.0	273.00
43.5	268.80
44.0	264.60
44.5	260.60
45.0	256.60
45.5	252.70
46.0	248.90
46.5	245.10
47.0	241.30
47.5	237.70
48.0	234.00
48.5	230.40
49.0	226.90
49.5	223.50
50.0	220.10
50.5	216.80
51.0	213.50
51.5	210.30
52.0	207.10
52.5	204.00
53.0	200.90
53.5	198.10
54.0	195.40
54.5	192.60

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CANDELA TABULATION - (Cont.)

55.0	189.70
55.5	186.80
56.0	184.00
56.5	181.30
57.0	179.00
57.5	176.40
58.0	173.70
58.5	171.10
59.0	168.50
59.5	165.90
60.0	163.30
60.5	160.80
61.0	158.30
61.5	155.80
62.0	153.30
62.5	150.80
63.0	148.30
63.5	145.90
64.0	143.40
64.5	140.90
65.0	138.50
65.5	136.00
66.0	133.50
66.5	131.00
67.0	128.50
67.5	126.10
68.0	123.60
68.5	121.20
69.0	118.70
69.5	116.30
70.0	113.80
70.5	111.40
71.0	109.00
71.5	106.50
72.0	104.10
72.5	101.60
73.0	99.09
73.5	96.53
74.0	93.92
74.5	91.26
75.0	88.57
75.5	85.84
76.0	83.05
76.5	80.21
77.0	77.31
77.5	74.36
78.0	71.34
78.5	68.27
79.0	65.17
79.5	62.00
80.0	58.79
80.5	55.54
81.0	52.24
81.5	48.89
82.0	45.49
82.5	42.04

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CANDELA TABULATION - (Cont.)

83.0	38.55
83.5	35.04
84.0	31.49
84.5	27.93
85.0	24.36
85.5	20.80
86.0	17.27
86.5	13.90
87.0	10.91
87.5	8.48
88.0	6.37
88.5	4.50
89.0	2.84
89.5	1.59
90.0	0.81
90.5	0.00
91.0	0.00
91.5	0.00
92.0	0.00
92.5	0.00
93.0	0.00
93.5	0.00
94.0	0.00
94.5	0.00
95.0	0.00
95.5	0.00
96.0	0.00
96.5	0.00
97.0	0.00
97.5	0.00
98.0	0.00
98.5	0.00
99.0	0.00
99.5	0.00
100.0	0.00
100.5	0.00
101.0	0.00
101.5	0.00
102.0	0.00
102.5	0.00
103.0	0.00
103.5	0.00
104.0	0.00
104.5	0.00
105.0	0.00
105.5	0.00
106.0	0.00
106.5	0.00
107.0	0.00
107.5	0.00
108.0	0.00
108.5	0.00
109.0	0.00
109.5	0.00
110.0	0.00
110.5	0.00

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CANDELA TABULATION - (Cont.)

111.0	0.00
111.5	0.00
112.0	0.00
112.5	0.00
113.0	0.00
113.5	0.00
114.0	0.00
114.5	0.00
115.0	0.00
115.5	0.00
116.0	0.00
116.5	0.00
117.0	0.00
117.5	0.00
118.0	0.00
118.5	0.00
119.0	0.00
119.5	0.00
120.0	0.00
120.5	0.00
121.0	0.00
121.5	0.00
122.0	0.00
122.5	0.00
123.0	0.00
123.5	0.00
124.0	0.00
124.5	0.00
125.0	0.00
125.5	0.00
126.0	0.00
126.5	0.00
127.0	0.00
127.5	0.00
128.0	0.00
128.5	0.00
129.0	0.00
129.5	0.00
130.0	0.00
130.5	0.00
131.0	0.00
131.5	0.00
132.0	0.00
132.5	0.00
133.0	0.00
133.5	0.00
134.0	0.00
134.5	0.00
135.0	0.00
135.5	0.00
136.0	0.00
136.5	0.00
137.0	0.00
137.5	0.00
138.0	0.00
138.5	0.00

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CANDELA TABULATION - (Cont.)

139.0	0.00
139.5	0.00
140.0	0.00
140.5	0.00
141.0	0.00
141.5	0.00
142.0	0.00
142.5	0.00
143.0	0.00
143.5	0.00
144.0	0.00
144.5	0.00
145.0	0.00
145.5	0.00
146.0	0.00
146.5	0.00
147.0	0.00
147.5	0.00
148.0	0.00
148.5	0.00
149.0	0.00
149.5	0.00
150.0	0.00
150.5	0.00
151.0	0.00
151.5	0.00
152.0	0.00
152.5	0.00
153.0	0.00
153.5	0.00
154.0	0.00
154.5	0.00
155.0	0.00
155.5	0.00
156.0	0.00
156.5	0.00
157.0	0.00
157.5	0.00
158.0	0.00
158.5	0.00
159.0	0.00
159.5	0.00
160.0	0.00
160.5	0.00
161.0	0.00
161.5	0.00
162.0	0.00
162.5	0.00
163.0	0.00
163.5	0.00
164.0	0.00
164.5	0.00
165.0	0.00
165.5	0.00
166.0	0.00
166.5	0.00

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CANDELA TABULATION - (Cont.)

167.0	0.00
167.5	0.00
168.0	0.00
168.5	0.00
169.0	0.00
169.5	0.00
170.0	0.00
170.5	0.00
171.0	0.00
171.5	0.00
172.0	0.00
172.5	0.00
173.0	0.00
173.5	0.00
174.0	0.00
174.5	0.00
175.0	0.00
175.5	0.00
176.0	0.00
176.5	0.00
177.0	0.00
177.5	0.00
178.0	0.00
178.5	0.00
179.0	0.00
179.5	0.00
180.0	0.00

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	247.26	N.A.	18.70
0-30	475.02	N.A.	35.90
0-40	698.05	N.A.	52.70
0-60	1067.05	N.A.	80.50
0-80	1296.82	N.A.	97.90
0-90	1324.99	N.A.	100.00
10-90	1256.46	N.A.	94.80
20-40	450.79	N.A.	34.00
20-50	649.54	N.A.	49.00
40-70	506.12	N.A.	38.20
60-80	229.77	N.A.	17.30
70-80	92.65	N.A.	7.00
80-90	28.17	N.A.	2.10
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	1325.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	68.53
10-20	178.73
20-30	227.76
30-40	223.03
40-50	198.75
50-60	170.25
60-70	137.12
70-80	92.65
80-90	28.17
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	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	77	83	79	76	80	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	46	71	59	51	46	58	50	45	56	50	45	54	49	44	42
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	45	40	38
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	59	47	39	34	45	39	34	44	38	34	43	38	33	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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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	21.4	22.9	21.7	23.2	23.5	21.4	22.9	21.7	23.2	23.5
	3H	23.5	24.9	23.9	25.2	25.6	23.5	24.9	23.9	25.2	25.6
	4H	24.4	25.7	24.8	26.1	26.4	24.4	25.7	24.8	26.1	26.4
	6H	25.1	26.4	25.5	26.7	27.1	25.1	26.4	25.5	26.7	27.1
	8H	25.4	26.6	25.8	27.0	27.4	25.4	26.6	25.8	27.0	27.4
	12H	25.6	26.7	26.0	27.1	27.5	25.6	26.7	26.0	27.1	27.5

UGR Viewed Endwise

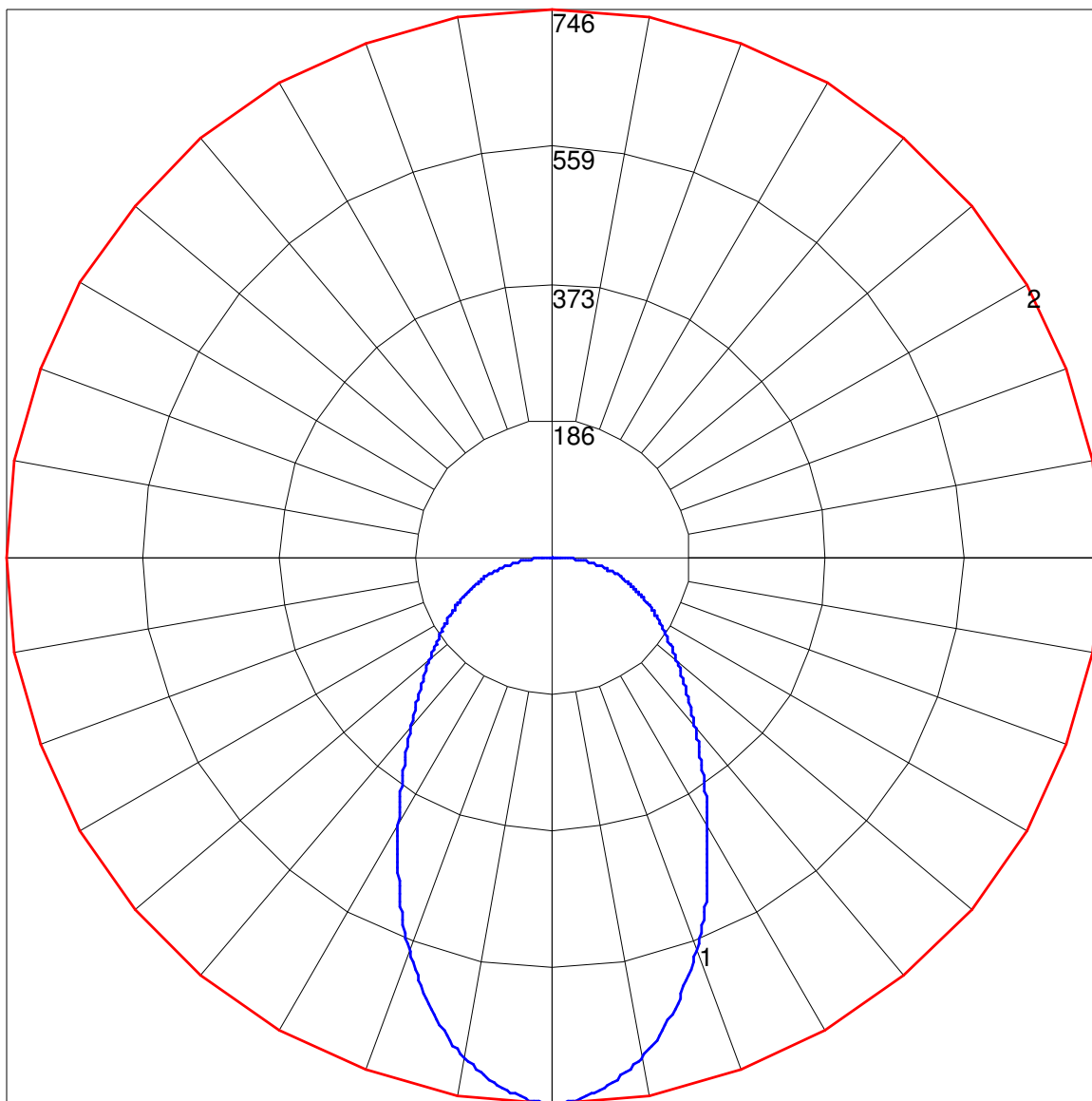
4H	2H	22.1	23.4	22.4	23.7	24.1	22.1	23.4	22.4	23.7	24.1
	3H	24.4	25.5	24.8	25.9	26.3	24.4	25.5	24.8	25.9	26.3
	4H	25.5	26.5	25.9	26.9	27.3	25.5	26.5	25.9	26.9	27.3
	6H	26.4	27.3	26.8	27.7	28.2	26.4	27.3	26.8	27.7	28.2
	8H	26.7	27.5	27.2	28.0	28.4	26.7	27.5	27.2	28.0	28.4
	12H	26.9	27.7	27.4	28.1	28.6	26.9	27.7	27.4	28.1	28.6

8H	4H	25.9	26.7	26.4	27.2	27.6	25.9	26.7	26.4	27.2	27.6
	6H	27.0	27.6	27.5	28.1	28.6	27.0	27.6	27.5	28.1	28.6
	8H	27.4	28.0	27.9	28.5	29.0	27.4	28.0	27.9	28.5	29.0
	12H	27.7	28.2	28.2	28.7	29.3	27.7	28.2	28.2	28.7	29.3

12H	4H	26.0	26.7	26.4	27.2	27.6	26.0	26.7	26.4	27.2	27.6
	6H	27.1	27.7	27.6	28.1	28.7	27.1	27.7	27.6	28.1	28.7
	8H	27.5	28.1	28.0	28.6	29.1	27.5	28.1	28.0	28.6	29.1

Maximum UGR = 29.3

POLAR GRAPH



Maximum Candela = 745.8 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.)