



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L15-935-DIM-UNV-RW-OF-WH-IP_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12316380.12
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01-18-2024
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4DR-TL-L15-935-DIM-UNV-RW-OF-WH-IP
 [LUMINAIRE] Black formed aluminum housing, white reflector, clear glas
 [MORE] s patterned lens enclosure
 [LAMP] One white LED
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	797
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	57
Total Luminaire Watts	13.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	0.98
Spacing Criterion (Diagonal)	0.88
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 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	18441	18441	18441
55	14890	14890	14890
65	9633	9633	9633
75	5371	5371	5371
85	2759	2759	2759

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CANDELA TABULATION

	<u>0</u>
0.0	640.403
0.5	640.403
1.0	639.801
1.5	638.596
2.0	637.391
2.5	636.186
3.0	634.379
3.5	632.571
4.0	630.764
4.5	628.354
5.0	626.547
5.5	624.137
6.0	621.727
6.5	619.318
7.0	616.908
7.5	614.498
8.0	612.088
8.5	609.076
9.0	606.666
9.5	604.256
10.0	601.967
10.5	599.497
11.0	596.967
11.5	594.497
12.0	592.147
12.5	589.798
13.0	587.448
13.5	585.038
14.0	582.628
14.5	580.219
15.0	577.749
15.5	575.218
16.0	572.568
16.5	569.917
17.0	567.206
17.5	564.314
18.0	561.241
18.5	557.928
19.0	554.735
19.5	551.301
20.0	547.566
20.5	543.289
21.0	538.348
21.5	532.987
22.0	526.842
22.5	520.034
23.0	512.323
23.5	503.647
24.0	494.129
24.5	483.345
25.0	471.296
25.5	457.982
26.0	443.583
26.5	428.281

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CANDELA TABULATION - (Cont.)

27.0	412.196
27.5	395.869
28.0	378.760
28.5	361.831
29.0	344.962
29.5	328.094
30.0	311.526
30.5	295.260
31.0	279.898
31.5	265.017
32.0	250.980
32.5	237.907
33.0	225.798
33.5	214.894
34.0	205.074
34.5	196.519
35.0	188.988
35.5	182.602
36.0	177.000
36.5	172.300
37.0	168.144
37.5	164.589
38.0	161.336
38.5	158.444
39.0	155.854
39.5	153.504
40.0	151.395
40.5	149.407
41.0	147.480
41.5	145.732
42.0	143.985
42.5	142.359
43.0	140.732
43.5	139.045
44.0	137.358
44.5	135.672
45.0	133.924
45.5	132.117
46.0	130.249
46.5	128.322
47.0	126.334
47.5	124.285
48.0	122.237
48.5	120.068
49.0	117.839
49.5	115.489
50.0	113.140
50.5	110.730
51.0	108.200
51.5	105.730
52.0	103.200
52.5	100.669
53.0	98.259
53.5	95.609
54.0	92.958
54.5	90.307

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CANDELA TABULATION - (Cont.)

55.0	87.717
55.5	85.066
56.0	82.475
56.5	79.945
57.0	77.415
57.5	74.884
58.0	72.414
58.5	70.005
59.0	67.595
59.5	65.245
60.0	62.896
60.5	60.606
61.0	58.377
61.5	56.148
62.0	54.040
62.5	51.871
63.0	49.823
63.5	47.714
64.0	45.726
64.5	43.738
65.0	41.810
65.5	39.882
66.0	38.015
66.5	36.207
67.0	34.460
67.5	32.713
68.0	31.026
68.5	29.339
69.0	27.713
69.5	26.146
70.0	24.700
70.5	23.315
71.0	22.050
71.5	20.845
72.0	19.700
72.5	18.616
73.0	17.592
73.5	16.688
74.0	15.784
74.5	15.001
75.0	14.278
75.5	13.615
76.0	12.892
76.5	12.230
77.0	11.567
77.5	10.904
78.0	10.302
78.5	9.639
79.0	9.037
79.5	8.434
80.0	7.832
80.5	7.229
81.0	6.687
81.5	6.145
82.0	5.543
82.5	5.061

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CANDELA TABULATION - (Cont.)

83.0	4.518
83.5	3.976
84.0	3.494
84.5	2.952
85.0	2.470
85.5	2.048
86.0	1.627
86.5	1.325
87.0	1.024
87.5	0.783
88.0	0.542
88.5	0.361
89.0	0.181
89.5	0.060
90.0	0.000
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
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100.5	0.000
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101.5	0.000
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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
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120.0	0.000
120.5	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
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147.5	0.000
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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	221.67	N.A.	27.80
0-30	428.95	N.A.	53.80
0-40	555.27	N.A.	69.60
0-60	736.37	N.A.	92.40
0-80	793.99	N.A.	99.60
0-90	797.25	N.A.	100.00
10-90	738.27	N.A.	92.60
20-40	333.60	N.A.	41.80
20-50	436.38	N.A.	54.70
40-70	222.99	N.A.	28.00
60-80	57.62	N.A.	7.20
70-80	15.74	N.A.	2.00
80-90	3.26	N.A.	0.40
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	797.25	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	58.98
10-20	162.68
20-30	207.29
30-40	126.32
40-50	102.77
50-60	78.33
60-70	41.89
70-80	15.74
80-90	3.26
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	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	83	78	75	80	77	74	72
4	91	82	75	70	89	80	74	69	78	73	68	76	71	67	74	70	67	65
5	85	75	68	63	84	74	67	62	72	66	62	70	65	61	69	64	61	59
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	45	41	39

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UGR TABLE - CORRECTED

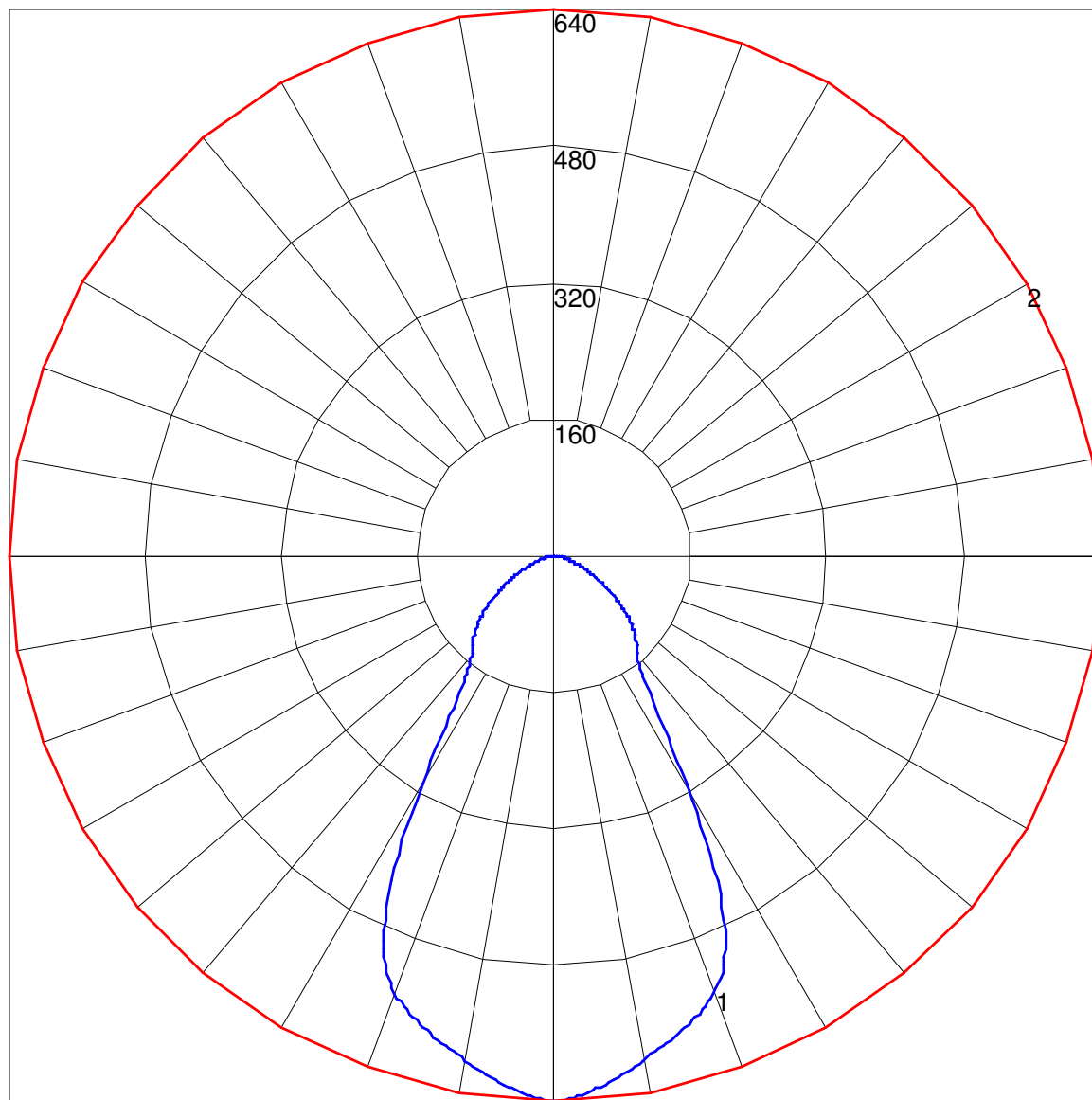
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	18.8	20.1	19.1	20.4	20.7	18.8	20.1	19.1	20.4	20.7
	3H	19.5	20.7	19.9	21.0	21.4	19.5	20.7	19.9	21.0	21.4
	4H	19.7	20.8	20.1	21.1	21.5	19.7	20.8	20.1	21.1	21.5
	6H	19.8	20.8	20.2	21.2	21.6	19.8	20.8	20.2	21.2	21.6
	8H	19.8	20.8	20.2	21.2	21.6	19.8	20.8	20.2	21.2	21.6
	12H	19.8	20.7	20.2	21.1	21.5	19.8	20.7	20.2	21.1	21.5
4H	2H	19.0	20.1	19.4	20.5	20.9	19.0	20.1	19.4	20.5	20.9
	3H	19.9	20.8	20.3	21.2	21.6	19.9	20.8	20.3	21.2	21.6
	4H	20.2	21.0	20.6	21.4	21.8	20.2	21.0	20.6	21.4	21.8
	6H	20.3	21.0	20.8	21.5	21.9	20.3	21.0	20.8	21.5	21.9
	8H	20.4	21.0	20.8	21.5	21.9	20.4	21.0	20.8	21.5	21.9
	12H	20.4	20.9	20.9	21.4	21.9	20.4	20.9	20.9	21.4	21.9
8H	4H	20.2	20.8	20.7	21.3	21.8	20.2	20.8	20.7	21.3	21.8
	6H	20.4	21.0	20.9	21.5	21.9	20.4	21.0	20.9	21.5	21.9
	8H	20.5	21.0	21.0	21.5	22.0	20.5	21.0	21.0	21.5	22.0
	12H	20.5	20.9	21.0	21.4	22.0	20.5	20.9	21.0	21.4	22.0
12H	4H	20.2	20.7	20.7	21.2	21.7	20.2	20.7	20.7	21.2	21.7
	6H	20.4	20.9	20.9	21.4	21.9	20.4	20.9	20.9	21.4	21.9
	8H	20.5	20.9	21.0	21.4	22.0	20.5	20.9	21.0	21.4	22.0

Maximum UGR = 22.0

POLAR GRAPH



Maximum Candela = 640.403 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.)