

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L20-850-DIM-UNV-LW-OF-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.07

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 02-26-2025

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.

[LUMCAT] 4DR-TL-L20-850-DIM-UNV-LW-OF-XX

[LUMINAIRE] Black formed aluminum housing, white reflector, clear patt

[MORE] erved glass 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	1379
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	153
Total Luminaire Watts	9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.35 ft (Diameter)
Luminous Width (90-270)	0.35 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	38047	38047	38047
55	31263	31263	31263
65	22871	22871	22871
75	15833	15833	15833
85	8631	8631	8631

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CANDELA TABULATION

	<u>0</u>
0.0	968.490
0.5	968.184
1.0	967.572
1.5	966.756
2.0	965.940
2.5	965.022
3.0	963.798
3.5	963.084
4.0	962.574
4.5	962.268
5.0	961.860
5.5	961.452
6.0	961.146
6.5	960.738
7.0	960.432
7.5	960.228
8.0	960.126
8.5	959.820
9.0	959.514
9.5	958.902
10.0	958.494
10.5	957.780
11.0	957.066
11.5	956.148
12.0	955.128
12.5	953.904
13.0	952.476
13.5	950.844
14.0	948.804
14.5	946.356
15.0	943.398
15.5	939.828
16.0	935.850
16.5	931.158
17.0	926.058
17.5	920.346
18.0	913.614
18.5	906.678
19.0	899.130
19.5	890.664
20.0	881.382
20.5	871.284
21.0	860.370
21.5	848.640
22.0	835.686
22.5	821.916
23.0	807.126
23.5	791.214
24.0	774.078
24.5	755.820
25.0	736.032
25.5	715.326
26.0	693.192
26.5	669.732

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CANDELA TABULATION - (Cont.)

27.0	645.456
27.5	620.160
28.0	594.456
28.5	568.650
29.0	543.354
29.5	518.568
30.0	494.700
30.5	472.260
31.0	451.248
31.5	432.072
32.0	414.630
32.5	398.922
33.0	384.948
33.5	372.504
34.0	361.386
34.5	351.594
35.0	342.720
35.5	334.662
36.0	327.522
36.5	320.790
37.0	314.670
37.5	308.958
38.0	303.654
38.5	298.554
39.0	293.862
39.5	289.272
40.0	284.988
40.5	280.704
41.0	276.624
41.5	272.646
42.0	268.872
42.5	265.098
43.0	261.324
43.5	257.550
44.0	253.776
44.5	250.002
45.0	246.228
45.5	242.454
46.0	238.680
46.5	234.906
47.0	230.928
47.5	226.950
48.0	222.972
48.5	218.892
49.0	214.710
49.5	210.528
50.0	206.448
50.5	202.266
51.0	198.084
51.5	193.902
52.0	189.822
52.5	185.742
53.0	181.560
53.5	177.276
54.0	172.890
54.5	168.504

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CANDELA TABULATION - (Cont.)

55.0	164.118
55.5	159.732
56.0	155.448
56.5	151.266
57.0	147.084
57.5	142.902
58.0	138.822
58.5	134.844
59.0	130.866
59.5	126.990
60.0	123.216
60.5	119.442
61.0	115.770
61.5	112.200
62.0	108.630
62.5	105.060
63.0	101.653
63.5	98.267
64.0	94.942
64.5	91.667
65.0	88.465
65.5	85.343
66.0	82.263
66.5	79.264
67.0	76.337
67.5	73.460
68.0	70.676
68.5	67.952
69.0	65.229
69.5	62.597
70.0	60.037
70.5	57.518
71.0	55.060
71.5	52.663
72.0	50.347
72.5	48.062
73.0	45.839
73.5	43.676
74.0	41.555
74.5	39.505
75.0	37.505
75.5	35.567
76.0	33.670
76.5	31.824
77.0	30.059
77.5	28.305
78.0	26.612
78.5	24.970
79.0	23.358
79.5	21.808
80.0	20.288
80.5	18.809
81.0	17.350
81.5	15.932
82.0	14.545
82.5	13.199

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CANDELA TABULATION - (Cont.)

83.0	11.863
83.5	10.567
84.0	9.302
84.5	8.068
85.0	6.885
85.5	5.743
86.0	4.651
86.5	3.621
87.0	2.713
87.5	1.958
88.0	1.367
88.5	0.867
89.0	0.541
89.5	0.367
90.0	0.255
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
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125.5	0.000
126.0	0.000
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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
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147.5	0.000
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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	355.75	N.A.	25.80
0-30	682.36	N.A.	49.50
0-40	904.84	N.A.	65.60
0-60	1241.14	N.A.	90.00
0-80	1370.06	N.A.	99.40
0-90	1378.68	N.A.	100.00
10-90	1286.95	N.A.	93.30
20-40	549.09	N.A.	39.80
20-50	738.72	N.A.	53.60
40-70	424.76	N.A.	30.80
60-80	128.92	N.A.	9.40
70-80	40.46	N.A.	2.90
80-90	8.62	N.A.	0.60
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1378.69	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	91.73
10-20	264.01
20-30	326.61
30-40	222.48
40-50	189.63
50-60	146.68
60-70	88.46
70-80	40.46
80-90	8.62
90-100	0.01
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	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89
2	103	97	91	87	101	95	90	86	92	87	84	89	85	82	86	83	80	78
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	79	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	51
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	49	47
8	69	58	51	46	68	57	50	45	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37

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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	21.7	23.1	22.1	23.4	23.7	21.7	23.1	22.1	23.4	23.7
	3H	22.8	24.0	23.2	24.4	24.7	22.8	24.0	23.2	24.4	24.7
	4H	23.2	24.3	23.6	24.6	25.0	23.2	24.3	23.6	24.6	25.0
	6H	23.4	24.4	23.8	24.8	25.2	23.4	24.4	23.8	24.8	25.2
	8H	23.4	24.4	23.9	24.8	25.2	23.4	24.4	23.9	24.8	25.2
	12H	23.4	24.4	23.9	24.8	25.2	23.4	24.4	23.9	24.8	25.2

UGR Viewed Endwise

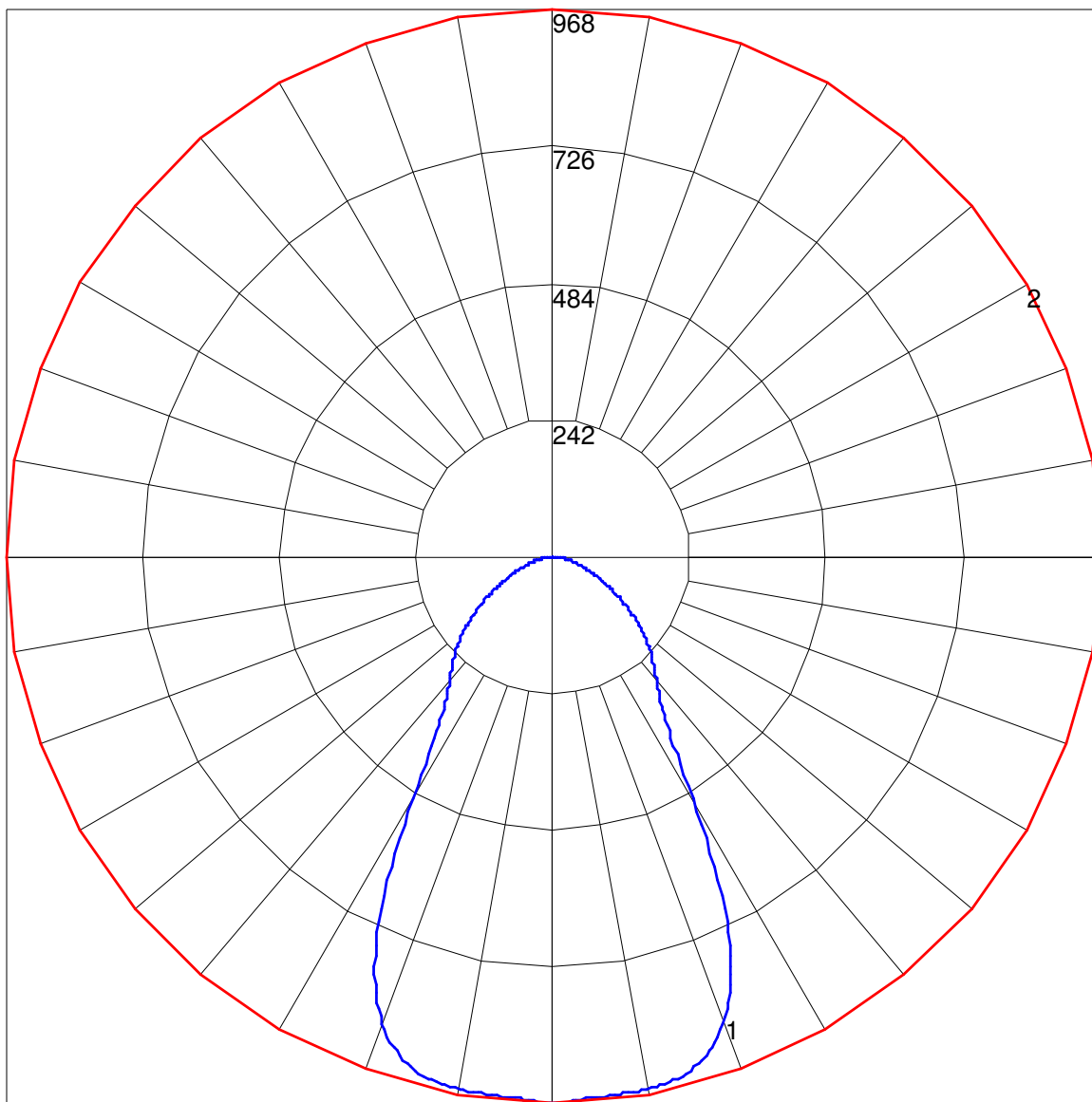
4H	2H	22.1	23.2	22.5	23.6	23.9	22.1	23.2	22.5	23.6	23.9
	3H	23.4	24.3	23.8	24.7	25.1	23.4	24.3	23.8	24.7	25.1
	4H	23.8	24.7	24.2	25.1	25.5	23.8	24.7	24.2	25.1	25.5
	6H	24.1	24.9	24.6	25.3	25.8	24.1	24.9	24.6	25.3	25.8
	8H	24.2	24.9	24.7	25.3	25.8	24.2	24.9	24.7	25.3	25.8
	12H	24.2	24.8	24.7	25.3	25.8	24.2	24.8	24.7	25.3	25.8

8H	4H	23.9	24.6	24.4	25.1	25.5	23.9	24.6	24.4	25.1	25.5
	6H	24.3	24.9	24.8	25.4	25.9	24.3	24.9	24.8	25.4	25.9
	8H	24.4	24.9	24.9	25.5	25.9	24.4	24.9	24.9	25.5	25.9
	12H	24.5	24.9	25.0	25.4	26.0	24.5	24.9	25.0	25.4	26.0

12H	4H	23.9	24.5	24.4	25.0	25.5	23.9	24.5	24.4	25.0	25.5
	6H	24.3	24.8	24.9	25.3	25.8	24.3	24.8	24.9	25.3	25.8
	8H	24.5	24.9	25.0	25.4	26.0	24.5	24.9	25.0	25.4	26.0

Maximum UGR = 26.0

POLAR GRAPH



Maximum Candela = 968.49 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.)