



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L10-940-DIM-UNV-LW-OF-CS\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 12316380.07  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 01/27/2023  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 4DR-TL-L10-940-DIM-UNV-LW-OF-CS  
 [LUMINAIRE] Black formed aluminum housing, specular 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	566
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	63
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	15620	15620	15620
55	12835	12835	12835
65	9390	9390	9390
75	6500	6500	6500
85	3544	3544	3544

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CANDELA TABULATION

	<u>0</u>
0.0	397.610
0.5	397.485
1.0	397.233
1.5	396.898
2.0	396.563
2.5	396.186
3.0	395.684
3.5	395.391
4.0	395.181
4.5	395.056
5.0	394.888
5.5	394.721
6.0	394.595
6.5	394.428
7.0	394.302
7.5	394.218
8.0	394.176
8.5	394.051
9.0	393.925
9.5	393.674
10.0	393.506
10.5	393.213
11.0	392.920
11.5	392.543
12.0	392.124
12.5	391.622
13.0	391.036
13.5	390.366
14.0	389.528
14.5	388.523
15.0	387.309
15.5	385.843
16.0	384.210
16.5	382.284
17.0	380.190
17.5	377.845
18.0	375.081
18.5	372.233
19.0	369.135
19.5	365.659
20.0	361.848
20.5	357.703
21.0	353.222
21.5	348.406
22.0	343.088
22.5	337.435
23.0	331.363
23.5	324.830
24.0	317.795
24.5	310.299
25.0	302.175
25.5	293.675
26.0	284.588
26.5	274.956

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CANDELA TABULATION - (Cont.)

27.0	264.990
27.5	254.605
28.0	244.052
28.5	233.457
29.0	223.072
29.5	212.896
30.0	203.097
30.5	193.885
31.0	185.258
31.5	177.386
32.0	170.225
32.5	163.776
33.0	158.039
33.5	152.930
34.0	148.366
34.5	144.346
35.0	140.702
35.5	137.394
36.0	134.463
36.5	131.699
37.0	129.187
37.5	126.842
38.0	124.664
38.5	122.570
39.0	120.644
39.5	118.760
40.0	117.001
40.5	115.242
41.0	113.567
41.5	111.934
42.0	110.384
42.5	108.835
43.0	107.286
43.5	105.736
44.0	104.187
44.5	102.637
45.0	101.088
45.5	99.539
46.0	97.989
46.5	96.440
47.0	94.807
47.5	93.174
48.0	91.540
48.5	89.865
49.0	88.148
49.5	86.432
50.0	84.756
50.5	83.040
51.0	81.323
51.5	79.606
52.0	77.931
52.5	76.256
53.0	74.539
53.5	72.780
54.0	70.979
54.5	69.179

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**CANDELA TABULATION - (Cont.)**

55.0	67.378
55.5	65.577
56.0	63.819
56.5	62.102
57.0	60.385
57.5	58.668
58.0	56.993
58.5	55.360
59.0	53.727
59.5	52.135
60.0	50.586
60.5	49.036
61.0	47.529
61.5	46.063
62.0	44.598
62.5	43.132
63.0	41.733
63.5	40.343
64.0	38.978
64.5	37.634
65.0	36.319
65.5	35.037
66.0	33.773
66.5	32.542
67.0	31.340
67.5	30.159
68.0	29.016
68.5	27.898
69.0	26.780
69.5	25.699
70.0	24.648
70.5	23.614
71.0	22.605
71.5	21.620
72.0	20.670
72.5	19.732
73.0	18.819
73.5	17.931
74.0	17.060
74.5	16.218
75.0	15.398
75.5	14.602
76.0	13.823
76.5	13.065
77.0	12.341
77.5	11.621
78.0	10.925
78.5	10.251
79.0	9.590
79.5	8.953
80.0	8.329
80.5	7.722
81.0	7.123
81.5	6.541
82.0	5.971
82.5	5.419

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CANDELA TABULATION - (Cont.)

83.0	4.870
83.5	4.338
84.0	3.819
84.5	3.312
85.0	2.827
85.5	2.358
86.0	1.910
86.5	1.487
87.0	1.114
87.5	0.804
88.0	0.561
88.5	0.356
89.0	0.222
89.5	0.151
90.0	0.105
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
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

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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
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

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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



**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4DR-TL-L10-940-DIM-UNV-LW-OF-CS\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	146.05	N.A.	25.80
0-30	280.14	N.A.	49.50
0-40	371.48	N.A.	65.60
0-60	509.55	N.A.	90.00
0-80	562.47	N.A.	99.40
0-90	566.01	N.A.	100.00
10-90	528.35	N.A.	93.30
20-40	225.43	N.A.	39.80
20-50	303.28	N.A.	53.60
40-70	174.38	N.A.	30.80
60-80	52.93	N.A.	9.40
70-80	16.61	N.A.	2.90
80-90	3.54	N.A.	0.60
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	566.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	37.66
10-20	108.39
20-30	134.09
30-40	91.34
40-50	77.85
50-60	60.22
60-70	36.32
70-80	16.61
80-90	3.54
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	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89
2	103	97	91	87	101	95	90	86	92	88	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

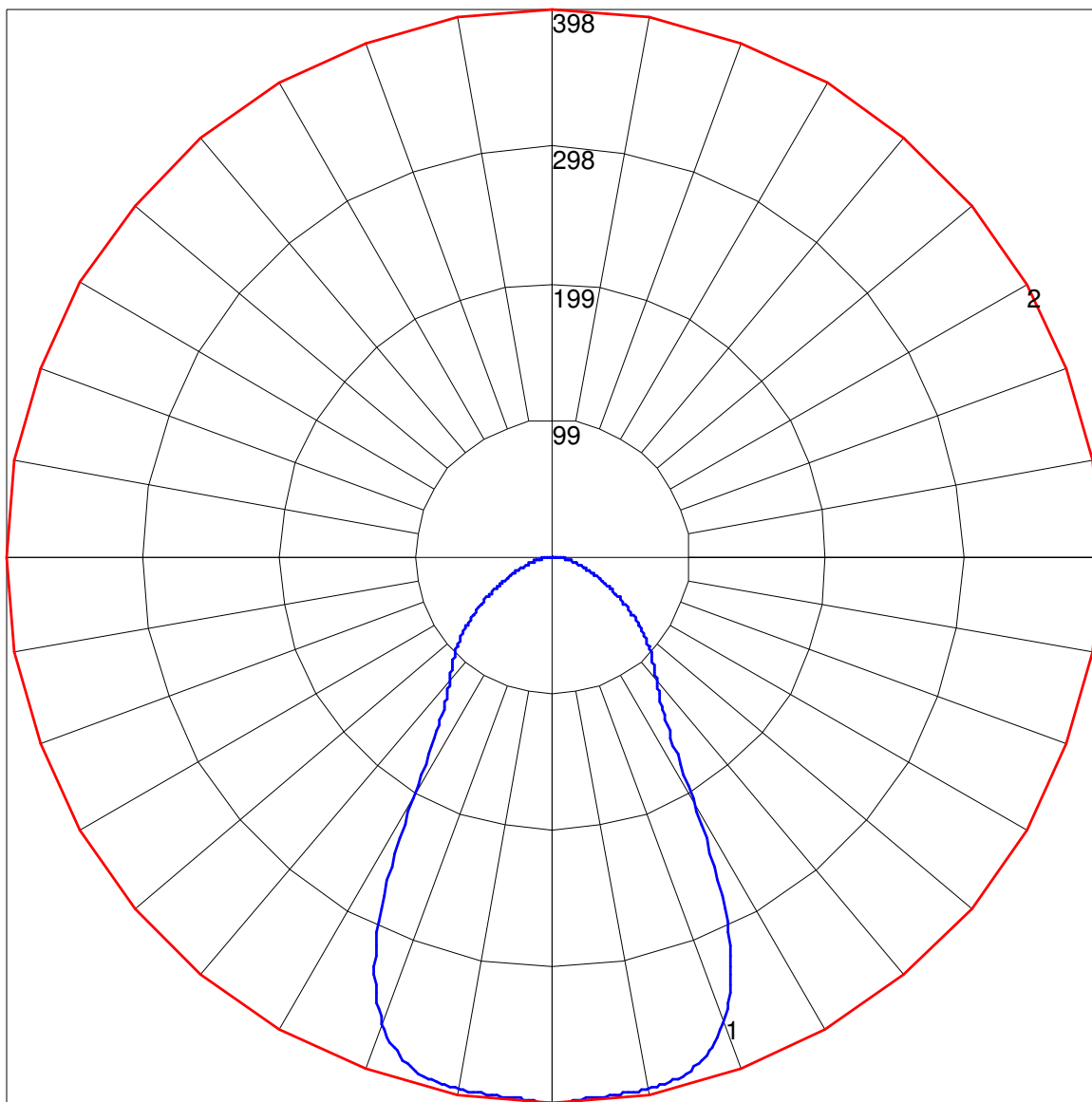
X=2H	Y=2H	18.6	20.0	19.0	20.3	20.6	18.6	20.0	19.0	20.3	20.6
	3H	19.7	20.9	20.1	21.3	21.6	19.7	20.9	20.1	21.3	21.6
	4H	20.1	21.2	20.5	21.6	21.9	20.1	21.2	20.5	21.6	21.9
	6H	20.3	21.3	20.7	21.7	22.1	20.3	21.3	20.7	21.7	22.1
	8H	20.3	21.3	20.8	21.7	22.1	20.3	21.3	20.8	21.7	22.1
	12H	20.3	21.3	20.8	21.7	22.1	20.3	21.3	20.8	21.7	22.1

### UGR Viewed Endwise

4H	2H	19.0	20.1	19.4	20.5	20.8	19.0	20.1	19.4	20.5	20.8
	3H	20.3	21.2	20.7	21.6	22.0	20.3	21.2	20.7	21.6	22.0
	4H	20.7	21.6	21.1	22.0	22.4	20.7	21.6	21.1	22.0	22.4
	6H	21.0	21.8	21.5	22.2	22.7	21.0	21.8	21.5	22.2	22.7
	8H	21.1	21.8	21.6	22.2	22.7	21.1	21.8	21.6	22.2	22.7
	12H	21.1	21.7	21.6	22.2	22.7	21.1	21.7	21.6	22.2	22.7
8H	4H	20.8	21.5	21.3	22.0	22.4	20.8	21.5	21.3	22.0	22.4
	6H	21.2	21.8	21.7	22.3	22.8	21.2	21.8	21.7	22.3	22.8
	8H	21.3	21.8	21.9	22.4	22.8	21.3	21.8	21.9	22.4	22.8
	12H	21.4	21.9	21.9	22.3	22.9	21.4	21.9	21.9	22.3	22.9
12H	4H	20.8	21.4	21.3	21.9	22.4	20.8	21.4	21.3	21.9	22.4
	6H	21.2	21.7	21.8	22.2	22.7	21.2	21.7	21.8	22.2	22.7
	8H	21.4	21.8	21.9	22.3	22.9	21.4	21.8	21.9	22.3	22.9

Maximum UGR = 22.9

POLAR GRAPH



Maximum Candela = 397.61 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.)