



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L10-830-(L5)-DIM1-UNV-LW-OF-CS-AD_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.07

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 10-02-2024

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 4DR-TL-L10-830-(L5)-DIM1-UNV-LW-OF-CS-AD

[LUMINAIRE] Black formed aluminum housing, clear semi 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	525
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
Total Luminaire Watts	7
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	14484	14484	14484
55	11902	11902	11902
65	8707	8707	8707
75	6028	6028	6028
85	3286	3286	3286

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DR-TL-L10-830-(L5)-DIM1-UNV-LW-OF-CS-AD_.IES****CANDELA TABULATION**

	<u>0</u>
0.0	368.704
0.5	368.587
1.0	368.354
1.5	368.044
2.0	367.733
2.5	367.383
3.0	366.918
3.5	366.646
4.0	366.452
4.5	366.335
5.0	366.180
5.5	366.024
6.0	365.908
6.5	365.753
7.0	365.636
7.5	365.558
8.0	365.520
8.5	365.403
9.0	365.287
9.5	365.054
10.0	364.898
10.5	364.626
11.0	364.355
11.5	364.005
12.0	363.617
12.5	363.151
13.0	362.607
13.5	361.986
14.0	361.209
14.5	360.277
15.0	359.151
15.5	357.792
16.0	356.278
16.5	354.491
17.0	352.550
17.5	350.375
18.0	347.812
18.5	345.172
19.0	342.298
19.5	339.075
20.0	335.542
20.5	331.697
21.0	327.543
21.5	323.077
22.0	318.145
22.5	312.903
23.0	307.273
23.5	301.215
24.0	294.691
24.5	287.740
25.0	280.207
25.5	272.324
26.0	263.898
26.5	254.967

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DR-TL-L10-830-(L5)-DIM1-UNV-LW-OF-CS-AD_.IES****CANDELA TABULATION - (Cont.)**

27.0	245.725
27.5	236.095
28.0	226.309
28.5	216.485
29.0	206.855
29.5	197.419
30.0	188.332
30.5	179.789
31.0	171.790
31.5	164.490
32.0	157.849
32.5	151.869
33.0	146.550
33.5	141.812
34.0	137.580
34.5	133.852
35.0	130.473
35.5	127.406
36.0	124.687
36.5	122.125
37.0	119.795
37.5	117.620
38.0	115.601
38.5	113.659
39.0	111.873
39.5	110.126
40.0	108.495
40.5	106.864
41.0	105.311
41.5	103.796
42.0	102.359
42.5	100.923
43.0	99.486
43.5	98.049
44.0	96.612
44.5	95.176
45.0	93.739
45.5	92.302
46.0	90.865
46.5	89.429
47.0	87.914
47.5	86.400
48.0	84.885
48.5	83.332
49.0	81.740
49.5	80.148
50.0	78.595
50.5	77.003
51.0	75.410
51.5	73.818
52.0	72.265
52.5	70.712
53.0	69.120
53.5	67.489
54.0	65.819
54.5	64.149

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DR-TL-L10-830-(L5)-DIM1-UNV-LW-OF-CS-AD_.IES****CANDELA TABULATION - (Cont.)**

55.0	62.480
55.5	60.810
56.0	59.179
56.5	57.587
57.0	55.995
57.5	54.403
58.0	52.849
58.5	51.335
59.0	49.821
59.5	48.345
60.0	46.908
60.5	45.472
61.0	44.074
61.5	42.714
62.0	41.355
62.5	39.996
63.0	38.699
63.5	37.410
64.0	36.144
64.5	34.898
65.0	33.678
65.5	32.490
66.0	31.317
66.5	30.176
67.0	29.061
67.5	27.966
68.0	26.906
68.5	25.869
69.0	24.833
69.5	23.831
70.0	22.856
70.5	21.897
71.0	20.961
71.5	20.049
72.0	19.167
72.5	18.297
73.0	17.451
73.5	16.628
74.0	15.820
74.5	15.039
75.0	14.278
75.5	13.540
76.0	12.818
76.5	12.115
77.0	11.444
77.5	10.776
78.0	10.131
78.5	9.506
79.0	8.892
79.5	8.302
80.0	7.724
80.5	7.161
81.0	6.605
81.5	6.065
82.0	5.537
82.5	5.025

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83.0	4.516
83.5	4.023
84.0	3.541
84.5	3.072
85.0	2.621
85.5	2.186
86.0	1.771
86.5	1.379
87.0	1.033
87.5	0.746
88.0	0.520
88.5	0.330
89.0	0.206
89.5	0.140
90.0	0.097
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DR-TL-L10-830-(L5)-DIM1-UNV-LW-OF-CS-AD_.IES****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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DR-TL-L10-830-(L5)-DIM1-UNV-LW-OF-CS-AD_.IES****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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DR-TL-L10-830-(L5)-DIM1-UNV-LW-OF-CS-AD_.IES****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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Zone	Lumens	%Lamp	%Fixt
0-20	135.43	N.A.	25.80
0-30	259.77	N.A.	49.50
0-40	344.47	N.A.	65.60
0-60	472.50	N.A.	90.00
0-80	521.58	N.A.	99.40
0-90	524.86	N.A.	100.00
10-90	489.94	N.A.	93.30
20-40	209.04	N.A.	39.80
20-50	281.23	N.A.	53.60
40-70	161.71	N.A.	30.80
60-80	49.08	N.A.	9.40
70-80	15.40	N.A.	2.90
80-90	3.28	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	524.87	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	34.92
10-20	100.51
20-30	124.34
30-40	84.70
40-50	72.19
50-60	55.84
60-70	33.67
70-80	15.40
80-90	3.28
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	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

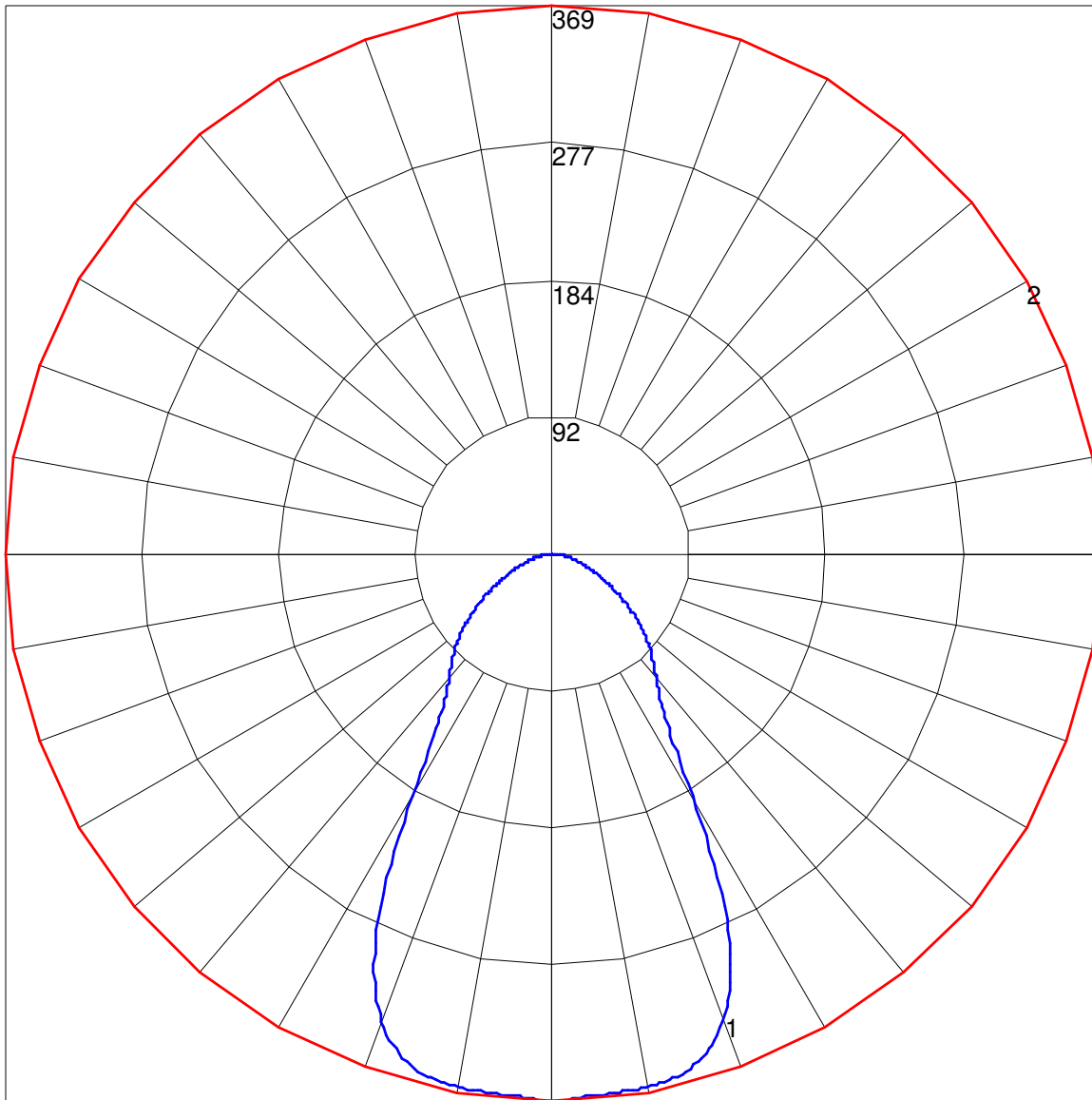
X=2H	Y=2H	18.4	19.8	18.8	20.1	20.4	18.4	19.8	18.8	20.1	20.4
	3H	19.5	20.7	19.9	21.1	21.4	19.5	20.7	19.9	21.1	21.4
	4H	19.9	21.0	20.3	21.4	21.7	19.9	21.0	20.3	21.4	21.7
	6H	20.1	21.1	20.5	21.5	21.9	20.1	21.1	20.5	21.5	21.9
	8H	20.1	21.1	20.6	21.5	21.9	20.1	21.1	20.6	21.5	21.9
	12H	20.1	21.1	20.6	21.5	21.9	20.1	21.1	20.6	21.5	21.9

UGR Viewed Endwise

4H	2H	18.8	19.9	19.2	20.3	20.6	18.8	19.9	19.2	20.3	20.6
	3H	20.1	21.0	20.5	21.4	21.8	20.1	21.0	20.5	21.4	21.8
	4H	20.5	21.4	20.9	21.8	22.2	20.5	21.4	20.9	21.8	22.2
	6H	20.8	21.6	21.3	22.0	22.5	20.8	21.6	21.3	22.0	22.5
	8H	20.9	21.6	21.4	22.0	22.5	20.9	21.6	21.4	22.0	22.5
	12H	20.9	21.5	21.4	22.0	22.5	20.9	21.5	21.4	22.0	22.5
8H	4H	20.6	21.3	21.1	21.8	22.2	20.6	21.3	21.1	21.8	22.2
	6H	21.0	21.6	21.5	22.1	22.6	21.0	21.6	21.5	22.1	22.6
	8H	21.1	21.6	21.7	22.2	22.6	21.1	21.6	21.7	22.2	22.6
	12H	21.2	21.7	21.7	22.1	22.7	21.2	21.7	21.7	22.1	22.7
12H	4H	20.6	21.2	21.1	21.7	22.2	20.6	21.2	21.1	21.7	22.2
	6H	21.0	21.5	21.6	22.0	22.5	21.0	21.5	21.6	22.0	22.5
	8H	21.2	21.6	21.7	22.1	22.7	21.2	21.6	21.7	22.1	22.7

Maximum UGR = 22.7

POLAR GRAPH



Maximum Candela = 368.704 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.)