



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 15248898.01

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 2024-04-30

[TESTDATE] 4/15/2024

[MANUFAC] H.E. WILLIAMS, INC.

[MORE] CARTHAGE, MO. 64836

[LUMCAT] 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K

[LUMINAIRE] 6 INCH ROUND, RECESSED LED DOWNLIGHT

[MORE] W/SEMI-SPECULAR TRIM. WATTAGE & COLOR SELECTABLE

[LAMP] LED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1033
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	9.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.08
Spacing Criterion (Diagonal)	1.02
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.50 ft (Diameter)
Luminous Width (90-270)	0.50 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	11741	11741	11741
55	1650	1650	1650
65	182	182	182
75	74	74	74
85	31	31	31

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K_.IES

CANDELA TABULATION

	<u>0</u>
0.0	854.134
0.5	854.134
1.0	854.637
1.5	855.139
2.0	855.642
2.5	856.144
3.0	856.646
3.5	857.149
4.0	858.154
4.5	858.656
5.0	859.661
5.5	860.163
6.0	861.168
6.5	862.173
7.0	863.178
7.5	864.183
8.0	864.685
8.5	865.690
9.0	866.193
9.5	866.193
10.0	865.690
10.5	865.188
11.0	864.183
11.5	863.178
12.0	861.168
12.5	859.159
13.0	857.149
13.5	854.637
14.0	851.622
14.5	848.608
15.0	845.091
15.5	841.573
16.0	837.554
16.5	833.032
17.0	828.008
17.5	822.983
18.0	817.959
18.5	811.930
19.0	805.901
19.5	799.369
20.0	792.335
20.5	785.301
21.0	777.765
21.5	770.228
22.0	762.189
22.5	753.648
23.0	744.102
23.5	735.058
24.0	724.507
24.5	713.453
25.0	701.897
25.5	689.839
26.0	677.781
26.5	664.717

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K_.IES

CANDELA TABULATION - (Cont.)

27.0	651.152
27.5	637.084
28.0	622.513
28.5	607.943
29.0	592.870
29.5	577.294
30.0	561.719
30.5	545.641
31.0	529.563
31.5	513.485
32.0	497.156
32.5	480.978
33.0	464.800
33.5	448.621
34.0	432.745
34.5	417.019
35.0	401.544
35.5	387.978
36.0	375.116
36.5	360.093
37.0	345.020
37.5	330.249
38.0	315.879
38.5	301.811
39.0	287.944
39.5	274.378
40.0	261.064
40.5	248.252
41.0	235.942
41.5	223.833
42.0	212.127
42.5	200.923
43.0	190.070
43.5	179.720
44.0	169.872
44.5	160.527
45.0	151.584
45.5	142.942
46.0	134.702
46.5	126.814
47.0	119.227
47.5	111.841
48.0	104.657
48.5	97.572
49.0	90.639
49.5	83.856
50.0	77.174
50.5	70.491
51.0	63.859
51.5	57.026
52.0	50.394
52.5	43.913
53.0	37.481
53.5	31.603
54.0	26.177
54.5	21.404

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K_.IES

CANDELA TABULATION - (Cont.)

55.0	17.284
55.5	13.917
56.0	11.204
56.5	9.144
57.0	7.536
57.5	6.280
58.0	5.376
58.5	4.622
59.0	4.070
59.5	3.618
60.0	3.216
60.5	2.914
61.0	2.613
61.5	2.412
62.0	2.211
62.5	2.010
63.0	1.859
63.5	1.759
64.0	1.608
64.5	1.507
65.0	1.407
65.5	1.306
66.0	1.206
66.5	1.156
67.0	1.055
67.5	1.005
68.0	0.904
68.5	0.854
69.0	0.804
69.5	0.754
70.0	0.703
70.5	0.653
71.0	0.603
71.5	0.553
72.0	0.502
72.5	0.502
73.0	0.452
73.5	0.402
74.0	0.402
74.5	0.352
75.0	0.352
75.5	0.301
76.0	0.301
76.5	0.251
77.0	0.251
77.5	0.201
78.0	0.201
78.5	0.201
79.0	0.151
79.5	0.151
80.0	0.151
80.5	0.151
81.0	0.100
81.5	0.100
82.0	0.100
82.5	0.100

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K_.IES

CANDELA TABULATION - (Cont.)

83.0	0.100
83.5	0.100
84.0	0.050
84.5	0.050
85.0	0.050
85.5	0.050
86.0	0.050
86.5	0.050
87.0	0.050
87.5	0.050
88.0	0.050
88.5	0.000
89.0	0.000
89.5	0.000
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
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 : 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K_.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 : 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K_.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 : 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K_.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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	319.27	N.A.	30.90
0-30	636.85	N.A.	61.70
0-40	888.02	N.A.	86.00
0-60	1031.01	N.A.	99.80
0-80	1032.92	N.A.	100.00
0-90	1032.99	N.A.	100.00
10-90	950.68	N.A.	92.00
20-40	568.75	N.A.	55.10
20-50	688.85	N.A.	66.70
40-70	144.53	N.A.	14.00
60-80	1.92	N.A.	0.20
70-80	0.38	N.A.	0.00
80-90	0.07	N.A.	0.00
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	1032.99	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	82.31
10-20	236.96
20-30	317.58
30-40	251.17
40-50	120.10
50-60	22.89
60-70	1.54
70-80	0.38
80-90	0.07
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

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K_.IES

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	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	85	83	80	78
4	95	87	81	77	94	86	81	76	84	79	75	82	78	75	80	77	74	72
5	90	81	75	70	88	80	74	70	78	73	69	77	72	69	75	71	68	66
6	85	75	69	64	84	75	69	64	73	68	64	72	67	63	70	66	63	61
7	80	70	64	59	79	70	64	59	68	63	59	67	62	59	66	62	58	57
8	76	66	59	55	75	65	59	55	64	59	55	63	58	54	62	57	54	53
9	72	62	55	51	71	61	55	51	60	55	51	59	54	51	58	54	50	49
10	68	58	52	48	67	57	52	48	57	51	47	56	51	47	55	50	47	46

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6FDR-LS-8CS-CS-DIM-UNV_10W_4000K_.IES

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

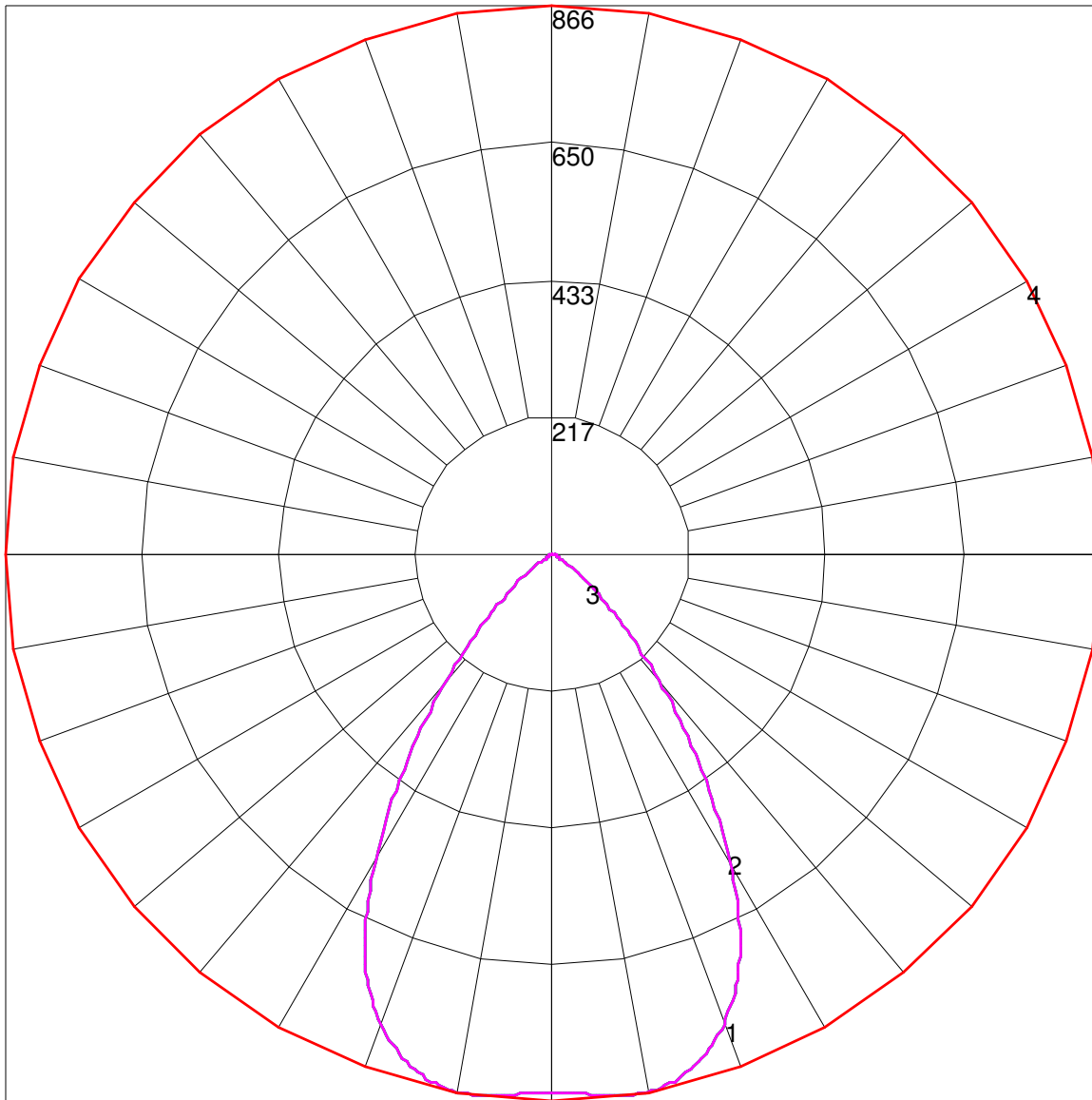
X=2H	Y=2H	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.3
	3H	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2
	4H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	6H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	8H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	12H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

UGR Viewed Endwise

4H	2H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	3H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	4H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	6H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	8H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	12H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
8H	4H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	6H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	8H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	12H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
12H	4H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	6H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	8H	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Maximum UGR = 0.3

POLAR GRAPH



Maximum Candela = 866.193 Located At Horizontal Angle = 0, Vertical Angle = 9
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (5 - 185)
3 - Vertical Plane Through Horizontal Angles (10 - 190)
4 - Horizontal Cone Through Vertical Angle (9) (Through Max. Cd.)