



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6FDR-LS-8CS-CS-DIM-UNV\_10W\_3000K\_.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\_3000K

[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	1020
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	9.4
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	11593	11593	11593
55	1630	1630	1630
65	180	180	180
75	73	73	73
85	31	31	31

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CANDELA TABULATION

	<u>0</u>
0.0	843.385
0.5	843.385
1.0	843.881
1.5	844.377
2.0	844.873
2.5	845.370
3.0	845.866
3.5	846.362
4.0	847.354
4.5	847.850
5.0	848.842
5.5	849.338
6.0	850.331
6.5	851.323
7.0	852.315
7.5	853.307
8.0	853.803
8.5	854.796
9.0	855.292
9.5	855.292
10.0	854.796
10.5	854.300
11.0	853.307
11.5	852.315
12.0	850.331
12.5	848.346
13.0	846.362
13.5	843.881
14.0	840.905
14.5	837.928
15.0	834.455
15.5	830.982
16.0	827.014
16.5	822.549
17.0	817.587
17.5	812.626
18.0	807.665
18.5	801.712
19.0	795.759
19.5	789.309
20.0	782.364
20.5	775.418
21.0	767.977
21.5	760.535
22.0	752.597
22.5	744.163
23.0	734.737
23.5	725.807
24.0	715.389
24.5	704.475
25.0	693.064
25.5	681.158
26.0	669.251
26.5	656.352

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CANDELA TABULATION - (Cont.)

27.0	642.957
27.5	629.066
28.0	614.679
28.5	600.292
29.0	585.408
29.5	570.029
30.0	554.650
30.5	538.774
31.0	522.899
31.5	507.023
32.0	490.900
32.5	474.925
33.0	458.950
33.5	442.976
34.0	427.299
34.5	411.770
35.0	396.490
35.5	383.095
36.0	370.395
36.5	355.561
37.0	340.678
37.5	326.092
38.0	311.904
38.5	298.013
39.0	284.320
39.5	270.925
40.0	257.778
40.5	245.127
41.0	232.973
41.5	221.017
42.0	209.457
42.5	198.394
43.0	187.678
43.5	177.458
44.0	167.734
44.5	158.507
45.0	149.676
45.5	141.143
46.0	133.007
46.5	125.218
47.0	117.727
47.5	110.434
48.0	103.339
48.5	96.344
49.0	89.498
49.5	82.801
50.0	76.202
50.5	69.604
51.0	63.055
51.5	56.308
52.0	49.760
52.5	43.360
53.0	37.010
53.5	31.205
54.0	25.847
54.5	21.134

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CANDELA TABULATION - (Cont.)

55.0	17.066
55.5	13.742
56.0	11.063
56.5	9.029
57.0	7.442
57.5	6.201
58.0	5.308
58.5	4.564
59.0	4.018
59.5	3.572
60.0	3.175
60.5	2.877
61.0	2.580
61.5	2.381
62.0	2.183
62.5	1.984
63.0	1.836
63.5	1.736
64.0	1.588
64.5	1.488
65.0	1.389
65.5	1.290
66.0	1.191
66.5	1.141
67.0	1.042
67.5	0.992
68.0	0.893
68.5	0.843
69.0	0.794
69.5	0.744
70.0	0.695
70.5	0.645
71.0	0.595
71.5	0.546
72.0	0.496
72.5	0.496
73.0	0.446
73.5	0.397
74.0	0.397
74.5	0.347
75.0	0.347
75.5	0.298
76.0	0.298
76.5	0.248
77.0	0.248
77.5	0.198
78.0	0.198
78.5	0.198
79.0	0.149
79.5	0.149
80.0	0.149
80.5	0.149
81.0	0.099
81.5	0.099
82.0	0.099
82.5	0.099

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CANDELA TABULATION - (Cont.)

83.0	0.099
83.5	0.099
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\_3000K\_.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
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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
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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
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132.5	0.000
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133.5	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

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 6FDR-LS-8CS-CS-DIM-UNV\_10W\_3000K\_.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

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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 : 6FDR-LS-8CS-CS-DIM-UNV\_10W\_3000K\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	315.25	N.A.	30.90
0-30	628.84	N.A.	61.70
0-40	876.84	N.A.	86.00
0-60	1018.03	N.A.	99.80
0-80	1019.92	N.A.	100.00
0-90	1019.99	N.A.	100.00
10-90	938.71	N.A.	92.00
20-40	561.59	N.A.	55.10
20-50	680.18	N.A.	66.70
40-70	142.71	N.A.	14.00
60-80	1.89	N.A.	0.20
70-80	0.37	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	1019.99	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	81.28
10-20	233.97
20-30	313.58
30-40	248.01
40-50	118.59
50-60	22.60
60-70	1.52
70-80	0.37
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

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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	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

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## UGR TABLE - CORRECTED

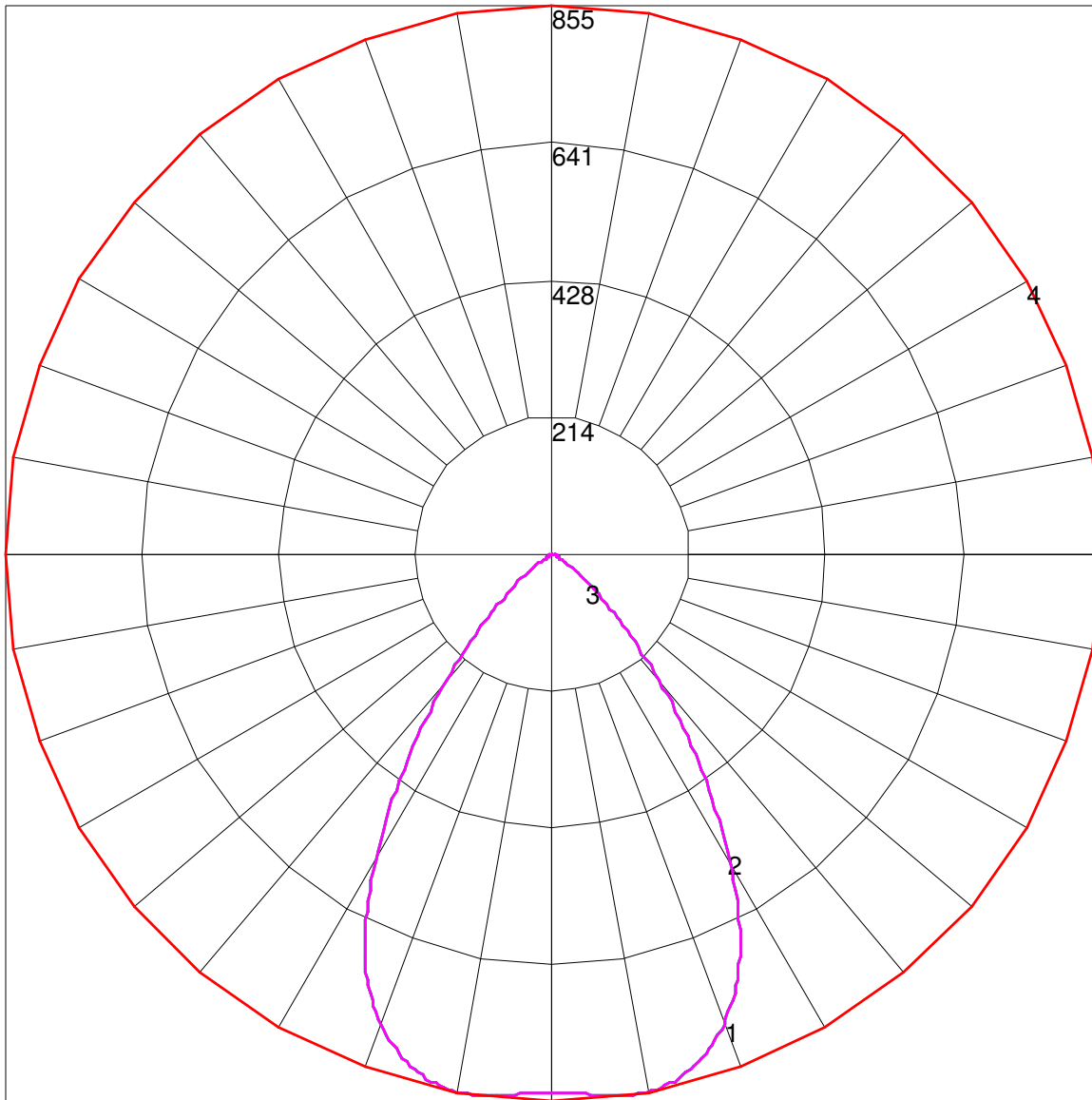
### Reflectances

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	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
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 = 855.292 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.)