



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6RCD-LS-9CS-WH-DIM-UNV\_22W\_2700K.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 14879730.01  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 2023-07-21  
 [TESTDATE] 7/10/2023  
 [MANUFAC] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 6RCD-LS-9CS-WH-DIM-UNV\_22W\_2700K  
 [LUMINAIRE] 6 INCH DIAMETER LED DOWNLIGHT  
 [MORE] WHITE TRIM WITH FLAT DIFFUSED LENS  
 [LAMP] White LEDs  
 [BALLAST] 0-10V DIMMING DRIVER

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1949
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	91
Total Luminaire Watts	21.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.30
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	37594	37594	37594
55	31380	31380	31380
65	22946	22946	22946
75	10933	10933	10933
85	6770	6770	6770

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CANDELA TABULATION

	<u>0</u>
0.0	853.202
0.5	853.374
1.0	853.202
1.5	853.288
2.0	852.859
2.5	852.602
3.0	852.087
3.5	851.315
4.0	850.457
4.5	849.514
5.0	848.227
5.5	846.854
6.0	845.310
6.5	843.938
7.0	842.565
7.5	841.278
8.0	839.992
8.5	838.791
9.0	837.332
9.5	836.046
10.0	834.416
10.5	832.700
11.0	830.727
11.5	828.497
12.0	826.266
12.5	823.693
13.0	821.119
13.5	818.460
14.0	815.886
14.5	812.970
15.0	810.310
15.5	807.136
16.0	804.306
16.5	801.046
17.0	798.129
17.5	794.869
18.0	791.610
18.5	788.093
19.0	784.747
19.5	781.058
20.0	777.370
20.5	773.681
21.0	769.735
21.5	765.789
22.0	761.414
22.5	757.039
23.0	752.235
23.5	747.260
24.0	742.198
24.5	737.309
25.0	732.162
25.5	727.358
26.0	722.554
26.5	717.836

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**CANDELA TABULATION - (Cont.)**

27.0	713.289
27.5	708.571
28.0	704.025
28.5	699.307
29.0	694.503
29.5	689.356
30.0	684.123
30.5	678.547
31.0	672.885
31.5	666.709
32.0	660.361
32.5	653.841
33.0	647.065
33.5	640.202
34.0	633.253
34.5	626.219
35.0	619.099
35.5	612.236
36.0	605.374
36.5	598.940
37.0	595.251
37.5	589.761
38.0	583.413
38.5	577.151
39.0	570.374
39.5	563.769
40.0	557.078
40.5	550.387
41.0	543.524
41.5	536.661
42.0	529.541
42.5	522.335
43.0	514.872
43.5	507.495
44.0	500.032
44.5	492.740
45.0	485.363
45.5	478.071
46.0	470.694
46.5	463.402
47.0	455.767
47.5	448.304
48.0	440.670
48.5	433.121
49.0	425.314
49.5	417.508
50.0	409.616
50.5	401.724
51.0	393.660
51.5	385.682
52.0	377.533
52.5	369.298
53.0	361.063
53.5	352.827
54.0	344.678
54.5	336.614

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 6RCD-LS-9CS-WH-DIM-UNV\_22W\_2700K.IES****CANDELA TABULATION - (Cont.)**

55.0	328.636
55.5	320.744
56.0	312.852
56.5	305.046
57.0	297.411
57.5	289.605
58.0	281.884
58.5	274.164
59.0	266.529
59.5	258.723
60.0	251.002
60.5	243.282
61.0	235.647
61.5	227.927
62.0	220.292
62.5	212.743
63.0	205.280
63.5	197.988
64.0	190.868
64.5	184.006
65.0	177.057
65.5	170.194
66.0	163.246
66.5	156.212
67.0	149.092
67.5	141.886
68.0	134.594
68.5	127.303
69.0	120.011
69.5	112.805
70.0	105.771
70.5	98.908
71.0	92.389
71.5	86.212
72.0	80.285
72.5	74.709
73.0	69.450
73.5	64.518
74.0	59.945
74.5	55.673
75.0	51.667
75.5	47.919
76.0	44.419
76.5	41.176
77.0	38.156
77.5	35.377
78.0	32.786
78.5	30.410
79.0	28.240
79.5	26.293
80.0	24.577
80.5	23.024
81.0	21.660
81.5	20.399
82.0	19.044
82.5	17.603

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 6RCD-LS-9CS-WH-DIM-UNV\_22W\_2700K.IES****CANDELA TABULATION - (Cont.)**

83.0	16.247
83.5	14.909
84.0	13.511
84.5	12.121
85.0	10.774
85.5	9.368
86.0	7.969
86.5	6.665
87.0	5.353
87.5	4.066
88.0	2.994
88.5	2.110
89.0	1.244
89.5	0.558
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

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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

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 6RCD-LS-9CS-WH-DIM-UNV\_22W\_2700K.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
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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 : 6RCD-LS-9CS-WH-DIM-UNV\_22W\_2700K.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 : 6RCD-LS-9CS-WH-DIM-UNV\_22W\_2700K.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	308.90	N.A.	15.80
0-30	646.50	N.A.	33.20
0-40	1034.78	N.A.	53.10
0-60	1702.82	N.A.	87.40
0-80	1937.08	N.A.	99.40
0-90	1949.15	N.A.	100.00
10-90	1868.66	N.A.	95.90
20-40	725.88	N.A.	37.20
20-50	1099.8	N.A.	56.40
40-70	843.20	N.A.	43.30
60-80	234.27	N.A.	12.00
70-80	59.11	N.A.	3.00
80-90	12.07	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	1949.15	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	80.49
10-20	228.41
20-30	337.60
30-40	388.28
40-50	373.91
50-60	294.12
60-70	175.16
70-80	59.11
80-90	12.07
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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	41	67	55	47	41	53	46	41	52	45	41	51	45	40	39
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	47	41	36	35
9	60	47	39	34	58	46	39	34	45	38	33	44	38	33	43	37	33	31
10	56	43	36	31	55	43	35	31	42	35	30	41	35	30	40	34	30	29

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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	22.8	24.3	23.2	24.6	25.0	22.8	24.3	23.2	24.6	25.0
	3H	23.8	25.2	24.2	25.5	25.9	23.8	25.2	24.2	25.5	25.9
	4H	24.0	25.2	24.4	25.6	26.0	24.0	25.2	24.4	25.6	26.0
	6H	24.0	25.2	24.4	25.6	26.0	24.0	25.2	24.4	25.6	26.0
	8H	24.0	25.1	24.5	25.5	25.9	24.0	25.1	24.5	25.5	25.9
	12H	24.0	25.1	24.5	25.5	25.9	24.0	25.1	24.5	25.5	25.9

### UGR Viewed Endwise

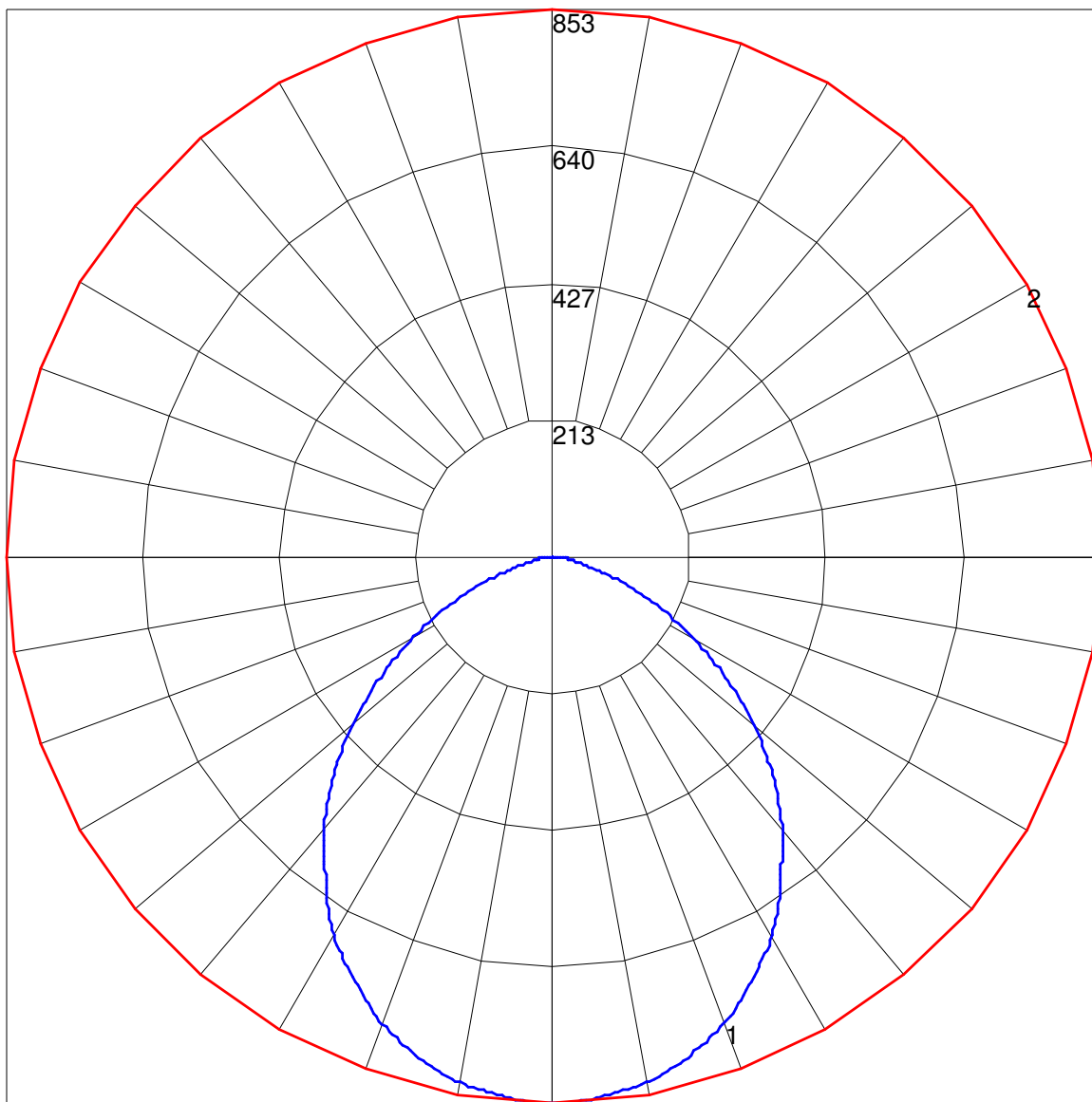
4H	2H	23.2	24.5	23.6	24.8	25.2	23.2	24.5	23.6	24.8	25.2
	3H	24.3	25.4	24.7	25.8	26.2	24.3	25.4	24.7	25.8	26.2
	4H	24.5	25.5	25.0	25.9	26.3	24.5	25.5	25.0	25.9	26.3
	6H	24.6	25.5	25.1	25.9	26.4	24.6	25.5	25.1	25.9	26.4
	8H	24.6	25.4	25.1	25.9	26.3	24.6	25.4	25.1	25.9	26.3
	12H	24.7	25.3	25.1	25.8	26.3	24.7	25.3	25.1	25.8	26.3

8H	4H	24.6	25.3	25.0	25.8	26.2	24.6	25.3	25.0	25.8	26.2
	6H	24.7	25.3	25.2	25.8	26.3	24.7	25.3	25.2	25.8	26.3
	8H	24.7	25.3	25.2	25.8	26.3	24.7	25.3	25.2	25.8	26.3
	12H	24.8	25.3	25.3	25.8	26.3	24.8	25.3	25.3	25.8	26.3

12H	4H	24.5	25.2	25.0	25.7	26.2	24.5	25.2	25.0	25.7	26.2
	6H	24.7	25.3	25.2	25.7	26.3	24.7	25.3	25.2	25.7	26.3
	8H	24.8	25.2	25.3	25.7	26.3	24.8	25.2	25.3	25.7	26.3

Maximum UGR = 26.4

POLAR GRAPH



Maximum Candela = 853.374 Located At Horizontal Angle = 0, Vertical Angle = .5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)