



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6RCD-LS-9CS-WH-DIM-UNV\_22W\_4000K.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\_4000K  
 [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	2234
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
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	43091	43091	43091
55	35969	35969	35969
65	26301	26301	26301
75	12532	12532	12532
85	7761	7761	7761

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CANDELA TABULATION

	<u>0</u>
0.0	977.965
0.5	978.162
1.0	977.965
1.5	978.063
2.0	977.572
2.5	977.277
3.0	976.687
3.5	975.802
4.0	974.818
4.5	973.737
5.0	972.262
5.5	970.689
6.0	968.919
6.5	967.346
7.0	965.772
7.5	964.297
8.0	962.822
8.5	961.446
9.0	959.774
9.5	958.299
10.0	956.431
10.5	954.465
11.0	952.203
11.5	949.647
12.0	947.090
12.5	944.140
13.0	941.190
13.5	938.142
14.0	935.192
14.5	931.849
15.0	928.801
15.5	925.163
16.0	921.918
16.5	918.182
17.0	914.839
17.5	911.102
18.0	907.366
18.5	903.334
19.0	899.500
19.5	895.272
20.0	891.043
20.5	886.815
21.0	882.292
21.5	877.769
22.0	872.755
22.5	867.740
23.0	862.233
23.5	856.530
24.0	850.729
24.5	845.125
25.0	839.225
25.5	833.719
26.0	828.212
26.5	822.804

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 6RCD-LS-9CS-WH-DIM-UNV\_22W\_4000K.IES****CANDELA TABULATION - (Cont.)**

27.0	817.593
27.5	812.185
28.0	806.973
28.5	801.565
29.0	796.059
29.5	790.159
30.0	784.161
30.5	777.770
31.0	771.281
31.5	764.201
32.0	756.925
32.5	749.452
33.0	741.684
33.5	733.818
34.0	725.853
34.5	717.790
35.0	709.629
35.5	701.763
36.0	693.897
36.5	686.522
37.0	682.294
37.5	676.001
38.0	668.725
38.5	661.547
39.0	653.779
39.5	646.208
40.0	638.539
40.5	630.869
41.0	623.003
41.5	615.137
42.0	606.975
42.5	598.716
43.0	590.161
43.5	581.705
44.0	573.151
44.5	564.793
45.0	556.337
45.5	547.979
46.0	539.523
46.5	531.165
47.0	522.414
47.5	513.859
48.0	505.108
48.5	496.455
49.0	487.508
49.5	478.560
50.0	469.514
50.5	460.467
51.0	451.225
51.5	442.080
52.0	432.739
52.5	423.300
53.0	413.860
53.5	404.421
54.0	395.080
54.5	385.837

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55.0	376.692
55.5	367.646
56.0	358.600
56.5	349.652
57.0	340.901
57.5	331.953
58.0	323.104
58.5	314.255
59.0	305.503
59.5	296.556
60.0	287.706
60.5	278.857
61.0	270.106
61.5	261.256
62.0	252.505
62.5	243.852
63.0	235.298
63.5	226.940
64.0	218.779
64.5	210.912
65.0	202.948
65.5	195.082
66.0	187.117
66.5	179.054
67.0	170.893
67.5	162.634
68.0	154.276
68.5	145.918
69.0	137.560
69.5	129.301
70.0	121.238
70.5	113.372
71.0	105.899
71.5	98.819
72.0	92.025
72.5	85.633
73.0	79.606
73.5	73.952
74.0	68.711
74.5	63.815
75.0	59.223
75.5	54.926
76.0	50.914
76.5	47.197
77.0	43.736
77.5	40.550
78.0	37.581
78.5	34.857
79.0	32.369
79.5	30.137
80.0	28.171
80.5	26.391
81.0	24.828
81.5	23.382
82.0	21.829
82.5	20.177

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CANDELA TABULATION - (Cont.)

83.0	18.623
83.5	17.089
84.0	15.487
84.5	13.894
85.0	12.350
85.5	10.737
86.0	9.135
86.5	7.640
87.0	6.136
87.5	4.661
88.0	3.432
88.5	2.419
89.0	1.426
89.5	0.639
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
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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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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



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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	354.07	N.A.	15.80
0-30	741.04	N.A.	33.20
0-40	1186.1	N.A.	53.10
0-60	1951.82	N.A.	87.40
0-80	2220.34	N.A.	99.40
0-90	2234.18	N.A.	100.00
10-90	2141.91	N.A.	95.90
20-40	832.03	N.A.	37.20
20-50	1260.62	N.A.	56.40
40-70	966.49	N.A.	43.30
60-80	268.53	N.A.	12.00
70-80	67.75	N.A.	3.00
80-90	13.83	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	2234.18	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	92.26
10-20	261.81
20-30	386.97
30-40	445.06
40-50	428.59
50-60	337.13
60-70	200.78
70-80	67.75
80-90	13.83
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

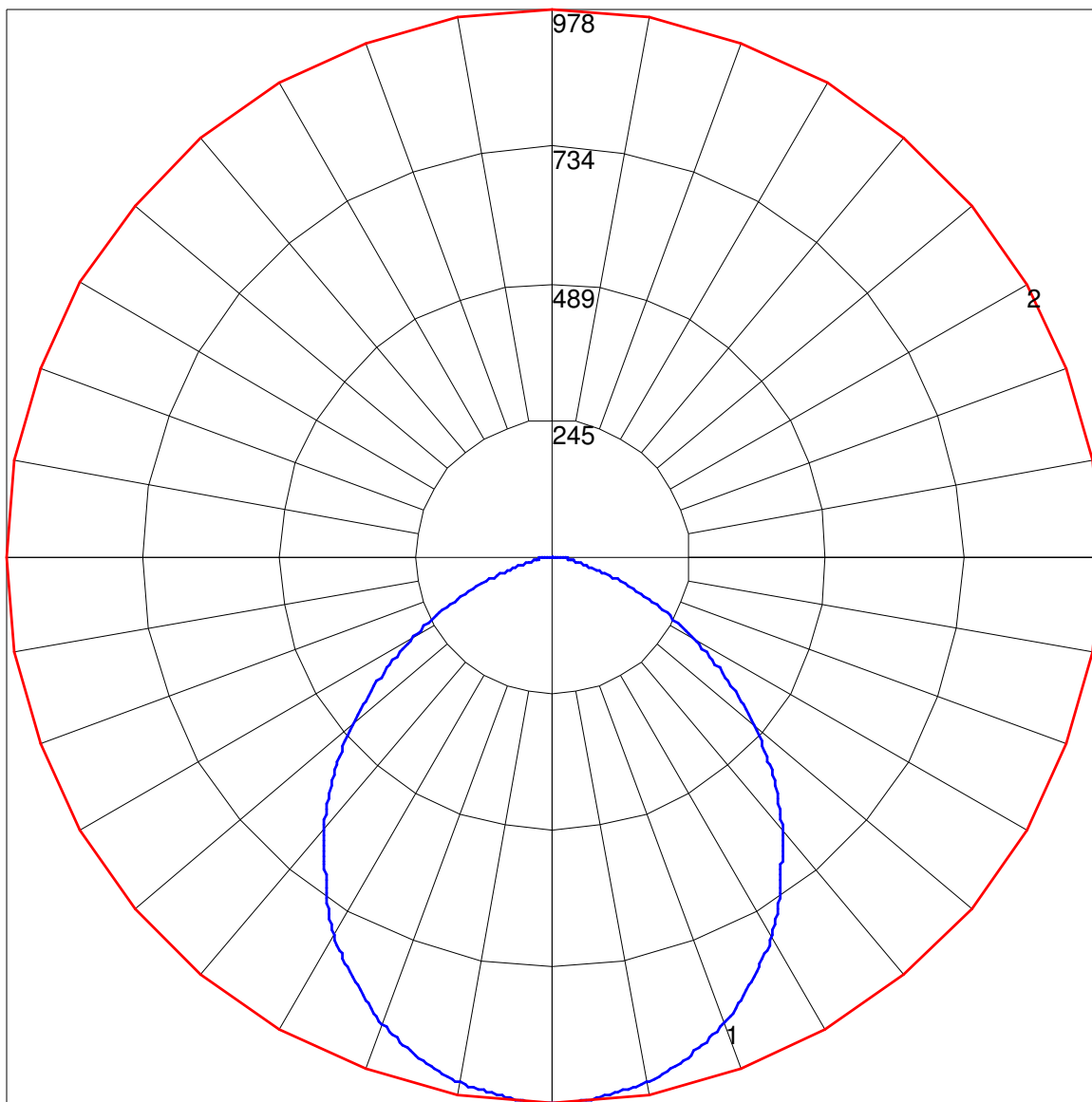
X=2H	Y=2H	23.3	24.8	23.7	25.2	25.5	23.3	24.8	23.7	25.2	25.5
	3H	24.3	25.7	24.7	26.0	26.4	24.3	25.7	24.7	26.0	26.4
	4H	24.5	25.7	24.9	26.1	26.5	24.5	25.7	24.9	26.1	26.5
	6H	24.5	25.7	24.9	26.1	26.5	24.5	25.7	24.9	26.1	26.5
	8H	24.5	25.6	25.0	26.0	26.4	24.5	25.6	25.0	26.0	26.4
	12H	24.5	25.6	25.0	26.0	26.4	24.5	25.6	25.0	26.0	26.4

### UGR Viewed Endwise

4H	2H	23.7	25.0	24.1	25.3	25.7	23.7	25.0	24.1	25.3	25.7
	3H	24.8	25.9	25.2	26.3	26.7	24.8	25.9	25.2	26.3	26.7
	4H	25.0	26.0	25.5	26.4	26.8	25.0	26.0	25.5	26.4	26.8
	6H	25.1	26.0	25.6	26.4	26.9	25.1	26.0	25.6	26.4	26.9
	8H	25.1	25.9	25.6	26.4	26.8	25.1	25.9	25.6	26.4	26.8
	12H	25.2	25.8	25.6	26.3	26.8	25.2	25.8	25.6	26.3	26.8
8H	4H	25.1	25.8	25.5	26.3	26.7	25.1	25.8	25.5	26.3	26.7
	6H	25.2	25.8	25.7	26.3	26.8	25.2	25.8	25.7	26.3	26.8
	8H	25.3	25.8	25.8	26.3	26.8	25.3	25.8	25.8	26.3	26.8
	12H	25.3	25.8	25.8	26.3	26.8	25.3	25.8	25.8	26.3	26.8
12H	4H	25.0	25.7	25.5	26.2	26.7	25.0	25.7	25.5	26.2	26.7
	6H	25.2	25.8	25.7	26.2	26.8	25.2	25.8	25.7	26.2	26.8
	8H	25.3	25.8	25.8	26.2	26.8	25.3	25.8	25.8	26.2	26.8

Maximum UGR = 26.9

POLAR GRAPH



Maximum Candela = 978.162 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.)