

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-4000K\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #15006535.03

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 21 NOV, 2023

[TEST DATE] 10/18/2023

[MANUFAC] H E Williams Inc

[LUMCAT] 4RCD-LS-9CS-SS-DIM-UNV-12W-4000k

[LUMINAIRE] Round plastic housing with semi-specular reflector and frosted lens

[LAMP] White LEDs

[BALLAST] LED Driver

[OTHER] 24.9 C, 120.034 V, 0.096676 A, 11.5454 W, 0.994911 PF, 59.9707

[MORE] Hz

[OTHER] This test was performed using the calibrated photodetector met

[MORE] hod of absolute photometry.

[OTHER] The reported results were measured in a facility that meets th

[MORE] e requirements of ANSI/IES LM-75-19. The device under test emits no de

[MORE] tectable uplight as defined by ANSI/IES LM-75-19.

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1223
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	12.25
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.22
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.33 ft (Diameter)
Luminous Width (90-270)	0.33 ft (Diameter)
Luminous Height	0.00 ft

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**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	52900	52900	52900
55	35576	35576	35576
65	19013	19013	19013
75	2832	2832	2832
85	554	554	554

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CANDELA TABULATION

	<u>0</u>
0.0	654.961
0.5	654.858
1.0	654.755
1.5	654.447
2.0	654.035
2.5	653.520
3.0	652.903
3.5	652.183
4.0	651.360
4.5	650.536
5.0	649.610
5.5	648.581
6.0	647.449
6.5	646.317
7.0	645.083
7.5	643.848
8.0	642.613
8.5	641.378
9.0	640.143
9.5	638.806
10.0	637.468
10.5	635.924
11.0	634.381
11.5	632.632
12.0	630.677
12.5	628.824
13.0	626.766
13.5	624.503
14.0	622.239
14.5	619.872
15.0	617.505
15.5	614.933
16.0	612.360
16.5	609.479
17.0	606.598
17.5	603.408
18.0	600.115
18.5	596.719
19.0	593.118
19.5	589.413
20.0	585.709
20.5	582.108
21.0	578.609
21.5	575.110
22.0	571.715
22.5	568.319
23.0	565.026
23.5	561.630
24.0	558.235
24.5	554.839
25.0	551.237
25.5	547.430
26.0	543.314
26.5	538.992

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CANDELA TABULATION - (Cont.)

27.0	534.465
27.5	529.834
28.0	524.998
28.5	520.162
29.0	515.119
29.5	509.974
30.0	504.624
30.5	499.170
31.0	493.613
31.5	487.851
32.0	482.088
32.5	476.326
33.0	470.461
33.5	464.389
34.0	458.318
34.5	452.144
35.0	445.867
35.5	439.590
36.0	433.211
36.5	426.522
37.0	419.628
37.5	412.528
38.0	405.530
38.5	398.533
39.0	391.433
39.5	384.333
40.0	377.130
40.5	369.824
41.0	362.621
41.5	355.315
42.0	347.906
42.5	340.600
43.0	333.089
43.5	325.577
44.0	318.065
44.5	310.451
45.0	302.939
45.5	295.530
46.0	288.018
46.5	280.609
47.0	273.303
47.5	265.998
48.0	258.692
48.5	251.489
49.0	244.286
49.5	237.185
50.0	230.188
50.5	223.294
51.0	216.502
51.5	209.814
52.0	203.125
52.5	196.540
53.0	190.057
53.5	183.677
54.0	177.503
54.5	171.329

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CANDELA TABULATION - (Cont.)

55.0	165.258
55.5	159.290
56.0	153.424
56.5	147.765
57.0	142.105
57.5	136.549
58.0	131.095
58.5	125.744
59.0	120.496
59.5	115.351
60.0	110.309
60.5	105.267
61.0	100.359
61.5	95.533
62.0	90.861
62.5	86.292
63.0	81.837
63.5	77.443
64.0	73.224
64.5	69.128
65.0	65.074
65.5	61.092
66.0	57.130
66.5	53.230
67.0	49.464
67.5	45.791
68.0	42.230
68.5	38.783
69.0	35.490
69.5	32.259
70.0	29.141
70.5	26.126
71.0	23.266
71.5	20.559
72.0	17.997
72.5	15.600
73.0	13.326
73.5	11.216
74.0	9.251
74.5	7.501
75.0	5.937
75.5	4.538
76.0	3.272
76.5	2.305
77.0	1.698
77.5	1.420
78.0	1.317
78.5	1.225
79.0	1.142
79.5	1.060
80.0	0.978
80.5	0.906
81.0	0.833
81.5	0.761
82.0	0.700
82.5	0.638

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CANDELA TABULATION - (Cont.)

83.0	0.587
83.5	0.535
84.0	0.484
84.5	0.432
85.0	0.391
85.5	0.350
86.0	0.309
86.5	0.268
87.0	0.237
87.5	0.206
88.0	0.175
88.5	0.134
89.0	0.093
89.5	0.062
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
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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  
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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
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154.5	0.000
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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	235.31	N.A.	19.20
0-30	488.20	N.A.	39.90
0-40	765.53	N.A.	62.60
0-60	1147.42	N.A.	93.80
0-80	1222.5	N.A.	100.00
0-90	1222.96	N.A.	100.00
10-90	1161.36	N.A.	95.00
20-40	530.23	N.A.	43.40
20-50	763.42	N.A.	62.40
40-70	447.36	N.A.	36.60
60-80	75.08	N.A.	6.10
70-80	9.60	N.A.	0.80
80-90	0.47	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	1222.96	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	61.61
10-20	173.70
20-30	252.89
30-40	277.34
40-50	233.19
50-60	148.69
60-70	65.47
70-80	9.60
80-90	0.47
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	122	122	122	122	119	119	119	119	114	114	114	109	109	109	105	105	105	102
1	114	111	107	104	112	108	105	103	104	102	99	100	98	96	97	95	94	92
2	106	99	94	89	104	98	93	88	94	90	86	91	88	84	88	85	83	81
3	98	90	83	77	96	88	82	77	85	80	75	83	78	74	80	76	73	71
4	91	81	73	68	89	80	73	67	77	71	66	75	70	66	73	68	65	63
5	85	74	66	60	83	72	65	60	70	64	59	69	63	58	67	62	58	56
6	79	67	59	53	77	66	59	53	64	58	53	63	57	52	61	56	52	50
7	74	61	53	48	72	61	53	48	59	52	47	58	52	47	56	51	47	45
8	69	57	49	43	67	56	48	43	55	48	43	53	47	43	52	47	43	41
9	65	52	45	39	63	52	44	39	51	44	39	49	43	39	49	43	39	37
10	61	48	41	36	60	48	41	36	47	40	36	46	40	36	45	40	36	34

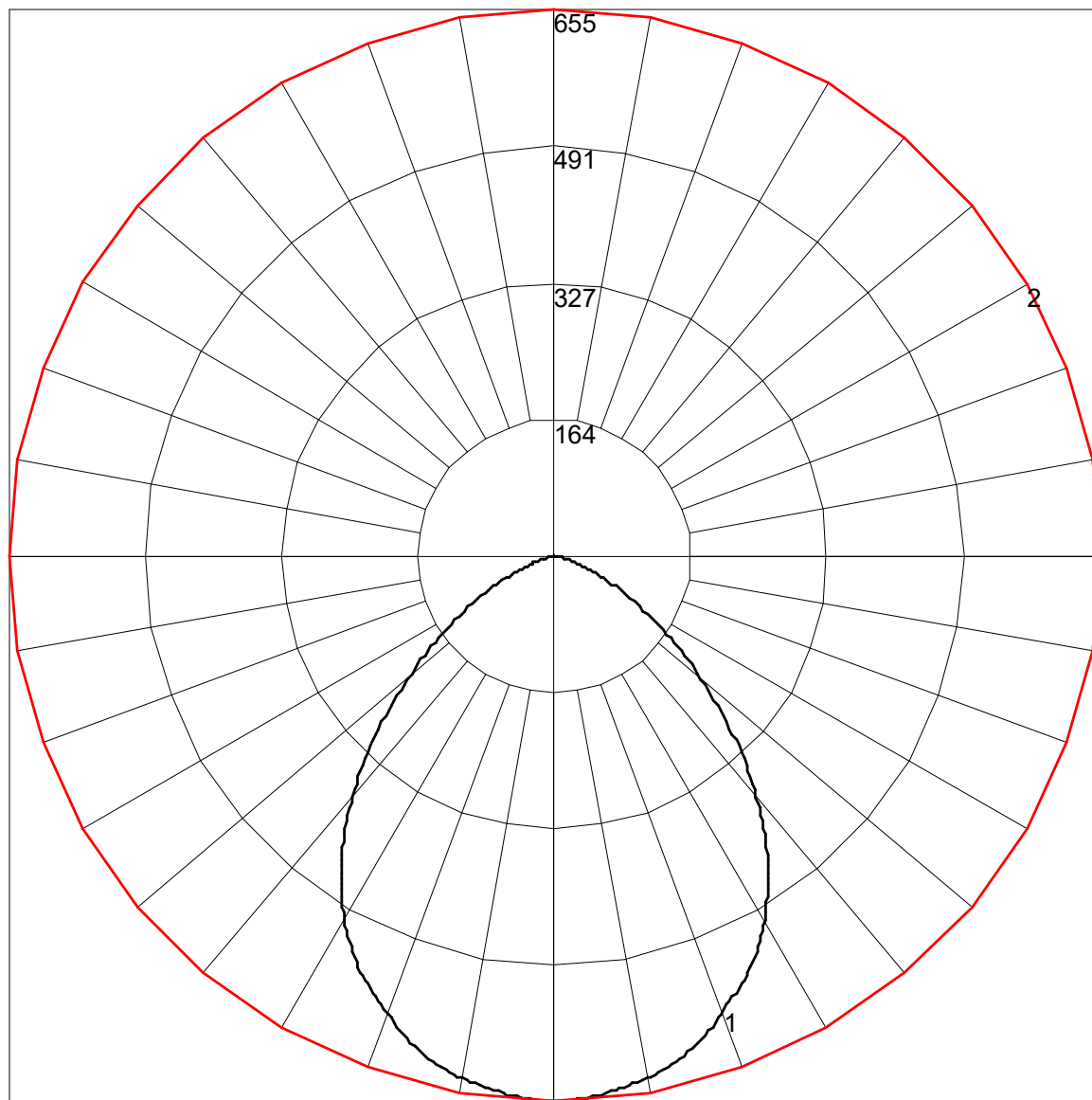
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**UGR TABLE - CORRECTED**

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	22.1	23.5	22.5	23.8	24.1	22.1	23.5	22.5	23.8	24.1
	3H	22.5	23.7	22.8	24.0	24.4	22.5	23.7	22.8	24.0	24.4
	4H	22.4	23.6	22.8	23.9	24.3	22.4	23.6	22.8	23.9	24.3
	6H	22.3	23.4	22.7	23.8	24.2	22.3	23.4	22.7	23.8	24.2
	8H	22.3	23.3	22.7	23.7	24.1	22.3	23.3	22.7	23.7	24.1
	12H	22.3	23.2	22.7	23.6	24.0	22.3	23.2	22.7	23.6	24.0
4H	2H	22.3	23.4	22.7	23.8	24.1	22.3	23.4	22.7	23.8	24.1
	3H	22.7	23.6	23.1	24.0	24.4	22.7	23.6	23.1	24.0	24.4
	4H	22.6	23.5	23.1	23.9	24.3	22.6	23.5	23.1	23.9	24.3
	6H	22.6	23.3	23.0	23.7	24.2	22.6	23.3	23.0	23.7	24.2
	8H	22.5	23.2	23.0	23.6	24.1	22.5	23.2	23.0	23.6	24.1
	12H	22.5	23.1	22.9	23.5	24.0	22.5	23.1	22.9	23.5	24.0
8H	4H	22.5	23.2	23.0	23.6	24.1	22.5	23.2	23.0	23.6	24.1
	6H	22.4	23.0	22.9	23.5	24.0	22.4	23.0	22.9	23.5	24.0
	8H	22.4	22.9	22.9	23.4	23.9	22.4	22.9	22.9	23.4	23.9
	12H	22.3	22.8	22.8	23.3	23.8	22.3	22.8	22.8	23.3	23.8
12H	4H	22.5	23.1	23.0	23.6	24.0	22.5	23.1	23.0	23.6	24.0
	6H	22.4	22.9	22.9	23.3	23.9	22.4	22.9	22.9	23.3	23.9
	8H	22.3	22.8	22.8	23.3	23.8	22.3	22.8	22.8	23.3	23.8

Maximum UGR = 24.4

POLAR GRAPH



Maximum Candela = 654.961 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)