

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-9W-5000K_.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-9W-5000k

[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	985
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
Total Luminaire Watts	9.76
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	42595	42595	42595
55	28646	28646	28646
65	15309	15309	15309
75	2281	2281	2281
85	446	446	446

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CANDELA TABULATION

	<u>0</u>
0.0	527.370
0.5	527.287
1.0	527.204
1.5	526.955
2.0	526.624
2.5	526.210
3.0	525.713
3.5	525.133
4.0	524.470
4.5	523.807
5.0	523.061
5.5	522.233
6.0	521.321
6.5	520.410
7.0	519.416
7.5	518.421
8.0	517.427
8.5	516.433
9.0	515.439
9.5	514.362
10.0	513.284
10.5	512.042
11.0	510.799
11.5	509.390
12.0	507.816
12.5	506.325
13.0	504.668
13.5	502.845
14.0	501.022
14.5	499.116
15.0	497.211
15.5	495.139
16.0	493.068
16.5	490.748
17.0	488.428
17.5	485.860
18.0	483.208
18.5	480.474
19.0	477.574
19.5	474.591
20.0	471.609
20.5	468.709
21.0	465.892
21.5	463.075
22.0	460.340
22.5	457.606
23.0	454.955
23.5	452.221
24.0	449.486
24.5	446.752
25.0	443.852
25.5	440.787
26.0	437.472
26.5	433.993

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CANDELA TABULATION - (Cont.)

27.0	430.347
27.5	426.618
28.0	422.724
28.5	418.830
29.0	414.770
29.5	410.628
30.0	406.319
30.5	401.928
31.0	397.454
31.5	392.814
32.0	388.174
32.5	383.534
33.0	378.811
33.5	373.923
34.0	369.035
34.5	364.063
35.0	359.009
35.5	353.955
36.0	348.818
36.5	343.432
37.0	337.881
37.5	332.164
38.0	326.530
38.5	320.896
39.0	315.179
39.5	309.462
40.0	303.662
40.5	297.780
41.0	291.980
41.5	286.097
42.0	280.131
42.5	274.249
43.0	268.200
43.5	262.152
44.0	256.104
44.5	249.972
45.0	243.924
45.5	237.958
46.0	231.910
46.5	225.945
47.0	220.062
47.5	214.179
48.0	208.297
48.5	202.497
49.0	196.697
49.5	190.980
50.0	185.346
50.5	179.795
51.0	174.326
51.5	168.941
52.0	163.555
52.5	158.252
53.0	153.032
53.5	147.896
54.0	142.924
54.5	137.953

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CANDELA TABULATION - (Cont.)

55.0	133.065
55.5	128.259
56.0	123.536
56.5	118.979
57.0	114.422
57.5	109.948
58.0	105.557
58.5	101.248
59.0	97.023
59.5	92.880
60.0	88.820
60.5	84.760
61.0	80.808
61.5	76.922
62.0	73.161
62.5	69.482
63.0	65.894
63.5	62.356
64.0	58.959
64.5	55.662
65.0	52.397
65.5	49.191
66.0	46.001
66.5	42.861
67.0	39.828
67.5	36.870
68.0	34.004
68.5	31.228
69.0	28.577
69.5	25.975
70.0	23.464
70.5	21.037
71.0	18.733
71.5	16.554
72.0	14.491
72.5	12.561
73.0	10.730
73.5	9.031
74.0	7.449
74.5	6.040
75.0	4.781
75.5	3.654
76.0	2.635
76.5	1.856
77.0	1.367
77.5	1.143
78.0	1.061
78.5	0.986
79.0	0.920
79.5	0.853
80.0	0.787
80.5	0.729
81.0	0.671
81.5	0.613
82.0	0.563
82.5	0.514

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CANDELA TABULATION - (Cont.)

83.0	0.472
83.5	0.431
84.0	0.389
84.5	0.348
85.0	0.315
85.5	0.282
86.0	0.249
86.5	0.215
87.0	0.191
87.5	0.166
88.0	0.141
88.5	0.108
89.0	0.075
89.5	0.050
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
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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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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
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150.0	0.000
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151.0	0.000
151.5	0.000
152.0	0.000
152.5	0.000
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153.5	0.000
154.0	0.000
154.5	0.000
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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	189.47	N.A.	19.20
0-30	393.09	N.A.	39.90
0-40	616.40	N.A.	62.60
0-60	923.89	N.A.	93.80
0-80	984.34	N.A.	100.00
0-90	984.72	N.A.	100.00
10-90	935.12	N.A.	95.00
20-40	426.93	N.A.	43.40
20-50	614.70	N.A.	62.40
40-70	360.21	N.A.	36.60
60-80	60.45	N.A.	6.10
70-80	7.73	N.A.	0.80
80-90	0.38	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	984.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	49.60
10-20	139.86
20-30	203.62
30-40	223.31
40-50	187.76
50-60	119.73
60-70	52.72
70-80	7.73
80-90	0.38
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	134	134	134	134	131	131	131	131	125	125	125	120	120	120	115	115	115	113
1	126	122	118	115	123	119	116	113	114	112	109	110	108	106	106	105	103	101
2	117	109	103	98	114	107	102	97	104	99	95	100	96	93	97	94	91	89
3	108	99	91	85	106	97	90	84	94	88	83	91	86	82	88	84	80	78
4	100	89	81	74	98	88	80	74	85	78	73	83	77	72	80	75	71	69
5	93	81	72	66	91	80	72	65	77	70	65	75	69	64	73	68	64	61
6	87	74	65	59	85	73	64	58	71	63	58	69	63	58	67	62	57	55
7	81	68	59	53	79	67	58	53	65	58	52	64	57	52	62	56	52	50
8	76	62	54	48	74	61	53	48	60	53	47	59	52	47	57	51	47	45
9	71	57	49	43	70	57	49	43	56	48	43	54	48	43	53	47	43	41
10	67	53	45	40	66	53	45	40	52	45	40	51	44	39	50	44	39	37

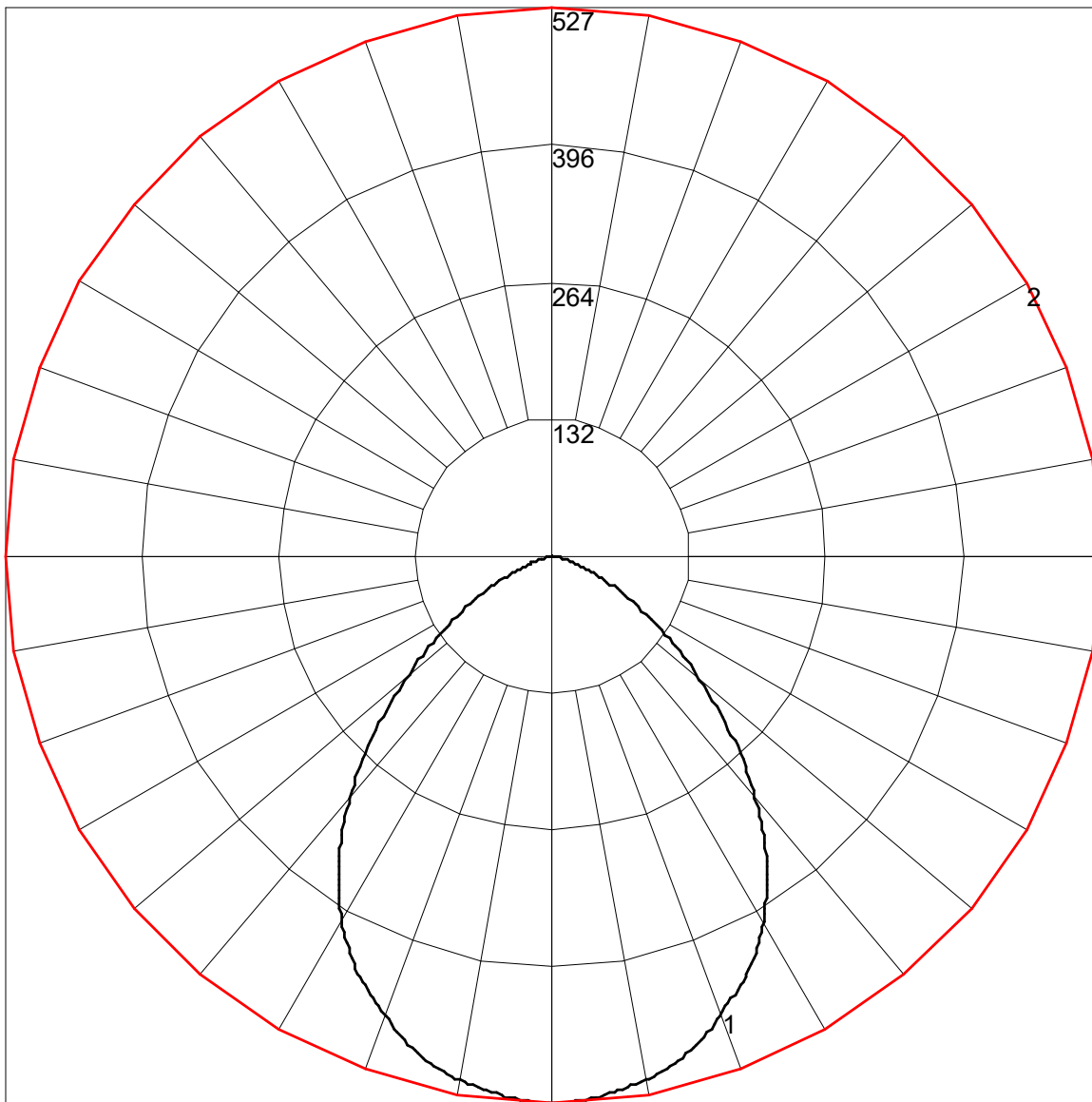
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UGR TABLE - CORRECTED

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	21.0	22.4	21.4	22.7	23.0	21.0	22.4	21.4	22.7	23.0
	3H	21.4	22.6	21.7	22.9	23.3	21.4	22.6	21.7	22.9	23.3
	4H	21.3	22.5	21.7	22.8	23.2	21.3	22.5	21.7	22.8	23.2
	6H	21.2	22.3	21.6	22.7	23.1	21.2	22.3	21.6	22.7	23.1
	8H	21.2	22.2	21.6	22.6	23.0	21.2	22.2	21.6	22.6	23.0
	12H	21.2	22.1	21.6	22.5	22.9	21.2	22.1	21.6	22.5	22.9
4H	2H	21.2	22.3	21.6	22.7	23.0	21.2	22.3	21.6	22.7	23.0
	3H	21.6	22.5	22.0	22.9	23.3	21.6	22.5	22.0	22.9	23.3
	4H	21.5	22.4	22.0	22.8	23.2	21.5	22.4	22.0	22.8	23.2
	6H	21.5	22.2	21.9	22.6	23.1	21.5	22.2	21.9	22.6	23.1
	8H	21.4	22.1	21.9	22.5	23.0	21.4	22.1	21.9	22.5	23.0
	12H	21.4	22.0	21.8	22.4	22.9	21.4	22.0	21.8	22.4	22.9
8H	4H	21.4	22.1	21.9	22.5	23.0	21.4	22.1	21.9	22.5	23.0
	6H	21.3	21.9	21.8	22.4	22.9	21.3	21.9	21.8	22.4	22.9
	8H	21.3	21.8	21.8	22.3	22.8	21.3	21.8	21.8	22.3	22.8
	12H	21.2	21.7	21.7	22.2	22.7	21.2	21.7	21.7	22.2	22.7
12H	4H	21.4	22.0	21.9	22.5	22.9	21.4	22.0	21.9	22.5	22.9
	6H	21.3	21.8	21.8	22.2	22.8	21.3	21.8	21.8	22.2	22.8
	8H	21.2	21.7	21.7	22.2	22.7	21.2	21.7	21.7	22.2	22.7

Maximum UGR = 23.3

POLAR GRAPH



Maximum Candela = 527.37 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.)