

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-9W-2700K_.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-2700k

[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	874
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	9.73
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	37793	37793	37793
55	25416	25416	25416
65	13583	13583	13583
75	2024	2024	2024
85	395	395	395

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CANDELA TABULATION

	<u>0</u>
0.0	467.923
0.5	467.850
1.0	467.776
1.5	467.556
2.0	467.261
2.5	466.894
3.0	466.453
3.5	465.938
4.0	465.350
4.5	464.762
5.0	464.100
5.5	463.365
6.0	462.557
6.5	461.748
7.0	460.866
7.5	459.983
8.0	459.101
8.5	458.219
9.0	457.337
9.5	456.381
10.0	455.426
10.5	454.323
11.0	453.220
11.5	451.970
12.0	450.574
12.5	449.250
13.0	447.780
13.5	446.163
14.0	444.545
14.5	442.854
15.0	441.164
15.5	439.326
16.0	437.488
16.5	435.429
17.0	433.371
17.5	431.092
18.0	428.740
18.5	426.314
19.0	423.741
19.5	421.094
20.0	418.448
20.5	415.874
21.0	413.375
21.5	410.875
22.0	408.449
22.5	406.023
23.0	403.671
23.5	401.245
24.0	398.819
24.5	396.393
25.0	393.820
25.5	391.100
26.0	388.159
26.5	385.072

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CANDELA TABULATION - (Cont.)

27.0	381.837
27.5	378.529
28.0	375.074
28.5	371.618
29.0	368.016
29.5	364.340
30.0	360.518
30.5	356.621
31.0	352.652
31.5	348.535
32.0	344.418
32.5	340.301
33.0	336.111
33.5	331.773
34.0	327.436
34.5	323.025
35.0	318.541
35.5	314.056
36.0	309.498
36.5	304.720
37.0	299.794
37.5	294.722
38.0	289.723
38.5	284.724
39.0	279.651
39.5	274.579
40.0	269.433
40.5	264.213
41.0	259.067
41.5	253.847
42.0	248.554
42.5	243.335
43.0	237.968
43.5	232.602
44.0	227.235
44.5	221.795
45.0	216.428
45.5	211.135
46.0	205.769
46.5	200.475
47.0	195.256
47.5	190.036
48.0	184.817
48.5	179.671
49.0	174.525
49.5	169.452
50.0	164.453
50.5	159.528
51.0	154.676
51.5	149.897
52.0	145.119
52.5	140.414
53.0	135.782
53.5	131.224
54.0	126.813
54.5	122.403

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CANDELA TABULATION - (Cont.)

55.0	118.065
55.5	113.801
56.0	109.611
56.5	105.568
57.0	101.524
57.5	97.554
58.0	93.658
58.5	89.835
59.0	86.086
59.5	82.410
60.0	78.808
60.5	75.206
61.0	71.699
61.5	68.251
62.0	64.914
62.5	61.650
63.0	58.466
63.5	55.327
64.0	52.313
64.5	49.387
65.0	46.491
65.5	43.646
66.0	40.816
66.5	38.029
67.0	35.339
67.5	32.714
68.0	30.171
68.5	27.708
69.0	25.355
69.5	23.047
70.0	20.819
70.5	18.665
71.0	16.622
71.5	14.688
72.0	12.858
72.5	11.145
73.0	9.520
73.5	8.013
74.0	6.609
74.5	5.359
75.0	4.242
75.5	3.242
76.0	2.338
76.5	1.647
77.0	1.213
77.5	1.015
78.0	0.941
78.5	0.875
79.0	0.816
79.5	0.757
80.0	0.698
80.5	0.647
81.0	0.595
81.5	0.544
82.0	0.500
82.5	0.456

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CANDELA TABULATION - (Cont.)

83.0	0.419
83.5	0.382
84.0	0.346
84.5	0.309
85.0	0.279
85.5	0.250
86.0	0.221
86.5	0.191
87.0	0.169
87.5	0.147
88.0	0.125
88.5	0.096
89.0	0.066
89.5	0.044
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
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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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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
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155.5	0.000
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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	168.11	N.A.	19.20
0-30	348.78	N.A.	39.90
0-40	546.92	N.A.	62.60
0-60	819.75	N.A.	93.80
0-80	873.39	N.A.	100.00
0-90	873.72	N.A.	100.00
10-90	829.71	N.A.	95.00
20-40	378.81	N.A.	43.40
20-50	545.41	N.A.	62.40
40-70	319.61	N.A.	36.60
60-80	53.64	N.A.	6.10
70-80	6.86	N.A.	0.80
80-90	0.33	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	873.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	44.01
10-20	124.10
20-30	180.67
30-40	198.14
40-50	166.60
50-60	106.23
60-70	46.78
70-80	6.86
80-90	0.33
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	163	163	163	163	159	159	159	159	152	152	152	145	145	145	140	140	140	137
1	153	148	143	139	149	145	141	137	139	136	133	134	131	129	129	127	125	122
2	142	133	125	119	138	130	124	118	126	120	115	121	117	113	117	114	110	108
3	131	120	111	103	128	118	109	102	114	107	101	110	104	99	107	102	97	95
4	122	108	98	90	119	106	97	90	103	95	89	100	93	88	97	91	86	84
5	113	98	88	80	111	97	87	79	94	85	79	91	84	78	89	82	77	75
6	105	89	79	71	103	88	78	71	86	77	70	84	76	70	82	75	69	67
7	98	82	71	64	96	81	71	64	79	70	63	77	69	63	75	68	63	60
8	92	75	65	58	90	75	65	58	73	64	57	71	63	57	70	62	57	54
9	86	70	60	53	84	69	59	53	67	59	52	66	58	52	65	57	52	50
10	81	65	55	48	80	64	55	48	63	54	48	62	53	48	60	53	48	45

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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	20.0	21.4	20.3	21.7	22.0	20.0	21.4	20.3	21.7	22.0
	3H	20.4	21.6	20.7	21.9	22.3	20.4	21.6	20.7	21.9	22.3
	4H	20.3	21.5	20.7	21.8	22.2	20.3	21.5	20.7	21.8	22.2
	6H	20.2	21.3	20.6	21.7	22.1	20.2	21.3	20.6	21.7	22.1
	8H	20.2	21.2	20.6	21.6	22.0	20.2	21.2	20.6	21.6	22.0
	12H	20.2	21.1	20.6	21.5	21.9	20.2	21.1	20.6	21.5	21.9

UGR Viewed Endwise

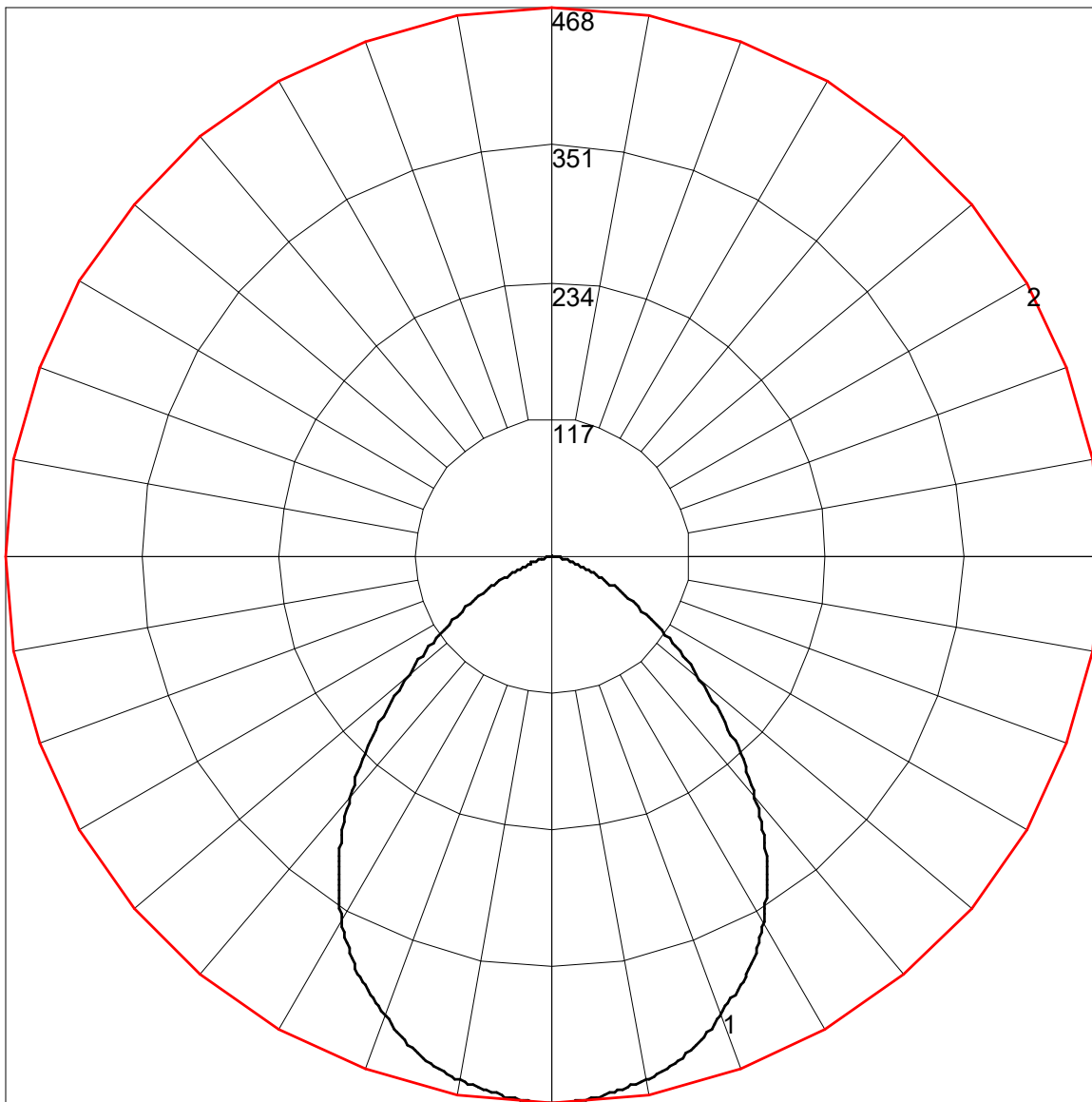
4H	2H	20.2	21.3	20.6	21.7	22.0	20.2	21.3	20.6	21.7	22.0
	3H	20.6	21.5	21.0	21.9	22.3	20.6	21.5	21.0	21.9	22.3
	4H	20.5	21.4	21.0	21.8	22.2	20.5	21.4	21.0	21.8	22.2
	6H	20.5	21.2	20.9	21.6	22.1	20.5	21.2	20.9	21.6	22.1
	8H	20.4	21.1	20.9	21.5	22.0	20.4	21.1	20.9	21.5	22.0
	12H	20.4	21.0	20.8	21.4	21.9	20.4	21.0	20.8	21.4	21.9

8H	4H	20.4	21.1	20.9	21.5	22.0	20.4	21.1	20.9	21.5	22.0
	6H	20.3	20.9	20.8	21.4	21.9	20.3	20.9	20.8	21.4	21.9
	8H	20.3	20.8	20.8	21.3	21.8	20.3	20.8	20.8	21.3	21.8
	12H	20.2	20.7	20.7	21.2	21.7	20.2	20.7	20.7	21.2	21.7

12H	4H	20.4	21.0	20.9	21.5	21.9	20.4	21.0	20.9	21.5	21.9
	6H	20.3	20.8	20.8	21.2	21.8	20.3	20.8	20.8	21.2	21.8
	8H	20.2	20.7	20.7	21.2	21.7	20.2	20.7	20.7	21.2	21.7

Maximum UGR = 22.3

POLAR GRAPH



Maximum Candela = 467.923 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.)