

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-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-12W-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	1244
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
Total Luminaire Watts	12.56
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	53819	53819	53819
55	36194	36194	36194
65	19343	19343	19343
75	2882	2882	2882
85	564	564	564

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CANDELA TABULATION

	<u>0</u>
0.0	666.339
0.5	666.234
1.0	666.130
1.5	665.816
2.0	665.397
2.5	664.873
3.0	664.245
3.5	663.513
4.0	662.675
4.5	661.838
5.0	660.895
5.5	659.848
6.0	658.697
6.5	657.545
7.0	656.289
7.5	655.033
8.0	653.777
8.5	652.520
9.0	651.264
9.5	649.903
10.0	648.542
10.5	646.972
11.0	645.402
11.5	643.622
12.0	641.633
12.5	639.748
13.0	637.655
13.5	635.351
14.0	633.048
14.5	630.641
15.0	628.233
15.5	625.615
16.0	622.998
16.5	620.067
17.0	617.136
17.5	613.890
18.0	610.540
18.5	607.086
19.0	603.422
19.5	599.653
20.0	595.884
20.5	592.220
21.0	588.661
21.5	585.101
22.0	581.647
22.5	578.192
23.0	574.842
23.5	571.387
24.0	567.932
24.5	564.478
25.0	560.814
25.5	556.940
26.0	552.753
26.5	548.356

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CANDELA TABULATION - (Cont.)

27.0	543.749
27.5	539.039
28.0	534.118
28.5	529.198
29.0	524.068
29.5	518.834
30.0	513.390
30.5	507.841
31.0	502.188
31.5	496.326
32.0	490.463
32.5	484.601
33.0	478.634
33.5	472.457
34.0	466.280
34.5	459.999
35.0	453.613
35.5	447.227
36.0	440.736
36.5	433.932
37.0	426.918
37.5	419.694
38.0	412.575
38.5	405.457
39.0	398.233
39.5	391.010
40.0	383.682
40.5	376.249
41.0	368.921
41.5	361.488
42.0	353.950
42.5	346.517
43.0	338.875
43.5	331.233
44.0	323.591
44.5	315.844
45.0	308.201
45.5	300.664
46.0	293.022
46.5	285.484
47.0	278.051
47.5	270.618
48.0	263.186
48.5	255.857
49.0	248.529
49.5	241.306
50.0	234.187
50.5	227.173
51.0	220.264
51.5	213.459
52.0	206.654
52.5	199.954
53.0	193.359
53.5	186.868
54.0	180.587
54.5	174.306

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CANDELA TABULATION - (Cont.)

55.0	168.129
55.5	162.057
56.0	156.090
56.5	150.332
57.0	144.574
57.5	138.921
58.0	133.373
58.5	127.929
59.0	122.590
59.5	117.355
60.0	112.226
60.5	107.096
61.0	102.102
61.5	97.192
62.0	92.440
62.5	87.791
63.0	83.258
63.5	78.788
64.0	74.496
64.5	70.329
65.0	66.205
65.5	62.153
66.0	58.123
66.5	54.155
67.0	50.324
67.5	46.586
68.0	42.964
68.5	39.457
69.0	36.107
69.5	32.820
70.0	29.648
70.5	26.580
71.0	23.670
71.5	20.917
72.0	18.310
72.5	15.871
73.0	13.557
73.5	11.411
74.0	9.411
74.5	7.632
75.0	6.040
75.5	4.617
76.0	3.329
76.5	2.345
77.0	1.727
77.5	1.445
78.0	1.340
78.5	1.246
79.0	1.162
79.5	1.078
80.0	0.995
80.5	0.921
81.0	0.848
81.5	0.775
82.0	0.712
82.5	0.649

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CANDELA TABULATION - (Cont.)

83.0	0.597
83.5	0.544
84.0	0.492
84.5	0.440
85.0	0.398
85.5	0.356
86.0	0.314
86.5	0.272
87.0	0.241
87.5	0.209
88.0	0.178
88.5	0.136
89.0	0.094
89.5	0.063
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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PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-5000K_.IES

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 : 4RCD-LS-9CS-SS-DIM-UNV-12W-5000K_.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
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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PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-5000K_.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

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	239.39	N.A.	19.20
0-30	496.68	N.A.	39.90
0-40	778.83	N.A.	62.60
0-60	1167.35	N.A.	93.80
0-80	1243.73	N.A.	100.00
0-90	1244.21	N.A.	100.00
10-90	1181.53	N.A.	95.00
20-40	539.44	N.A.	43.40
20-50	776.68	N.A.	62.40
40-70	455.13	N.A.	36.60
60-80	76.38	N.A.	6.10
70-80	9.77	N.A.	0.80
80-90	0.48	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	1244.21	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	62.68
10-20	176.72
20-30	257.28
30-40	282.15
40-50	237.24
50-60	151.28
60-70	66.61
70-80	9.77
80-90	0.48
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	124	124	124	124	121	121	121	121	116	116	116	111	111	111	106	106	106	104
1	116	113	109	106	114	110	107	104	106	103	101	102	100	98	98	97	95	93
2	108	101	96	91	105	99	94	90	96	92	88	93	89	86	90	87	84	82
3	100	91	84	79	98	90	83	78	87	81	77	84	79	75	81	78	74	72
4	93	82	75	69	91	81	74	68	79	72	68	76	71	67	74	70	66	64
5	86	75	67	61	84	74	66	61	72	65	60	70	64	59	68	63	59	57
6	80	68	60	54	78	67	60	54	66	59	54	64	58	53	62	57	53	51
7	75	62	54	49	73	62	54	49	60	53	48	59	53	48	57	52	48	46
8	70	57	50	44	69	57	49	44	56	49	44	54	48	44	53	48	43	42
9	66	53	45	40	64	53	45	40	51	45	40	50	44	40	49	44	40	38
10	62	49	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36	35

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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

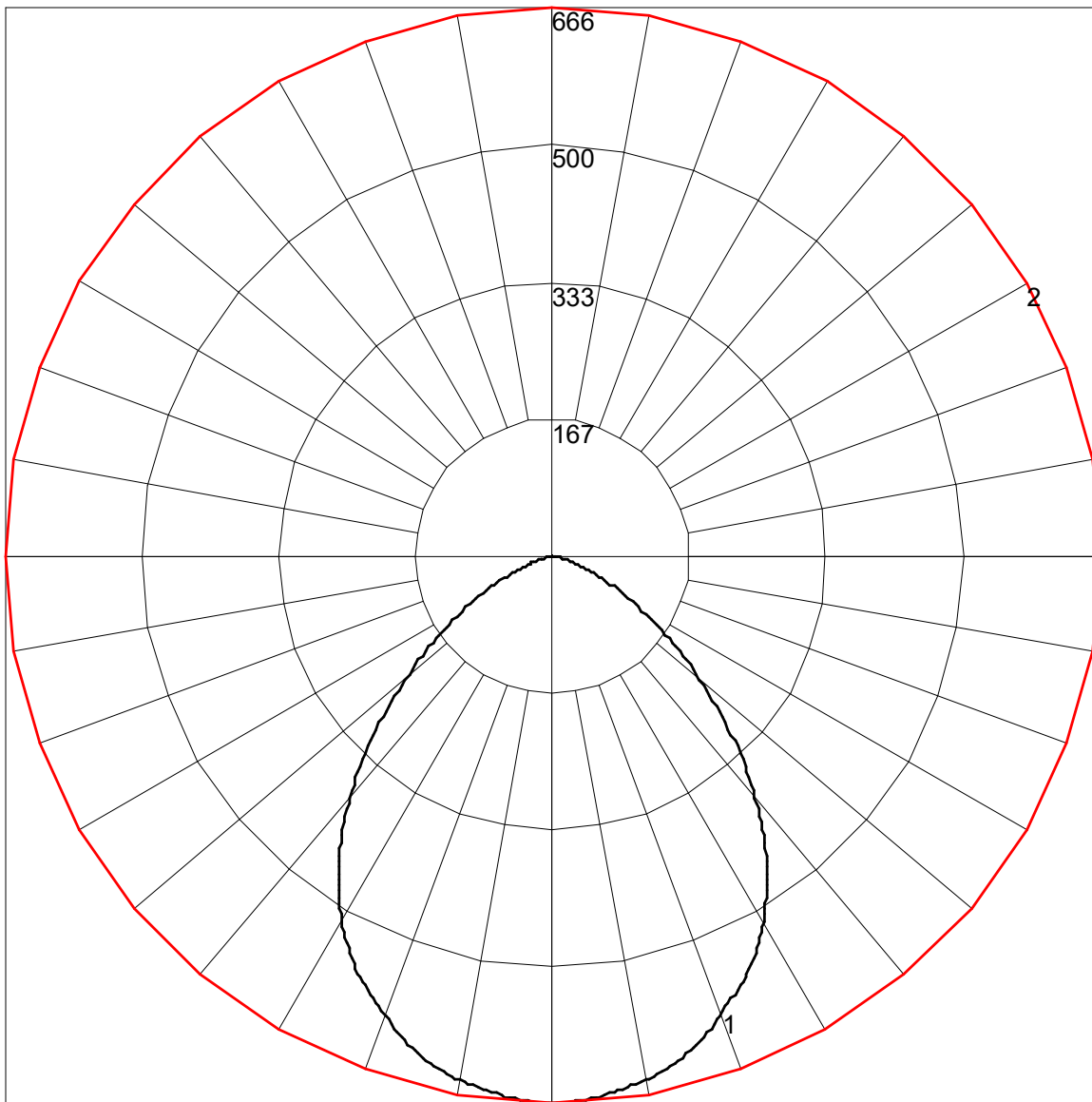
X=2H	Y=2H	22.1	23.5	22.5	23.8	24.1	22.1	23.5	22.5	23.8	24.1
	3H	22.5	23.7	22.8	24.0	24.4	22.5	23.7	22.8	24.0	24.4
	4H	22.4	23.6	22.8	23.9	24.3	22.4	23.6	22.8	23.9	24.3
	6H	22.3	23.4	22.7	23.8	24.2	22.3	23.4	22.7	23.8	24.2
	8H	22.3	23.3	22.7	23.7	24.1	22.3	23.3	22.7	23.7	24.1
	12H	22.3	23.2	22.7	23.6	24.0	22.3	23.2	22.7	23.6	24.0

UGR Viewed Endwise

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 = 666.339 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.)