

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-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-12W-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	1100
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	12.54
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	47598	47598	47598
55	32010	32010	32010
65	17107	17107	17107
75	2549	2549	2549
85	499	499	499

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CANDELA TABULATION

	<u>0</u>
0.0	589.316
0.5	589.224
1.0	589.131
1.5	588.854
2.0	588.483
2.5	588.020
3.0	587.465
3.5	586.817
4.0	586.076
4.5	585.335
5.0	584.502
5.5	583.576
6.0	582.558
6.5	581.539
7.0	580.428
7.5	579.317
8.0	578.206
8.5	577.095
9.0	575.984
9.5	574.780
10.0	573.577
10.5	572.188
11.0	570.799
11.5	569.225
12.0	567.466
12.5	565.799
13.0	563.948
13.5	561.911
14.0	559.874
14.5	557.744
15.0	555.615
15.5	553.300
16.0	550.985
16.5	548.393
17.0	545.801
17.5	542.930
18.0	539.968
18.5	536.912
19.0	533.672
19.5	530.339
20.0	527.005
20.5	523.765
21.0	520.617
21.5	517.469
22.0	514.414
22.5	511.358
23.0	508.395
23.5	505.340
24.0	502.285
24.5	499.229
25.0	495.989
25.5	492.563
26.0	488.860
26.5	484.971

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CANDELA TABULATION - (Cont.)

27.0	480.897
27.5	476.731
28.0	472.379
28.5	468.027
29.0	463.491
29.5	458.861
30.0	454.047
30.5	449.140
31.0	444.140
31.5	438.955
32.0	433.770
32.5	428.585
33.0	423.308
33.5	417.845
34.0	412.383
34.5	406.827
35.0	401.180
35.5	395.532
36.0	389.791
36.5	383.773
37.0	377.570
37.5	371.181
38.0	364.885
38.5	358.590
39.0	352.201
39.5	345.813
40.0	339.331
40.5	332.758
41.0	326.277
41.5	319.703
42.0	313.037
42.5	306.463
43.0	299.704
43.5	292.945
44.0	286.187
44.5	279.335
45.0	272.576
45.5	265.910
46.0	259.151
46.5	252.485
47.0	245.911
47.5	239.337
48.0	232.764
48.5	226.283
49.0	219.802
49.5	213.413
50.0	207.117
50.5	200.914
51.0	194.803
51.5	188.785
52.0	182.767
52.5	176.841
53.0	171.008
53.5	165.268
54.0	159.713
54.5	154.157

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CANDELA TABULATION - (Cont.)

55.0	148.695
55.5	143.325
56.0	138.047
56.5	132.955
57.0	127.863
57.5	122.863
58.0	117.956
58.5	113.141
59.0	108.419
59.5	103.790
60.0	99.253
60.5	94.717
61.0	90.300
61.5	85.958
62.0	81.754
62.5	77.643
63.0	73.634
63.5	69.681
64.0	65.885
64.5	62.200
65.0	58.552
65.5	54.969
66.0	51.404
66.5	47.895
67.0	44.507
67.5	41.201
68.0	37.998
68.5	34.896
69.0	31.933
69.5	29.026
70.0	26.221
70.5	23.508
71.0	20.934
71.5	18.499
72.0	16.193
72.5	14.036
73.0	11.990
73.5	10.092
74.0	8.324
74.5	6.750
75.0	5.342
75.5	4.083
76.0	2.944
76.5	2.074
77.0	1.528
77.5	1.278
78.0	1.185
78.5	1.102
79.0	1.028
79.5	0.954
80.0	0.880
80.5	0.815
81.0	0.750
81.5	0.685
82.0	0.630
82.5	0.574

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CANDELA TABULATION - (Cont.)

83.0	0.528
83.5	0.481
84.0	0.435
84.5	0.389
85.0	0.352
85.5	0.315
86.0	0.278
86.5	0.241
87.0	0.213
87.5	0.185
88.0	0.157
88.5	0.120
89.0	0.083
89.5	0.056
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
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121.0	0.000
121.5	0.000
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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
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	211.72	N.A.	19.20
0-30	439.27	N.A.	39.90
0-40	688.81	N.A.	62.60
0-60	1032.42	N.A.	93.80
0-80	1099.97	N.A.	100.00
0-90	1100.39	N.A.	100.00
10-90	1044.96	N.A.	95.00
20-40	477.08	N.A.	43.40
20-50	686.90	N.A.	62.40
40-70	402.52	N.A.	36.60
60-80	67.55	N.A.	6.10
70-80	8.64	N.A.	0.80
80-90	0.42	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	1100.39	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	55.43
10-20	156.29
20-30	227.54
30-40	249.54
40-50	209.82
50-60	133.79
60-70	58.91
70-80	8.64
80-90	0.42
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	110	110	110	110	107	107	107	107	102	102	102	98	98	98	94	94	94	92
1	103	99	97	94	100	97	95	92	94	91	89	90	88	87	87	86	84	82
2	95	90	85	80	93	88	83	79	85	81	78	82	79	76	79	77	74	73
3	89	81	75	70	86	79	74	69	77	72	68	74	70	67	72	69	66	64
4	82	73	66	61	80	72	65	61	70	64	60	68	63	59	66	62	58	57
5	76	66	59	54	75	65	59	54	63	58	53	62	57	53	60	56	52	50
6	71	60	53	48	69	59	53	48	58	52	47	56	51	47	55	50	47	45
7	66	55	48	43	65	55	48	43	53	47	43	52	47	42	51	46	42	41
8	62	51	44	39	61	50	44	39	49	43	39	48	43	39	47	42	38	37
9	58	47	40	36	57	46	40	35	45	39	35	45	39	35	44	39	35	33
10	55	44	37	33	54	43	37	32	42	36	32	41	36	32	41	36	32	31

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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

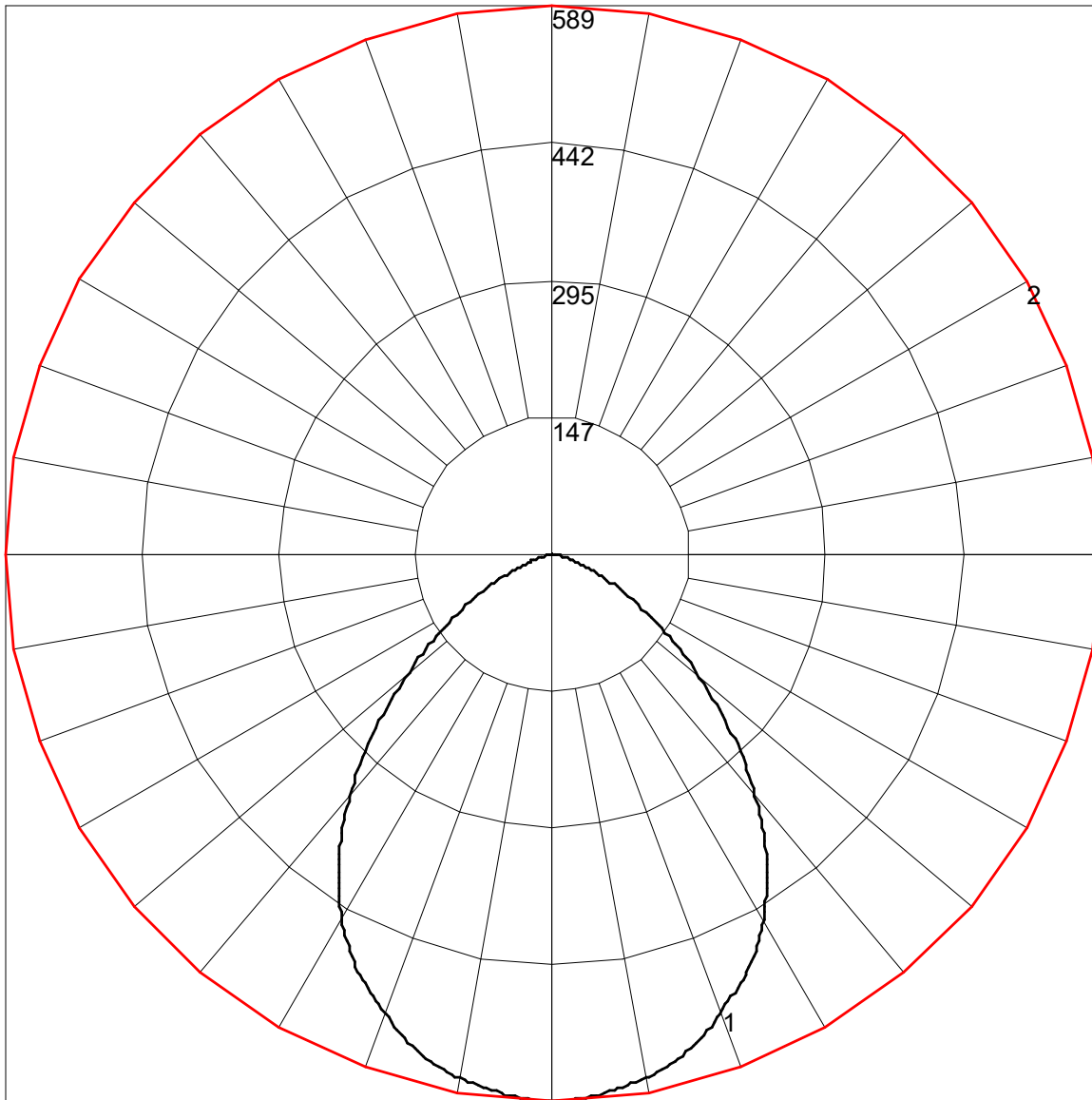
X=2H	Y=2H	22.1	23.5	22.5	23.8	24.1	22.1	23.5	22.5	23.8	24.1
	3H	22.5	23.7	22.8	24.0	24.4	22.5	23.7	22.8	24.0	24.4
	4H	22.4	23.6	22.8	23.9	24.3	22.4	23.6	22.8	23.9	24.3
	6H	22.3	23.4	22.7	23.8	24.2	22.3	23.4	22.7	23.8	24.2
	8H	22.3	23.3	22.7	23.7	24.1	22.3	23.3	22.7	23.7	24.1
	12H	22.3	23.2	22.7	23.6	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 = 589.316 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.)