

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-7W-3000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #15006535.03

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 17 NOV, 2023

[TEST DATE] 10/18/2023

[MANUFAC] H E Williams Inc

[LUMCAT] 4RCD-LS-9CS-SS-DIM-UNV-7W-3000k

[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	657
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	7.04
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	28410	28410	28410
55	19106	19106	19106
65	10211	10211	10211
75	1521	1521	1521
85	298	298	298

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CANDELA TABULATION

	<u>0</u>
0.0	351.749
0.5	351.694
1.0	351.639
1.5	351.473
2.0	351.252
2.5	350.976
3.0	350.644
3.5	350.257
4.0	349.815
4.5	349.373
5.0	348.876
5.5	348.323
6.0	347.715
6.5	347.107
7.0	346.444
7.5	345.781
8.0	345.118
8.5	344.455
9.0	343.791
9.5	343.073
10.0	342.355
10.5	341.526
11.0	340.697
11.5	339.757
12.0	338.707
12.5	337.712
13.0	336.607
13.5	335.391
14.0	334.176
14.5	332.905
15.0	331.634
15.5	330.252
16.0	328.870
16.5	327.323
17.0	325.776
17.5	324.062
18.0	322.294
18.5	320.470
19.0	318.536
19.5	316.547
20.0	314.557
20.5	312.623
21.0	310.744
21.5	308.865
22.0	307.041
22.5	305.218
23.0	303.449
23.5	301.626
24.0	299.802
24.5	297.978
25.0	296.044
25.5	293.999
26.0	291.789
26.5	289.468

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CANDELA TABULATION - (Cont.)

27.0	287.036
27.5	284.549
28.0	281.952
28.5	279.355
29.0	276.647
29.5	273.884
30.0	271.010
30.5	268.081
31.0	265.097
31.5	262.002
32.0	258.907
32.5	255.813
33.0	252.663
33.5	249.402
34.0	246.142
34.5	242.826
35.0	239.455
35.5	236.084
36.0	232.657
36.5	229.065
37.0	225.363
37.5	221.550
38.0	217.792
38.5	214.034
39.0	210.221
39.5	206.407
40.0	202.539
40.5	198.615
41.0	194.747
41.5	190.823
42.0	186.844
42.5	182.921
43.0	178.886
43.5	174.852
44.0	170.818
44.5	166.729
45.0	162.694
45.5	158.715
46.0	154.681
46.5	150.702
47.0	146.779
47.5	142.855
48.0	138.931
48.5	135.063
49.0	131.194
49.5	127.381
50.0	123.623
50.5	119.921
51.0	116.273
51.5	112.681
52.0	109.089
52.5	105.552
53.0	102.071
53.5	98.645
54.0	95.329
54.5	92.013

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CANDELA TABULATION - (Cont.)

55.0	88.752
55.5	85.547
56.0	82.397
56.5	79.358
57.0	76.318
57.5	73.334
58.0	70.405
58.5	67.531
59.0	64.713
59.5	61.950
60.0	59.242
60.5	56.534
61.0	53.898
61.5	51.306
62.0	48.797
62.5	46.344
63.0	43.951
63.5	41.591
64.0	39.325
64.5	37.126
65.0	34.948
65.5	32.810
66.0	30.682
66.5	28.588
67.0	26.565
67.5	24.592
68.0	22.680
68.5	20.829
69.0	19.060
69.5	17.325
70.0	15.650
70.5	14.031
71.0	12.495
71.5	11.042
72.0	9.666
72.5	8.378
73.0	7.157
73.5	6.024
74.0	4.968
74.5	4.029
75.0	3.189
75.5	2.437
76.0	1.757
76.5	1.238
77.0	0.912
77.5	0.763
78.0	0.707
78.5	0.658
79.0	0.613
79.5	0.569
80.0	0.525
80.5	0.486
81.0	0.448
81.5	0.409
82.0	0.376
82.5	0.343

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CANDELA TABULATION - (Cont.)

83.0	0.315
83.5	0.287
84.0	0.260
84.5	0.232
85.0	0.210
85.5	0.188
86.0	0.166
86.5	0.144
87.0	0.127
87.5	0.111
88.0	0.094
88.5	0.072
89.0	0.050
89.5	0.033
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
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

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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	126.37	N.A.	19.20
0-30	262.19	N.A.	39.90
0-40	411.13	N.A.	62.60
0-60	616.22	N.A.	93.80
0-80	656.55	N.A.	100.00
0-90	656.80	N.A.	100.00
10-90	623.71	N.A.	95.00
20-40	284.76	N.A.	43.40
20-50	410.00	N.A.	62.40
40-70	240.26	N.A.	36.60
60-80	40.32	N.A.	6.10
70-80	5.16	N.A.	0.80
80-90	0.25	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	656.80	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	33.09
10-20	93.29
20-30	135.82
30-40	148.94
40-50	125.24
50-60	79.86
60-70	35.16
70-80	5.16
80-90	0.25
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	65	65	65	65	64	64	64	64	61	61	61	59	59	59	56	56	56	55
1	61	59	58	56	60	58	57	55	56	55	53	54	53	52	52	51	50	49
2	57	53	50	48	56	52	50	47	51	48	46	49	47	45	47	46	44	43
3	53	48	44	42	52	47	44	41	46	43	41	44	42	40	43	41	39	38
4	49	43	39	36	48	43	39	36	42	38	36	40	37	35	39	37	35	34
5	46	39	35	32	44	39	35	32	38	34	32	37	34	31	36	33	31	30
6	42	36	32	29	41	36	31	29	35	31	28	34	31	28	33	30	28	27
7	40	33	29	26	39	33	29	26	32	28	25	31	28	25	30	27	25	24
8	37	30	26	23	36	30	26	23	29	26	23	29	25	23	28	25	23	22
9	35	28	24	21	34	28	24	21	27	24	21	27	23	21	26	23	21	20
10	33	26	22	19	32	26	22	19	25	22	19	25	22	19	24	21	19	18

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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

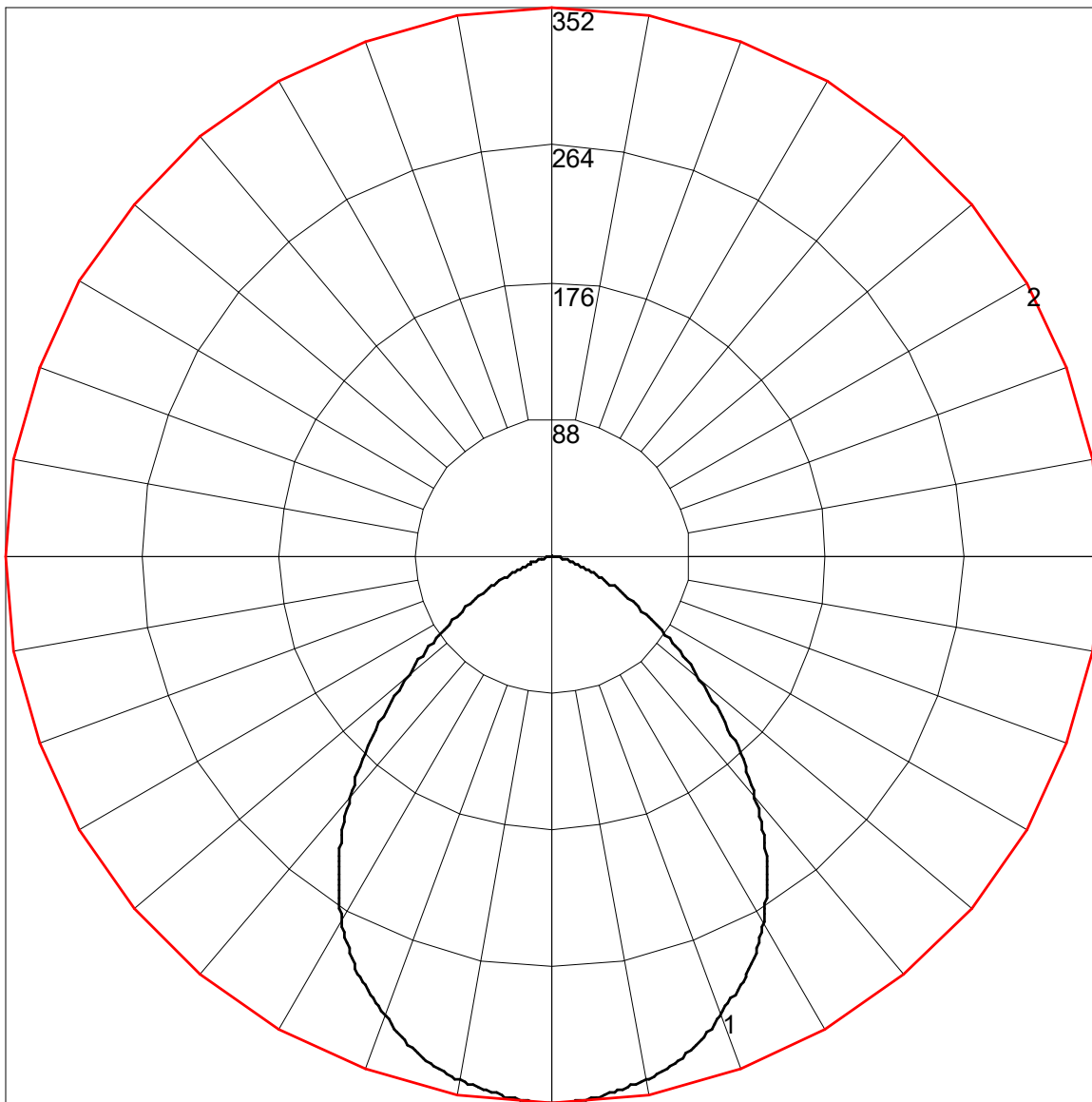
4H	2H	22.3	23.4	22.7	23.8	24.1	22.3	23.4	22.7	23.8	24.1
	3H	22.7	23.6	23.1	24.0	24.4	22.7	23.6	23.1	24.0	24.4
	4H	22.6	23.5	23.1	23.9	24.3	22.6	23.5	23.1	23.9	24.3
	6H	22.6	23.3	23.0	23.7	24.2	22.6	23.3	23.0	23.7	24.2
	8H	22.5	23.2	23.0	23.6	24.1	22.5	23.2	23.0	23.6	24.1
	12H	22.5	23.1	22.9	23.5	24.0	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 = 351.749 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.)