

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-7W-2700K_.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-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	639
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	7.1
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	27636	27636	27636
55	18586	18586	18586
65	9933	9933	9933
75	1480	1480	1480
85	289	289	289

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CANDELA TABULATION

	<u>0</u>
0.0	342.164
0.5	342.111
1.0	342.057
1.5	341.896
2.0	341.681
2.5	341.412
3.0	341.089
3.5	340.713
4.0	340.283
4.5	339.853
5.0	339.369
5.5	338.831
6.0	338.240
6.5	337.649
7.0	337.004
7.5	336.359
8.0	335.713
8.5	335.068
9.0	334.423
9.5	333.724
10.0	333.026
10.5	332.219
11.0	331.413
11.5	330.499
12.0	329.478
12.5	328.510
13.0	327.435
13.5	326.252
14.0	325.070
14.5	323.833
15.0	322.597
15.5	321.253
16.0	319.909
16.5	318.404
17.0	316.898
17.5	315.232
18.0	313.512
18.5	311.738
19.0	309.856
19.5	307.921
20.0	305.986
20.5	304.104
21.0	302.277
21.5	300.449
22.0	298.675
22.5	296.901
23.0	295.181
23.5	293.407
24.0	291.633
24.5	289.859
25.0	287.977
25.5	285.988
26.0	283.838
26.5	281.580

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CANDELA TABULATION - (Cont.)

27.0	279.215
27.5	276.796
28.0	274.269
28.5	271.742
29.0	269.108
29.5	266.420
30.0	263.625
30.5	260.776
31.0	257.873
31.5	254.863
32.0	251.852
32.5	248.842
33.0	245.778
33.5	242.606
34.0	239.434
34.5	236.209
35.0	232.930
35.5	229.651
36.0	226.318
36.5	222.823
37.0	219.222
37.5	215.512
38.0	211.857
38.5	208.201
39.0	204.492
39.5	200.783
40.0	197.020
40.5	193.203
41.0	189.440
41.5	185.623
42.0	181.753
42.5	177.936
43.0	174.012
43.5	170.088
44.0	166.163
44.5	162.185
45.0	158.261
45.5	154.391
46.0	150.466
46.5	146.596
47.0	142.779
47.5	138.962
48.0	135.146
48.5	131.383
49.0	127.619
49.5	123.910
50.0	120.255
50.5	116.653
51.0	113.105
51.5	109.611
52.0	106.117
52.5	102.676
53.0	99.289
53.5	95.957
54.0	92.731
54.5	89.506

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CANDELA TABULATION - (Cont.)

55.0	86.334
55.5	83.216
56.0	80.152
56.5	77.195
57.0	74.239
57.5	71.336
58.0	68.487
58.5	65.691
59.0	62.950
59.5	60.262
60.0	57.628
60.5	54.994
61.0	52.429
61.5	49.908
62.0	47.468
62.5	45.081
63.0	42.753
63.5	40.458
64.0	38.254
64.5	36.114
65.0	33.996
65.5	31.916
66.0	29.846
66.5	27.809
67.0	25.841
67.5	23.922
68.0	22.062
68.5	20.261
69.0	18.541
69.5	16.853
70.0	15.224
70.5	13.649
71.0	12.154
71.5	10.741
72.0	9.402
72.5	8.150
73.0	6.962
73.5	5.860
74.0	4.833
74.5	3.919
75.0	3.102
75.5	2.371
76.0	1.709
76.5	1.204
77.0	0.887
77.5	0.742
78.0	0.688
78.5	0.640
79.0	0.597
79.5	0.554
80.0	0.511
80.5	0.473
81.0	0.435
81.5	0.398
82.0	0.366
82.5	0.333

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CANDELA TABULATION - (Cont.)

83.0	0.306
83.5	0.280
84.0	0.253
84.5	0.226
85.0	0.204
85.5	0.183
86.0	0.161
86.5	0.140
87.0	0.124
87.5	0.108
88.0	0.091
88.5	0.070
89.0	0.048
89.5	0.032
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
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130.0	0.000
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131.0	0.000
131.5	0.000
132.0	0.000
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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	122.93	N.A.	19.20
0-30	255.04	N.A.	39.90
0-40	399.93	N.A.	62.60
0-60	599.43	N.A.	93.80
0-80	638.66	N.A.	100.00
0-90	638.90	N.A.	100.00
10-90	606.72	N.A.	95.00
20-40	277.00	N.A.	43.40
20-50	398.82	N.A.	62.40
40-70	233.71	N.A.	36.60
60-80	39.22	N.A.	6.10
70-80	5.02	N.A.	0.80
80-90	0.24	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	638.90	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	32.18
10-20	90.74
20-30	132.11
30-40	144.89
40-50	121.82
50-60	77.68
60-70	34.20
70-80	5.02
80-90	0.24
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	64	64	64	64	62	62	62	62	59	59	59	57	57	57	55	55	55	54
1	60	58	56	54	58	57	55	54	54	53	52	52	51	50	50	50	49	48
2	55	52	49	47	54	51	48	46	49	47	45	48	46	44	46	44	43	42
3	51	47	43	40	50	46	43	40	45	42	39	43	41	39	42	40	38	37
4	48	42	38	35	47	42	38	35	40	37	35	39	36	34	38	36	34	33
5	44	38	34	31	43	38	34	31	37	33	31	36	33	30	35	32	30	29
6	41	35	31	28	40	35	31	28	34	30	28	33	30	27	32	29	27	26
7	38	32	28	25	38	32	28	25	31	27	25	30	27	25	29	27	24	24
8	36	30	25	23	35	29	25	23	29	25	22	28	25	22	27	24	22	21
9	34	27	23	21	33	27	23	21	26	23	20	26	23	20	25	22	20	19
10	32	25	21	19	31	25	21	19	25	21	19	24	21	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

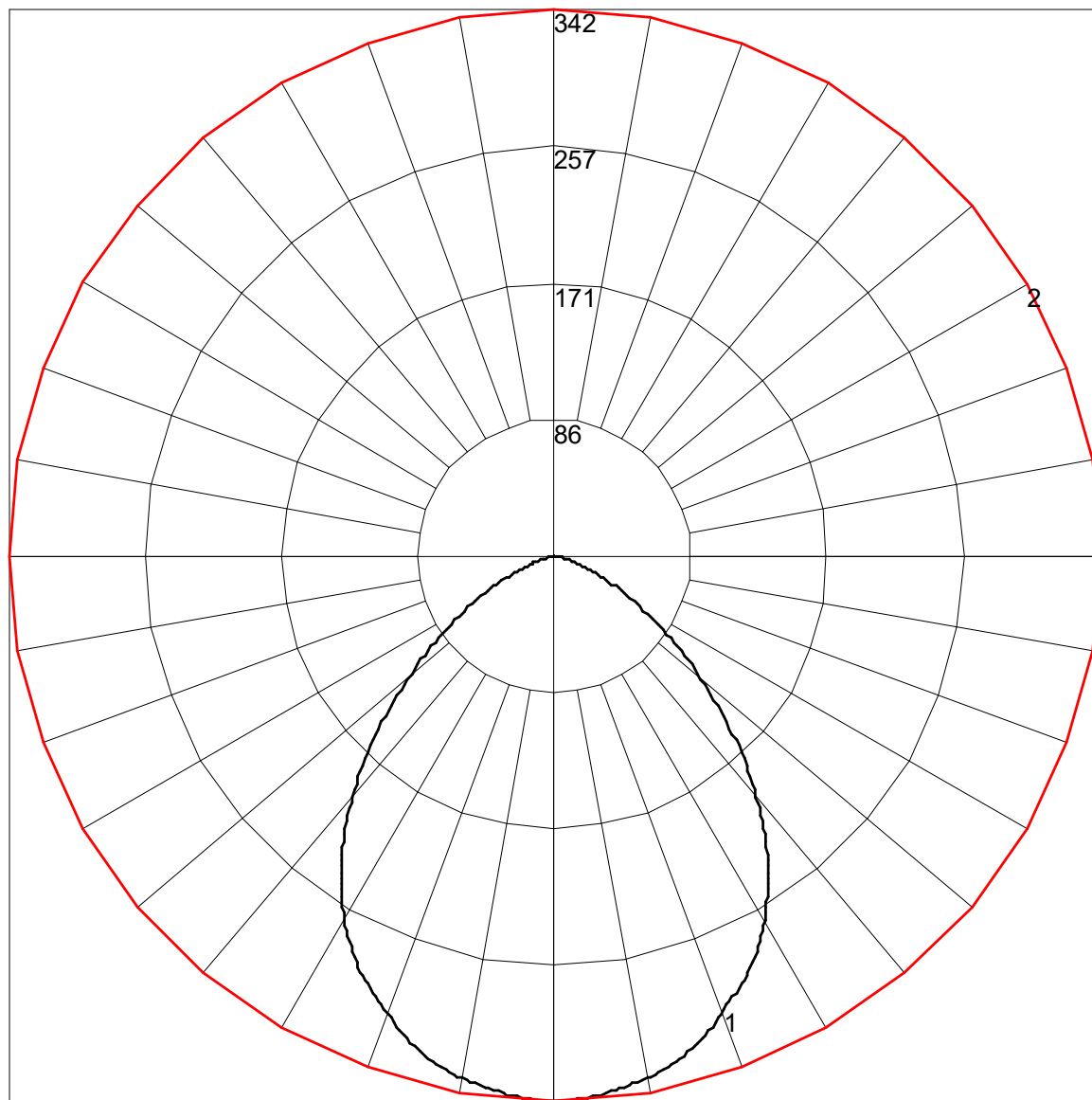
4H	2H	22.3	23.4	22.7	23.8	24.1	22.3	23.4	22.7	23.8	24.1
	3H	22.7	23.6	23.1	24.0	24.4	22.7	23.6	23.1	24.0	24.4
	4H	22.6	23.5	23.1	23.9	24.3	22.6	23.5	23.1	23.9	24.3
	6H	22.6	23.3	23.0	23.7	24.2	22.6	23.3	23.0	23.7	24.2
	8H	22.5	23.2	23.0	23.6	24.1	22.5	23.2	23.0	23.6	24.1
	12H	22.5	23.1	22.9	23.5	24.0	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 = 342.164 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.)