

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-7W-3500K\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #15006535.02

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 16-NOV-2023

[TEST DATE] 10/18/2023

[MANUFAC] H E Williams Inc

[LUMCAT] 4RCD-LS-9CS-WH-DIM-UNV-7W-3500k

[LUMINAIRE] Round plastic housing with white trim and frosted lens

[LAMP] White LEDs

[BALLAST] LED Driver

[OTHER] 24.8 C, 120.036 V, 0.0936374 A, 11.1785 W, 0.994546 PF, 59.971

[MORE] 3 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	573
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	6.52
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.24
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	24177	24177	24177
55	19248	19248	19248
65	13463	13463	13463
75	7199	7199	7199
85	5075	5075	5075

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CANDELA TABULATION

	<u>0</u>
0.0	271.157
0.5	271.157
1.0	271.053
1.5	270.896
2.0	270.739
2.5	270.582
3.0	270.321
3.5	270.059
4.0	269.693
4.5	269.327
5.0	268.909
5.5	268.491
6.0	268.020
6.5	267.497
7.0	266.974
7.5	266.451
8.0	265.876
8.5	265.353
9.0	264.831
9.5	264.308
10.0	263.733
10.5	263.105
11.0	262.425
11.5	261.693
12.0	260.909
12.5	260.125
13.0	259.288
13.5	258.399
14.0	257.458
14.5	256.465
15.0	255.419
15.5	254.373
16.0	253.275
16.5	252.125
17.0	250.870
17.5	249.563
18.0	248.204
18.5	246.740
19.0	245.275
19.5	243.759
20.0	242.191
20.5	240.674
21.0	239.210
21.5	237.799
22.0	236.387
22.5	235.027
23.0	233.668
23.5	232.308
24.0	230.897
24.5	229.485
25.0	228.021
25.5	226.452
26.0	224.832
26.5	223.054

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**CANDELA TABULATION - (Cont.)**

27.0	221.276
27.5	219.394
28.0	217.564
28.5	215.681
29.0	213.695
29.5	211.655
30.0	209.616
30.5	207.472
31.0	205.329
31.5	203.133
32.0	200.989
32.5	198.741
33.0	196.545
33.5	194.296
34.0	192.048
34.5	189.800
35.0	187.551
35.5	185.251
36.0	182.898
36.5	180.545
37.0	178.087
37.5	175.630
38.0	173.173
38.5	170.715
39.0	168.258
39.5	165.748
40.0	163.290
40.5	160.833
41.0	158.376
41.5	155.918
42.0	153.408
42.5	150.951
43.0	148.493
43.5	145.984
44.0	143.474
44.5	140.964
45.0	138.454
45.5	135.945
46.0	133.435
46.5	130.925
47.0	128.468
47.5	126.010
48.0	123.500
48.5	121.043
49.0	118.533
49.5	116.076
50.0	113.566
50.5	111.161
51.0	108.703
51.5	106.246
52.0	103.789
52.5	101.331
53.0	98.926
53.5	96.521
54.0	94.168
54.5	91.763

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CANDELA TABULATION - (Cont.)

55.0	89.410
55.5	87.005
56.0	84.704
56.5	82.456
57.0	80.155
57.5	77.907
58.0	75.658
58.5	73.410
59.0	71.162
59.5	68.966
60.0	66.770
60.5	64.626
61.0	62.482
61.5	60.339
62.0	58.195
62.5	56.156
63.0	54.064
63.5	52.056
64.0	50.022
64.5	48.046
65.0	46.080
65.5	44.166
66.0	42.279
66.5	40.428
67.0	38.619
67.5	36.862
68.0	35.136
68.5	33.437
69.0	31.759
69.5	30.101
70.0	28.470
70.5	26.860
71.0	25.322
71.5	23.848
72.0	22.436
72.5	21.056
73.0	19.728
73.5	18.447
74.0	17.260
74.5	16.136
75.0	15.090
75.5	14.133
76.0	13.255
76.5	12.455
77.0	11.744
77.5	11.116
78.0	10.541
78.5	10.008
79.0	9.485
79.5	8.951
80.0	8.418
80.5	7.885
81.0	7.367
81.5	6.860
82.0	6.363
82.5	5.872

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CANDELA TABULATION - (Cont.)

83.0	5.401
83.5	4.931
84.0	4.465
84.5	4.016
85.0	3.582
85.5	3.158
86.0	2.740
86.5	2.332
87.0	1.919
87.5	1.506
88.0	1.098
88.5	0.695
89.0	0.361
89.5	0.146
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

IES INDOOR REPORT  
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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
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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
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149.5	0.000
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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	97.35	N.A.	17.00
0-30	202.03	N.A.	35.30
0-40	318.98	N.A.	55.70
0-60	505.68	N.A.	88.30
0-80	568.88	N.A.	99.30
0-90	572.95	N.A.	100.00
10-90	547.46	N.A.	95.60
20-40	221.64	N.A.	38.70
20-50	328.31	N.A.	57.30
40-70	232.72	N.A.	40.60
60-80	63.20	N.A.	11.00
70-80	17.18	N.A.	3.00
80-90	4.07	N.A.	0.70
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	572.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	25.50
10-20	71.85
20-30	104.68
30-40	116.95
40-50	106.67
50-60	80.03
60-70	46.02
70-80	17.18
80-90	4.07
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	126	126	126	126	123	123	123	123	117	117	117	112	112	112	108	108	108	106
1	117	112	109	105	114	110	107	103	106	103	100	102	99	97	98	96	94	92
2	107	100	94	88	105	98	92	87	94	89	85	91	87	83	88	85	82	80
3	99	89	81	75	96	88	80	75	84	78	73	82	77	72	79	75	71	69
4	91	80	72	65	89	79	71	65	76	69	64	74	68	63	71	66	62	60
5	85	72	64	57	82	71	63	57	69	62	56	67	61	56	65	59	55	53
6	78	65	57	51	77	65	56	50	63	55	50	61	54	50	59	54	49	47
7	73	60	51	45	71	59	51	45	57	50	45	56	49	44	55	49	44	42
8	68	55	46	41	67	54	46	41	53	46	40	52	45	40	50	44	40	38
9	64	51	42	37	62	50	42	37	49	42	37	48	41	36	47	41	36	34
10	60	47	39	34	59	46	39	34	45	38	33	44	38	33	43	38	33	31

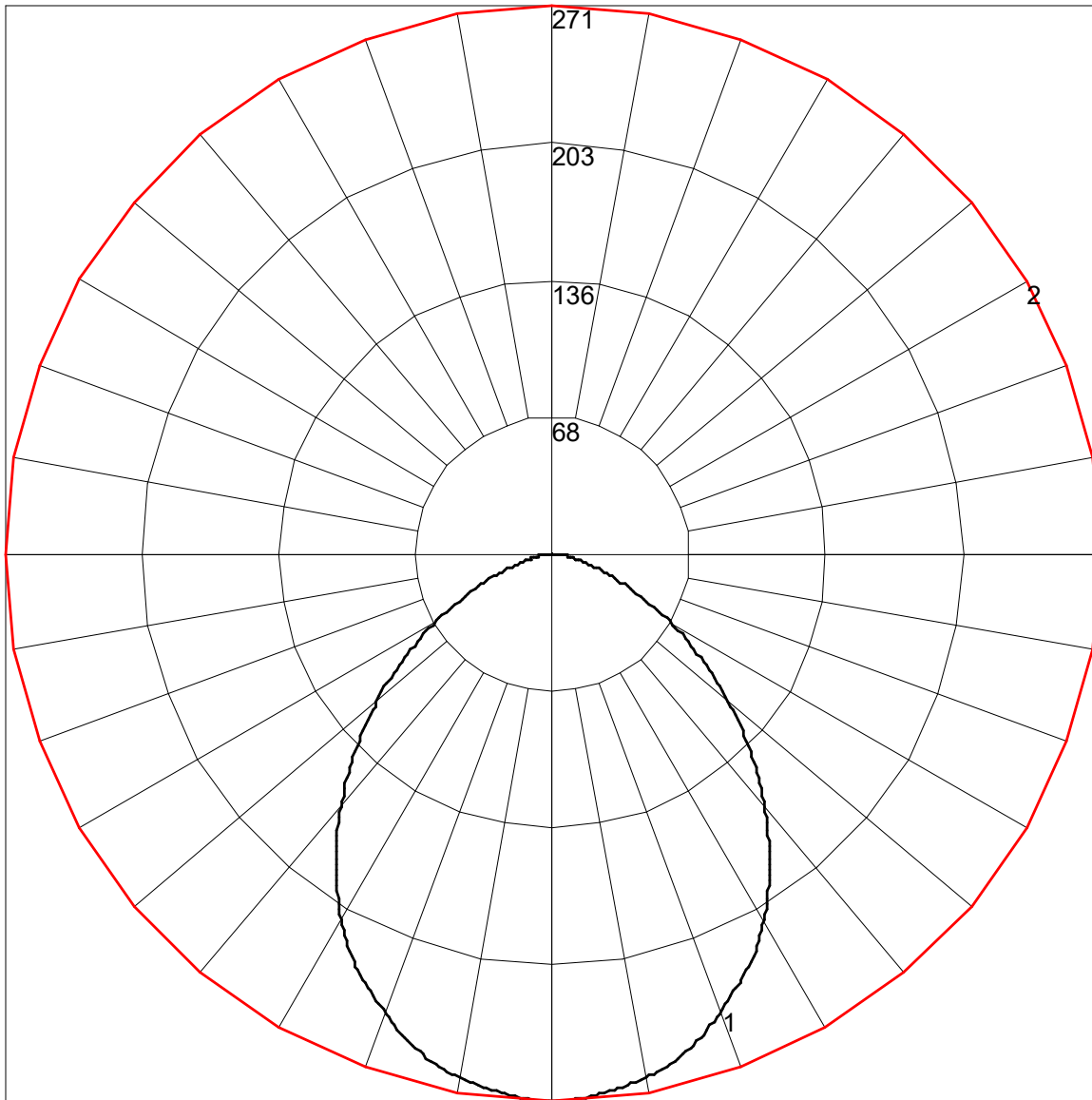
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**UGR TABLE - CORRECTED**

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					UGR Viewed Endwise				
X=2H	Y=2H	20.7	22.1	21.0	22.5	22.8	20.7	22.1	21.0	22.5	22.8
	3H	21.6	22.9	22.0	23.3	23.6	21.6	22.9	22.0	23.3	23.6
	4H	21.8	23.0	22.2	23.4	23.8	21.8	23.0	22.2	23.4	23.8
	6H	21.9	23.1	22.3	23.4	23.8	21.9	23.1	22.3	23.4	23.8
	8H	21.9	23.0	22.4	23.4	23.8	21.9	23.0	22.4	23.4	23.8
	12H	22.0	23.0	22.4	23.4	23.8	22.0	23.0	22.4	23.4	23.8
4H	2H	21.0	22.3	21.4	22.6	23.0	21.0	22.3	21.4	22.6	23.0
	3H	22.1	23.1	22.5	23.5	23.9	22.1	23.1	22.5	23.5	23.9
	4H	22.4	23.3	22.8	23.7	24.1	22.4	23.3	22.8	23.7	24.1
	6H	22.5	23.3	23.0	23.8	24.2	22.5	23.3	23.0	23.8	24.2
	8H	22.6	23.3	23.0	23.8	24.2	22.6	23.3	23.0	23.8	24.2
	12H	22.6	23.3	23.1	23.8	24.2	22.6	23.3	23.1	23.8	24.2
8H	4H	22.4	23.2	22.9	23.6	24.1	22.4	23.2	22.9	23.6	24.1
	6H	22.6	23.3	23.1	23.8	24.2	22.6	23.3	23.1	23.8	24.2
	8H	22.7	23.3	23.2	23.8	24.3	22.7	23.3	23.2	23.8	24.3
	12H	22.8	23.3	23.3	23.8	24.4	22.8	23.3	23.3	23.8	24.4
12H	4H	22.4	23.1	22.9	23.5	24.0	22.4	23.1	22.9	23.5	24.0
	6H	22.6	23.2	23.2	23.7	24.2	22.6	23.2	23.2	23.7	24.2
	8H	22.8	23.2	23.3	23.7	24.3	22.8	23.2	23.3	23.7	24.3

Maximum UGR = 24.4

POLAR GRAPH



Maximum Candela = 271.157 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.)