

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-9W-5000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #15006535.02

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 21-NOV-2023

[TEST DATE] 10/18/2023

[MANUFAC] H E Williams Inc

[LUMCAT] 4RCD-LS-9CS-WH-DIM-UNV-9W-5000k

[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	874
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	9.31
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-9W-5000K_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	36894	36894	36894
55	29372	29372	29372
65	20545	20545	20545
75	10986	10986	10986
85	7744	7744	7744

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CANDELA TABULATION

	<u>0</u>
0.0	413.782
0.5	413.782
1.0	413.623
1.5	413.383
2.0	413.144
2.5	412.905
3.0	412.506
3.5	412.107
4.0	411.548
4.5	410.990
5.0	410.351
5.5	409.713
6.0	408.995
6.5	408.197
7.0	407.399
7.5	406.601
8.0	405.724
8.5	404.926
9.0	404.128
9.5	403.330
10.0	402.452
10.5	401.495
11.0	400.458
11.5	399.341
12.0	398.144
12.5	396.947
13.0	395.670
13.5	394.314
14.0	392.878
14.5	391.362
15.0	389.766
15.5	388.170
16.0	386.495
16.5	384.739
17.0	382.824
17.5	380.830
18.0	378.755
18.5	376.521
19.0	374.287
19.5	371.973
20.0	369.580
20.5	367.266
21.0	365.032
21.5	362.877
22.0	360.723
22.5	358.649
23.0	356.574
23.5	354.500
24.0	352.345
24.5	350.191
25.0	347.957
25.5	345.563
26.0	343.090
26.5	340.377

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CANDELA TABULATION - (Cont.)

27.0	337.664
27.5	334.792
28.0	331.999
28.5	329.127
29.0	326.095
29.5	322.983
30.0	319.871
30.5	316.600
31.0	313.329
31.5	309.978
32.0	306.706
32.5	303.275
33.0	299.924
33.5	296.493
34.0	293.063
34.5	289.632
35.0	286.201
35.5	282.690
36.0	279.100
36.5	275.509
37.0	271.759
37.5	268.009
38.0	264.259
38.5	260.509
39.0	256.759
39.5	252.929
40.0	249.179
40.5	245.429
41.0	241.679
41.5	237.929
42.0	234.099
42.5	230.349
43.0	226.599
43.5	222.769
44.0	218.939
44.5	215.109
45.0	211.279
45.5	207.450
46.0	203.620
46.5	199.790
47.0	196.040
47.5	192.290
48.0	188.460
48.5	184.710
49.0	180.880
49.5	177.130
50.0	173.300
50.5	169.630
51.0	165.880
51.5	162.130
52.0	158.380
52.5	154.630
53.0	150.960
53.5	147.289
54.0	143.699
54.5	140.029

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CANDELA TABULATION - (Cont.)

55.0	136.438
55.5	132.768
56.0	129.257
56.5	125.826
57.0	122.315
57.5	118.885
58.0	115.454
58.5	112.023
59.0	108.592
59.5	105.241
60.0	101.890
60.5	98.618
61.0	95.347
61.5	92.076
62.0	88.804
62.5	85.693
63.0	82.501
63.5	79.437
64.0	76.333
64.5	73.317
65.0	70.317
65.5	67.397
66.0	64.517
66.5	61.692
67.0	58.932
67.5	56.251
68.0	53.618
68.5	51.025
69.0	48.463
69.5	45.934
70.0	43.445
70.5	40.987
71.0	38.641
71.5	36.391
72.0	34.237
72.5	32.131
73.0	30.104
73.5	28.149
74.0	26.338
74.5	24.623
75.0	23.027
75.5	21.567
76.0	20.226
76.5	19.006
77.0	17.920
77.5	16.963
78.0	16.085
78.5	15.271
79.0	14.474
79.5	13.660
80.0	12.846
80.5	12.032
81.0	11.242
81.5	10.468
82.0	9.710
82.5	8.960

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CANDELA TABULATION - (Cont.)

83.0	8.242
83.5	7.524
84.0	6.814
84.5	6.128
85.0	5.466
85.5	4.819
86.0	4.181
86.5	3.559
87.0	2.928
87.5	2.298
88.0	1.676
88.5	1.061
89.0	0.551
89.5	0.223
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
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128.0	0.000
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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	148.55	N.A.	17.00
0-30	308.29	N.A.	35.30
0-40	486.76	N.A.	55.70
0-60	771.66	N.A.	88.30
0-80	868.10	N.A.	99.30
0-90	874.32	N.A.	100.00
10-90	835.41	N.A.	95.50
20-40	338.21	N.A.	38.70
20-50	500.99	N.A.	57.30
40-70	355.13	N.A.	40.60
60-80	96.44	N.A.	11.00
70-80	26.21	N.A.	3.00
80-90	6.22	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	874.32	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	38.91
10-20	109.64
20-30	159.74
30-40	178.47
40-50	162.78
50-60	122.12
60-70	70.23
70-80	26.21
80-90	6.22
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	192	192	192	192	187	187	187	187	179	179	179	171	171	171	164	164	164	161
1	178	171	166	160	174	168	163	158	161	157	153	155	151	148	149	146	144	141
2	164	152	143	135	160	149	141	133	144	137	130	139	133	127	134	129	125	121
3	151	136	124	115	147	134	123	114	129	120	112	125	117	110	121	114	108	105
4	139	122	109	100	136	120	108	99	116	106	98	112	104	96	109	101	95	92
5	129	110	97	87	126	108	96	87	105	94	86	102	92	85	99	91	84	81
6	120	100	87	77	117	98	86	77	96	85	76	93	83	76	91	82	75	72
7	111	91	78	69	109	90	78	69	88	76	68	85	75	68	83	74	67	64
8	104	84	71	62	102	83	70	62	81	69	62	79	69	61	77	68	61	58
9	98	77	65	56	95	76	64	56	74	64	56	73	63	56	71	62	55	53
10	92	72	59	51	90	71	59	51	69	58	51	68	58	51	66	57	51	48

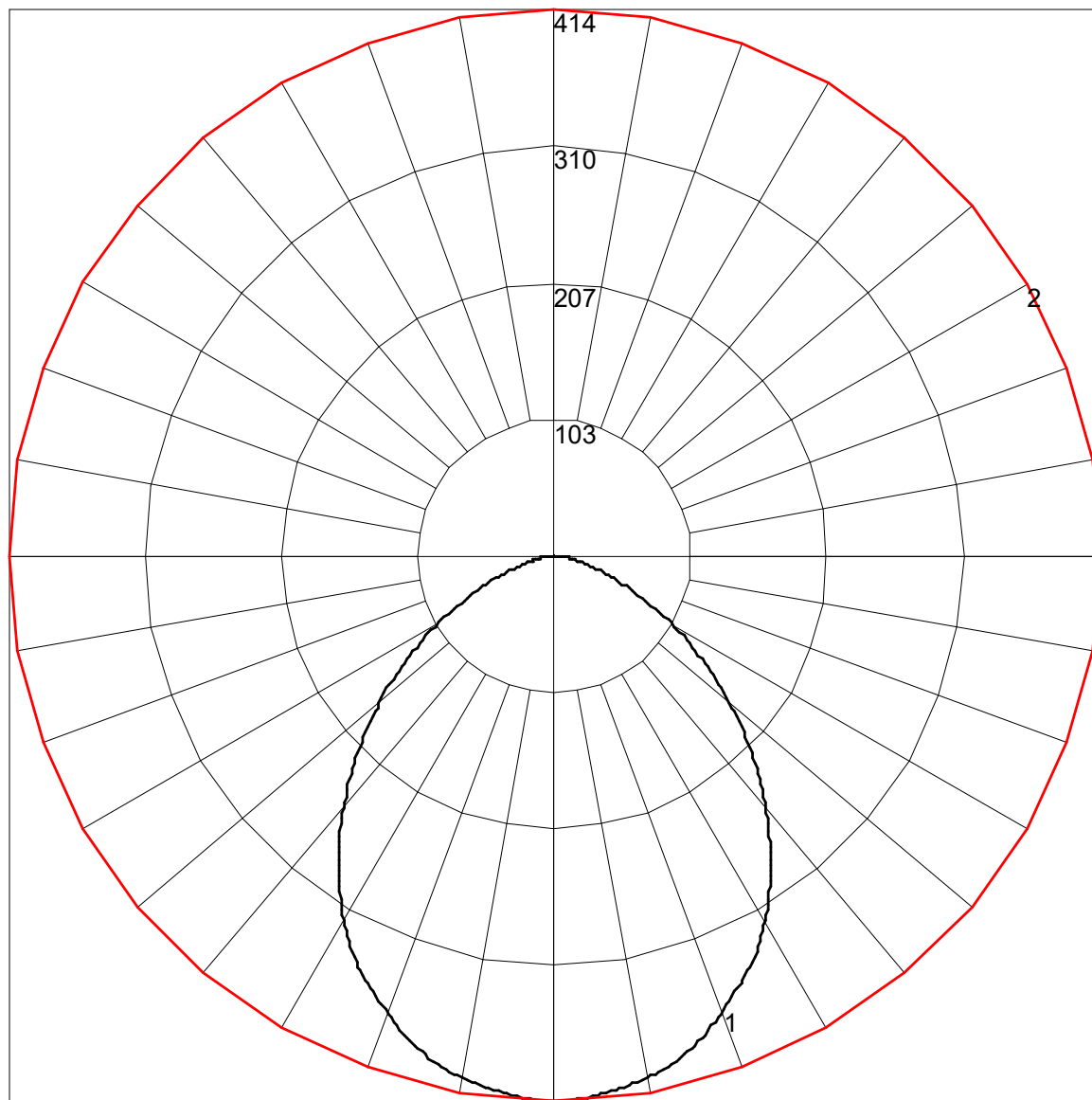
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UGR TABLE - CORRECTED

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 = 413.782 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.)