

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-12W-3500K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #15006535.02

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 17-NOV-2023

[TEST DATE] 10/18/2023

[MANUFAC] H E Williams Inc

[LUMCAT] 4RCD-LS-9CS-WH-DIM-UNV-12W-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	1104
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	11.92
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-12W-3500K_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	46593	46593	46593
55	37093	37093	37093
65	25946	25946	25946
75	13873	13873	13873
85	9778	9778	9778

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CANDELA TABULATION

	<u>0</u>
0.0	522.560
0.5	522.560
1.0	522.358
1.5	522.056
2.0	521.753
2.5	521.451
3.0	520.947
3.5	520.443
4.0	519.738
4.5	519.033
5.0	518.227
5.5	517.421
6.0	516.514
6.5	515.506
7.0	514.498
7.5	513.491
8.0	512.382
8.5	511.375
9.0	510.367
9.5	509.359
10.0	508.251
10.5	507.042
11.0	505.732
11.5	504.321
12.0	502.810
12.5	501.298
13.0	499.686
13.5	497.973
14.0	496.159
14.5	494.245
15.0	492.230
15.5	490.214
16.0	488.098
16.5	485.882
17.0	483.463
17.5	480.944
18.0	478.324
18.5	475.503
19.0	472.682
19.5	469.759
20.0	466.737
20.5	463.814
21.0	460.993
21.5	458.272
22.0	455.552
22.5	452.932
23.0	450.312
23.5	447.692
24.0	444.972
24.5	442.251
25.0	439.430
25.5	436.407
26.0	433.283
26.5	429.857

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-12W-3500K_.IES****CANDELA TABULATION - (Cont.)**

27.0	426.431
27.5	422.804
28.0	419.277
28.5	415.649
29.0	411.820
29.5	407.891
30.0	403.961
30.5	399.830
31.0	395.698
31.5	391.466
32.0	387.335
32.5	383.002
33.0	378.770
33.5	374.437
34.0	370.104
34.5	365.772
35.0	361.439
35.5	357.005
36.0	352.471
36.5	347.936
37.0	343.200
37.5	338.465
38.0	333.729
38.5	328.993
39.0	324.257
39.5	319.420
40.0	314.684
40.5	309.949
41.0	305.213
41.5	300.477
42.0	295.640
42.5	290.904
43.0	286.168
43.5	281.332
44.0	276.495
44.5	271.658
45.0	266.822
45.5	261.985
46.0	257.148
46.5	252.312
47.0	247.576
47.5	242.840
48.0	238.003
48.5	233.268
49.0	228.431
49.5	223.695
50.0	218.858
50.5	214.223
51.0	209.487
51.5	204.751
52.0	200.016
52.5	195.280
53.0	190.645
53.5	186.009
54.0	181.475
54.5	176.840

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55.0	172.306
55.5	167.670
56.0	163.237
56.5	158.904
57.0	154.470
57.5	150.138
58.0	145.805
58.5	141.472
59.0	137.139
59.5	132.907
60.0	128.675
60.5	124.544
61.0	120.412
61.5	116.281
62.0	112.150
62.5	108.220
63.0	104.189
63.5	100.320
64.0	96.400
64.5	92.592
65.0	88.803
65.5	85.115
66.0	81.477
66.5	77.910
67.0	74.424
67.5	71.038
68.0	67.713
68.5	64.438
69.0	61.204
69.5	58.010
70.0	54.866
70.5	51.762
71.0	48.800
71.5	45.958
72.0	43.238
72.5	40.577
73.0	38.018
73.5	35.549
74.0	33.262
74.5	31.096
75.0	29.080
75.5	27.236
76.0	25.544
76.5	24.002
77.0	22.631
77.5	21.422
78.0	20.314
78.5	19.286
79.0	18.278
79.5	17.251
80.0	16.223
80.5	15.195
81.0	14.198
81.5	13.220
82.0	12.263
82.5	11.316

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CANDELA TABULATION - (Cont.)

83.0	10.409
83.5	9.502
84.0	8.605
84.5	7.739
85.0	6.902
85.5	6.086
86.0	5.280
86.5	4.494
87.0	3.698
87.5	2.902
88.0	2.116
88.5	1.340
89.0	0.695
89.5	0.282
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**PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-12W-3500K_.IES****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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-12W-3500K_.IES****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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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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Zone	Lumens	%Lamp	%Fixt
0-20	187.60	N.A.	17.00
0-30	389.33	N.A.	35.30
0-40	614.72	N.A.	55.70
0-60	974.52	N.A.	88.30
0-80	1096.31	N.A.	99.30
0-90	1104.16	N.A.	100.00
10-90	1055.03	N.A.	95.60
20-40	427.12	N.A.	38.70
20-50	632.69	N.A.	57.30
40-70	448.49	N.A.	40.60
60-80	121.79	N.A.	11.00
70-80	33.10	N.A.	3.00
80-90	7.85	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	1104.16	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	49.13
10-20	138.46
20-30	201.74
30-40	225.39
40-50	205.57
50-60	154.23
60-70	88.69
70-80	33.10
80-90	7.85
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	84	77	71	91	83	76	71	80	74	70	77	73	68	75	71	67	65
4	87	76	68	62	84	75	67	61	72	66	61	70	64	60	68	63	59	57
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50
6	74	62	54	48	73	61	53	48	59	52	47	58	52	47	56	51	47	45
7	69	57	49	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40
8	65	52	44	39	63	51	44	38	50	43	38	49	43	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	35	44	39	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	31	30

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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	23.1	24.6	23.5	25.0	25.3	23.1	24.6	23.5	25.0	25.3
	3H	24.1	25.4	24.5	25.8	26.1	24.1	25.4	24.5	25.8	26.1
	4H	24.3	25.5	24.7	25.9	26.3	24.3	25.5	24.7	25.9	26.3
	6H	24.4	25.5	24.8	25.9	26.3	24.4	25.5	24.8	25.9	26.3
	8H	24.4	25.5	24.9	25.9	26.3	24.4	25.5	24.9	25.9	26.3
	12H	24.4	25.5	24.9	25.9	26.3	24.4	25.5	24.9	25.9	26.3

UGR Viewed Endwise

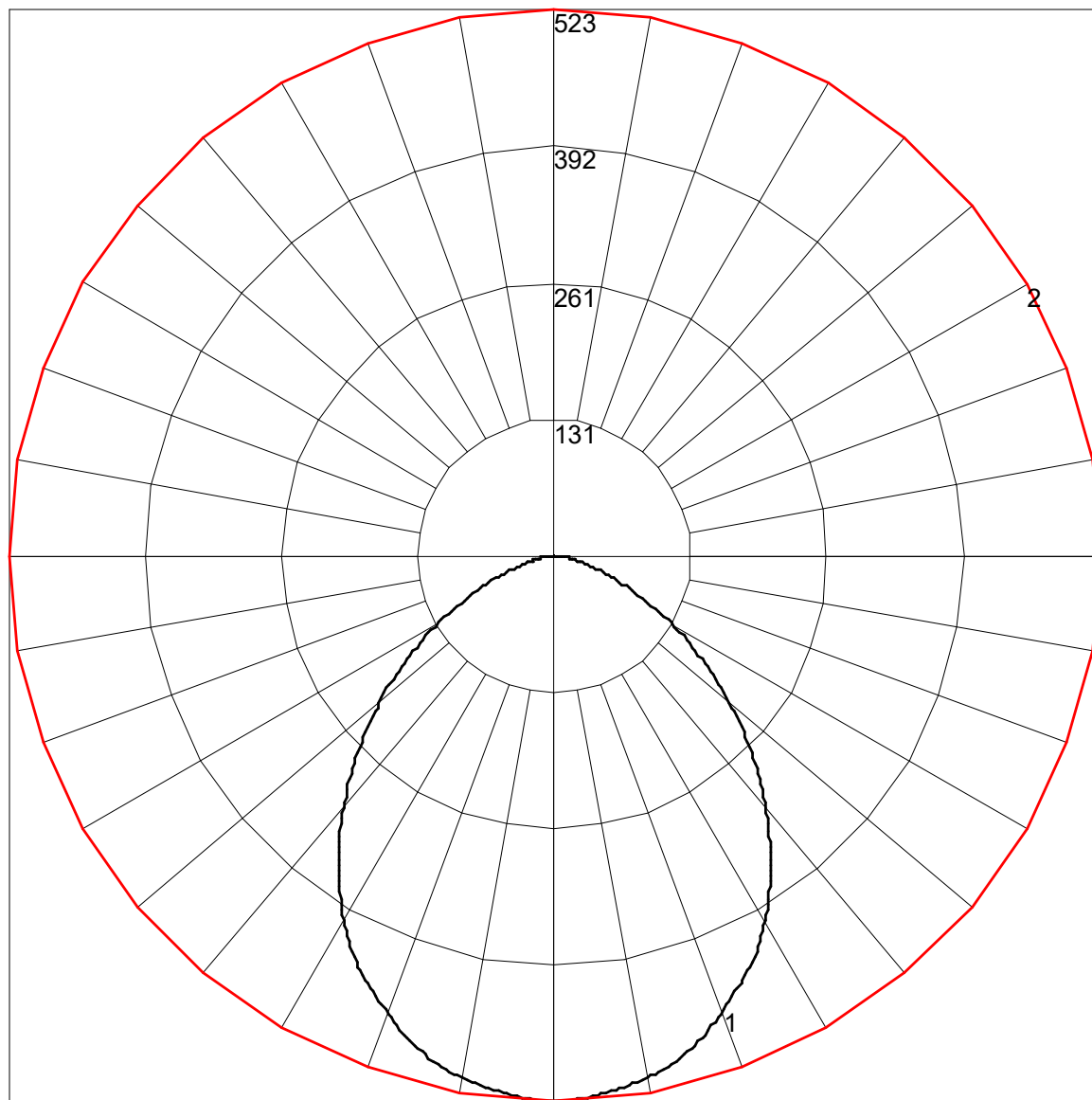
4H	2H	23.5	24.8	23.9	25.1	25.5	23.5	24.8	23.9	25.1	25.5
	3H	24.6	25.6	25.0	26.0	26.4	24.6	25.6	25.0	26.0	26.4
	4H	24.9	25.8	25.3	26.2	26.6	24.9	25.8	25.3	26.2	26.6
	6H	25.0	25.8	25.5	26.3	26.7	25.0	25.8	25.5	26.3	26.7
	8H	25.1	25.8	25.5	26.3	26.7	25.1	25.8	25.5	26.3	26.7
	12H	25.1	25.8	25.6	26.3	26.7	25.1	25.8	25.6	26.3	26.7

8H	4H	24.9	25.7	25.4	26.1	26.6	24.9	25.7	25.4	26.1	26.6
	6H	25.1	25.8	25.6	26.3	26.7	25.1	25.8	25.6	26.3	26.7
	8H	25.2	25.8	25.7	26.3	26.8	25.2	25.8	25.7	26.3	26.8
	12H	25.3	25.8	25.8	26.3	26.8	25.3	25.8	25.8	26.3	26.8

12H	4H	24.9	25.6	25.4	26.0	26.5	24.9	25.6	25.4	26.0	26.5
	6H	25.1	25.7	25.7	26.2	26.7	25.1	25.7	25.7	26.2	26.7
	8H	25.2	25.7	25.8	26.2	26.8	25.2	25.7	25.8	26.2	26.8

Maximum UGR = 26.8

POLAR GRAPH



Maximum Candela = 522.56 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.)