

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-9W-3500K_.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-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	835
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	92
Total Luminaire Watts	9.12
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-3500K_.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	35230	35230	35230
55	28047	28047	28047
65	19618	19618	19618
75	10490	10490	10490
85	7394	7394	7394

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

CANDELA TABULATION

	<u>0</u>
0.0	395.115
0.5	395.115
1.0	394.963
1.5	394.734
2.0	394.506
2.5	394.277
3.0	393.896
3.5	393.515
4.0	392.982
4.5	392.449
5.0	391.839
5.5	391.230
6.0	390.544
6.5	389.782
7.0	389.020
7.5	388.258
8.0	387.420
8.5	386.658
9.0	385.896
9.5	385.135
10.0	384.296
10.5	383.382
11.0	382.392
11.5	381.325
12.0	380.182
12.5	379.039
13.0	377.820
13.5	376.525
14.0	375.154
14.5	373.706
15.0	372.182
15.5	370.659
16.0	369.059
16.5	367.383
17.0	365.554
17.5	363.649
18.0	361.668
18.5	359.535
19.0	357.402
19.5	355.192
20.0	352.907
20.5	350.697
21.0	348.564
21.5	346.507
22.0	344.450
22.5	342.469
23.0	340.488
23.5	338.507
24.0	336.450
24.5	334.393
25.0	332.259
25.5	329.974
26.0	327.612
26.5	325.022

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

CANDELA TABULATION - (Cont.)

27.0	322.431
27.5	319.688
28.0	317.022
28.5	314.279
29.0	311.384
29.5	308.412
30.0	305.441
30.5	302.317
31.0	299.194
31.5	295.994
32.0	292.870
32.5	289.594
33.0	286.394
33.5	283.118
34.0	279.842
34.5	276.565
35.0	273.289
35.5	269.937
36.0	266.509
36.5	263.080
37.0	259.499
37.5	255.918
38.0	252.337
38.5	248.757
39.0	245.176
39.5	241.519
40.0	237.938
40.5	234.357
41.0	230.776
41.5	227.195
42.0	223.538
42.5	219.957
43.0	216.376
43.5	212.719
44.0	209.062
44.5	205.405
45.0	201.748
45.5	198.091
46.0	194.434
46.5	190.777
47.0	187.196
47.5	183.615
48.0	179.958
48.5	176.377
49.0	172.720
49.5	169.139
50.0	165.482
50.5	161.977
51.0	158.397
51.5	154.816
52.0	151.235
52.5	147.654
53.0	144.149
53.5	140.645
54.0	137.216
54.5	133.711

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

CANDELA TABULATION - (Cont.)

55.0	130.283
55.5	126.778
56.0	123.426
56.5	120.150
57.0	116.797
57.5	113.521
58.0	110.245
58.5	106.969
59.0	103.693
59.5	100.493
60.0	97.293
60.5	94.169
61.0	91.046
61.5	87.922
62.0	84.798
62.5	81.827
63.0	78.779
63.5	75.854
64.0	72.890
64.5	70.010
65.0	67.145
65.5	64.357
66.0	61.606
66.5	58.909
67.0	56.273
67.5	53.713
68.0	51.199
68.5	48.723
69.0	46.277
69.5	43.862
70.0	41.485
70.5	39.138
71.0	36.898
71.5	34.750
72.0	32.693
72.5	30.681
73.0	28.746
73.5	26.879
74.0	25.150
74.5	23.512
75.0	21.988
75.5	20.594
76.0	19.314
76.5	18.148
77.0	17.112
77.5	16.198
78.0	15.360
78.5	14.583
79.0	13.821
79.5	13.044
80.0	12.266
80.5	11.489
81.0	10.735
81.5	9.996
82.0	9.272
82.5	8.556

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

CANDELA TABULATION - (Cont.)

83.0	7.870
83.5	7.185
84.0	6.507
84.5	5.851
85.0	5.219
85.5	4.602
86.0	3.992
86.5	3.398
87.0	2.796
87.5	2.194
88.0	1.600
88.5	1.013
89.0	0.526
89.5	0.213
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-9W-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-9W-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

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

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

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

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	141.85	N.A.	17.00
0-30	294.38	N.A.	35.30
0-40	464.80	N.A.	55.70
0-60	736.85	N.A.	88.30
0-80	828.94	N.A.	99.30
0-90	834.87	N.A.	100.00
10-90	797.72	N.A.	95.50
20-40	322.95	N.A.	38.70
20-50	478.39	N.A.	57.30
40-70	339.11	N.A.	40.60
60-80	92.09	N.A.	11.00
70-80	25.03	N.A.	3.00
80-90	5.94	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	834.87	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	37.15
10-20	104.69
20-30	152.54
30-40	170.42
40-50	155.43
50-60	116.62
60-70	67.06
70-80	25.03
80-90	5.94
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

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

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	183	183	183	183	179	179	179	179	171	171	171	164	164	164	157	157	157	154
1	170	164	158	153	166	160	155	151	154	150	146	148	145	141	142	140	137	134
2	157	146	136	129	153	143	134	127	137	130	124	132	127	122	128	123	119	116
3	144	130	119	110	141	128	117	109	123	114	107	119	112	105	115	109	103	100
4	133	117	104	95	130	115	103	94	111	101	93	107	99	92	104	97	91	88
5	123	105	93	83	120	103	92	83	100	90	82	97	88	81	95	87	80	77
6	114	95	83	74	112	94	82	73	91	81	73	89	79	72	87	78	72	69
7	106	87	75	66	104	86	74	66	84	73	65	81	72	65	79	71	64	61
8	99	80	68	59	97	79	67	59	77	66	59	75	65	58	73	65	58	55
9	93	74	62	54	91	73	61	54	71	61	53	70	60	53	68	59	53	50
10	88	68	57	49	86	68	56	49	66	56	49	65	55	49	63	55	48	46

IES INDOOR REPORT

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

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

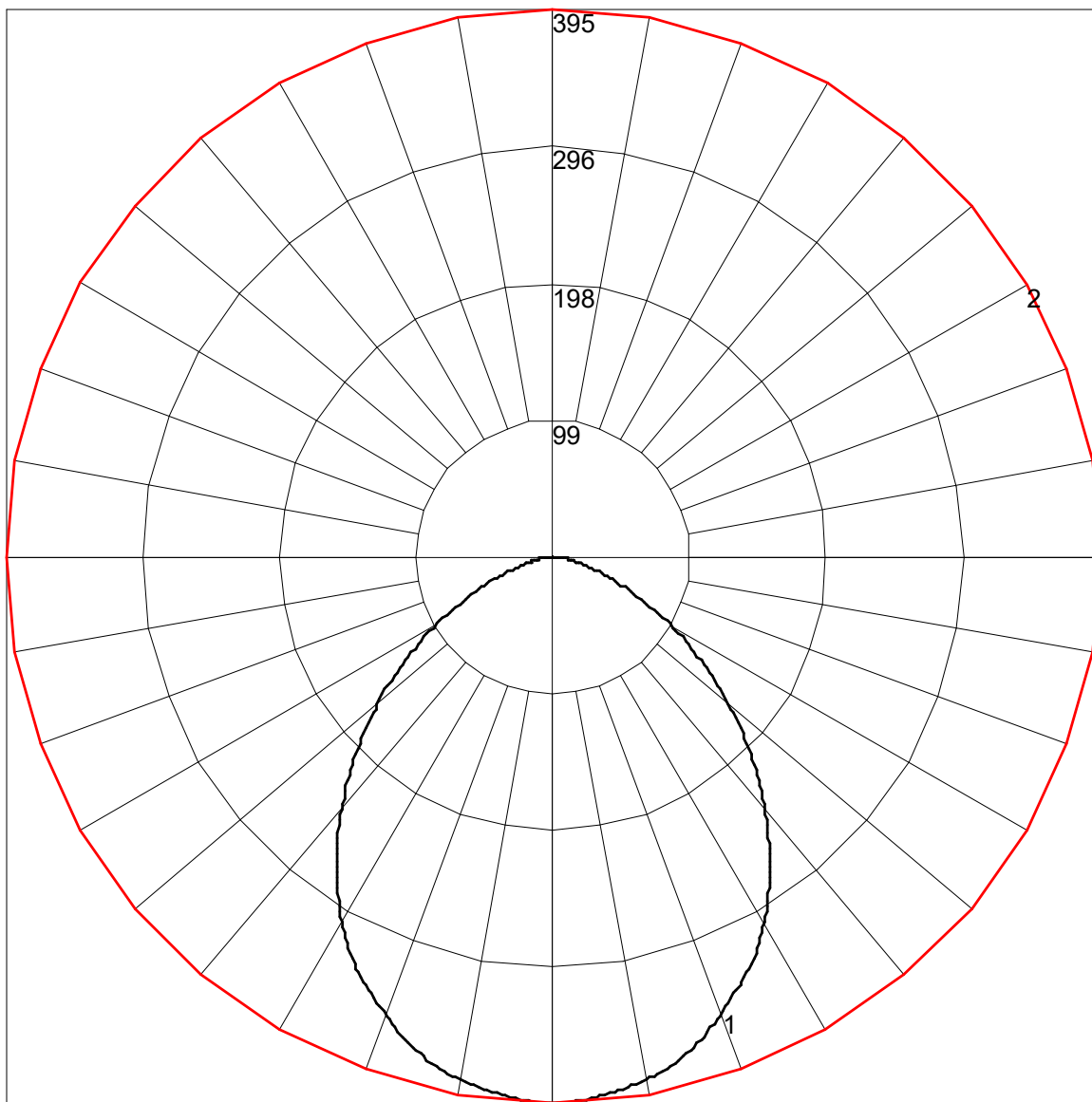
X=2H	Y=2H	20.7	22.1	21.0	22.5	22.8	20.7	22.1	21.0	22.5	22.8
	3H	21.6	22.9	22.0	23.3	23.6	21.6	22.9	22.0	23.3	23.6
	4H	21.8	23.0	22.2	23.4	23.8	21.8	23.0	22.2	23.4	23.8
	6H	21.9	23.1	22.3	23.4	23.8	21.9	23.1	22.3	23.4	23.8
	8H	21.9	23.0	22.4	23.4	23.8	21.9	23.0	22.4	23.4	23.8
	12H	22.0	23.0	22.4	23.4	23.8	22.0	23.0	22.4	23.4	23.8

UGR Viewed Endwise

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 = 395.115 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.)