

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-3000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #15006535.03

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 21 NOV, 2023

[TEST DATE] 10/18/2023

[MANUFAC] H E Williams Inc

[LUMCAT] 4RCD-LS-9CS-SS-DIM-UNV-12W-3000k

[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	1144
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	92
Total Luminaire Watts	12.42
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-3000K_.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	49484	49484	49484
55	33279	33279	33279
65	17785	17785	17785
75	2650	2650	2650
85	519	519	519

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-3000K_.IES

CANDELA TABULATION

	<u>0</u>
0.0	612.671
0.5	612.574
1.0	612.478
1.5	612.189
2.0	611.804
2.5	611.323
3.0	610.746
3.5	610.072
4.0	609.302
4.5	608.532
5.0	607.665
5.5	606.703
6.0	605.644
6.5	604.585
7.0	603.430
7.5	602.275
8.0	601.120
8.5	599.965
9.0	598.810
9.5	597.558
10.0	596.307
10.5	594.863
11.0	593.419
11.5	591.783
12.0	589.954
12.5	588.222
13.0	586.296
13.5	584.179
14.0	582.061
14.5	579.847
15.0	577.633
15.5	575.227
16.0	572.821
16.5	570.125
17.0	567.430
17.5	564.446
18.0	561.366
18.5	558.190
19.0	554.821
19.5	551.355
20.0	547.890
20.5	544.521
21.0	541.249
21.5	537.976
22.0	534.799
22.5	531.623
23.0	528.543
23.5	525.366
24.0	522.190
24.5	519.013
25.0	515.644
25.5	512.083
26.0	508.233
26.5	504.190

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-3000K_.IES

CANDELA TABULATION - (Cont.)

27.0	499.955
27.5	495.623
28.0	491.099
28.5	486.575
29.0	481.858
29.5	477.046
30.0	472.040
30.5	466.939
31.0	461.741
31.5	456.351
32.0	450.960
32.5	445.570
33.0	440.083
33.5	434.404
34.0	428.725
34.5	422.950
35.0	417.078
35.5	411.206
36.0	405.239
36.5	398.982
37.0	392.533
37.5	385.891
38.0	379.346
38.5	372.800
39.0	366.159
39.5	359.517
40.0	352.779
40.5	345.945
41.0	339.207
41.5	332.373
42.0	325.442
42.5	318.608
43.0	311.581
43.5	304.555
44.0	297.528
44.5	290.405
45.0	283.378
45.5	276.448
46.0	269.421
46.5	262.491
47.0	255.656
47.5	248.822
48.0	241.988
48.5	235.250
49.0	228.512
49.5	221.871
50.0	215.325
50.5	208.876
51.0	202.523
51.5	196.266
52.0	190.010
52.5	183.849
53.0	177.785
53.5	171.817
54.0	166.042
54.5	160.267

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-3000K_.IES

CANDELA TABULATION - (Cont.)

55.0	154.587
55.5	149.005
56.0	143.518
56.5	138.224
57.0	132.930
57.5	127.732
58.0	122.630
58.5	117.625
59.0	112.716
59.5	107.903
60.0	103.187
60.5	98.470
61.0	93.879
61.5	89.364
62.0	84.994
62.5	80.720
63.0	76.553
63.5	72.442
64.0	68.496
64.5	64.665
65.0	60.872
65.5	57.147
66.0	53.441
66.5	49.793
67.0	46.270
67.5	42.834
68.0	39.504
68.5	36.279
69.0	33.199
69.5	30.176
70.0	27.260
70.5	24.439
71.0	21.764
71.5	19.232
72.0	16.835
72.5	14.592
73.0	12.465
73.5	10.492
74.0	8.653
74.5	7.017
75.0	5.554
75.5	4.245
76.0	3.061
76.5	2.156
77.0	1.588
77.5	1.328
78.0	1.232
78.5	1.145
79.0	1.068
79.5	0.991
80.0	0.914
80.5	0.847
81.0	0.780
81.5	0.712
82.0	0.655
82.5	0.597

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-3000K_.IES

CANDELA TABULATION - (Cont.)

83.0	0.549
83.5	0.501
84.0	0.452
84.5	0.404
85.0	0.366
85.5	0.327
86.0	0.289
86.5	0.250
87.0	0.221
87.5	0.193
88.0	0.164
88.5	0.125
89.0	0.087
89.5	0.058
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-SS-DIM-UNV-12W-3000K_.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-SS-DIM-UNV-12W-3000K_.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-SS-DIM-UNV-12W-3000K_.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-SS-DIM-UNV-12W-3000K_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	220.11	N.A.	19.20
0-30	456.67	N.A.	39.90
0-40	716.10	N.A.	62.60
0-60	1073.33	N.A.	93.80
0-80	1143.56	N.A.	100.00
0-90	1144.00	N.A.	100.00
10-90	1086.37	N.A.	95.00
20-40	495.99	N.A.	43.40
20-50	714.12	N.A.	62.40
40-70	418.47	N.A.	36.60
60-80	70.23	N.A.	6.10
70-80	8.98	N.A.	0.80
80-90	0.44	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	1144.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	57.63
10-20	162.49
20-30	236.56
30-40	259.43
40-50	218.14
50-60	139.09
60-70	61.25
70-80	8.98
80-90	0.44
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-SS-DIM-UNV-12W-3000K_.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	114	114	114	114	111	111	111	111	106	106	106	102	102	102	98	98	98	96
1	107	103	100	98	104	101	99	96	97	95	93	94	92	90	90	89	88	86
2	99	93	88	84	97	91	87	83	88	84	81	85	82	79	82	80	77	75
3	92	84	77	72	90	82	77	72	80	75	71	77	73	69	75	71	68	66
4	85	76	69	63	83	75	68	63	72	67	62	70	65	61	68	64	61	59
5	79	69	61	56	77	68	61	56	66	60	55	64	59	55	62	58	54	52
6	74	63	55	50	72	62	55	50	60	54	49	59	53	49	57	52	49	47
7	69	57	50	45	67	57	50	45	55	49	44	54	48	44	53	48	44	42
8	64	53	46	41	63	52	45	40	51	45	40	50	44	40	49	44	40	38
9	60	49	42	37	59	48	42	37	47	41	37	46	41	37	45	40	36	35
10	57	45	38	34	56	45	38	34	44	38	34	43	37	34	42	37	33	32

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-12W-3000K_.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

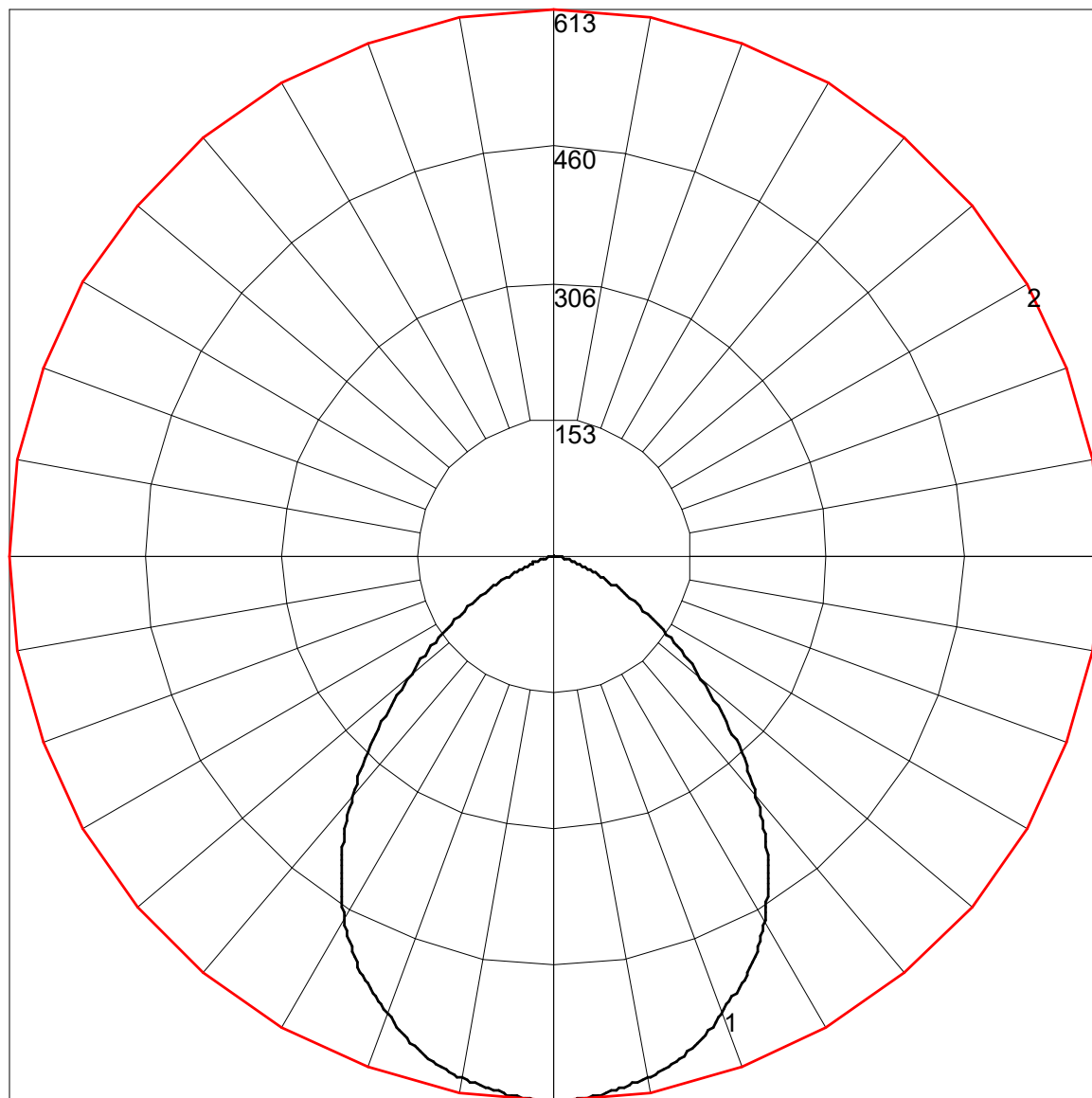
X=2H	Y=2H	22.1	23.5	22.5	23.8	24.1	22.1	23.5	22.5	23.8	24.1
	3H	22.5	23.7	22.8	24.0	24.4	22.5	23.7	22.8	24.0	24.4
	4H	22.4	23.6	22.8	23.9	24.3	22.4	23.6	22.8	23.9	24.3
	6H	22.3	23.4	22.7	23.8	24.2	22.3	23.4	22.7	23.8	24.2
	8H	22.3	23.3	22.7	23.7	24.1	22.3	23.3	22.7	23.7	24.1
	12H	22.3	23.2	22.7	23.6	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 = 612.671 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.)