

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-12W-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-12W-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	1149
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	12.23
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-5000K_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	48489	48489	48489
55	38602	38602	38602
65	27001	27001	27001
75	14438	14438	14438
85	10176	10176	10176

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CANDELA TABULATION

	<u>0</u>
0.0	543.823
0.5	543.823
1.0	543.613
1.5	543.299
2.0	542.984
2.5	542.670
3.0	542.145
3.5	541.621
4.0	540.887
4.5	540.153
5.0	539.314
5.5	538.475
6.0	537.531
6.5	536.483
7.0	535.434
7.5	534.385
8.0	533.232
8.5	532.183
9.0	531.135
9.5	530.086
10.0	528.933
10.5	527.674
11.0	526.311
11.5	524.843
12.0	523.270
12.5	521.697
13.0	520.019
13.5	518.236
14.0	516.349
14.5	514.356
15.0	512.259
15.5	510.162
16.0	507.960
16.5	505.653
17.0	503.136
17.5	500.514
18.0	497.788
18.5	494.852
19.0	491.916
19.5	488.875
20.0	485.729
20.5	482.688
21.0	479.751
21.5	476.920
22.0	474.089
22.5	471.362
23.0	468.636
23.5	465.909
24.0	463.078
24.5	460.247
25.0	457.311
25.5	454.165
26.0	450.914
26.5	447.349

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-12W-5000K_.IES****CANDELA TABULATION - (Cont.)**

27.0	443.783
27.5	440.008
28.0	436.338
28.5	432.563
29.0	428.578
29.5	424.488
30.0	420.399
30.5	416.099
31.0	411.800
31.5	407.395
32.0	403.096
32.5	398.587
33.0	394.183
33.5	389.674
34.0	385.164
34.5	380.655
35.0	376.146
35.5	371.532
36.0	366.813
36.5	362.094
37.0	357.166
37.5	352.237
38.0	347.309
38.5	342.380
39.0	337.451
39.5	332.418
40.0	327.489
40.5	322.561
41.0	317.632
41.5	312.704
42.0	307.670
42.5	302.742
43.0	297.813
43.5	292.779
44.0	287.746
44.5	282.713
45.0	277.679
45.5	272.646
46.0	267.612
46.5	262.579
47.0	257.650
47.5	252.722
48.0	247.688
48.5	242.759
49.0	237.726
49.5	232.797
50.0	227.764
50.5	222.940
51.0	218.012
51.5	213.083
52.0	208.154
52.5	203.226
53.0	198.402
53.5	193.578
54.0	188.860
54.5	184.036

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55.0	179.317
55.5	174.493
56.0	169.879
56.5	165.370
57.0	160.756
57.5	156.247
58.0	151.738
58.5	147.229
59.0	142.720
59.5	138.315
60.0	133.911
60.5	129.612
61.0	125.312
61.5	121.013
62.0	116.713
62.5	112.624
63.0	108.429
63.5	104.402
64.0	100.323
64.5	96.359
65.0	92.416
65.5	88.578
66.0	84.793
66.5	81.081
67.0	77.452
67.5	73.929
68.0	70.468
68.5	67.060
69.0	63.694
69.5	60.370
70.0	57.098
70.5	53.868
71.0	50.785
71.5	47.828
72.0	44.997
72.5	42.229
73.0	39.565
73.5	36.996
74.0	34.616
74.5	32.361
75.0	30.264
75.5	28.345
76.0	26.583
76.5	24.979
77.0	23.552
77.5	22.294
78.0	21.141
78.5	20.071
79.0	19.022
79.5	17.953
80.0	16.883
80.5	15.813
81.0	14.775
81.5	13.758
82.0	12.762
82.5	11.776

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CANDELA TABULATION - (Cont.)

83.0	10.832
83.5	9.889
84.0	8.955
84.5	8.054
85.0	7.183
85.5	6.334
86.0	5.495
86.5	4.677
87.0	3.848
87.5	3.020
88.0	2.202
88.5	1.395
89.0	0.724
89.5	0.294
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-5000K_.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

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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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Zone	Lumens	%Lamp	%Fixt
0-20	195.23	N.A.	17.00
0-30	405.18	N.A.	35.30
0-40	639.74	N.A.	55.70
0-60	1014.17	N.A.	88.30
0-80	1140.92	N.A.	99.30
0-90	1149.09	N.A.	100.00
10-90	1097.96	N.A.	95.60
20-40	444.50	N.A.	38.70
20-50	658.44	N.A.	57.30
40-70	466.74	N.A.	40.60
60-80	126.75	N.A.	11.00
70-80	34.45	N.A.	3.00
80-90	8.17	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	1149.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	51.13
10-20	144.10
20-30	209.94
30-40	234.56
40-50	213.93
50-60	160.51
60-70	92.30
70-80	34.45
80-90	8.17
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	252	252	252	252	246	246	246	246	235	235	235	225	225	225	216	216	216	212
1	234	225	218	211	228	221	214	207	212	206	201	204	199	195	196	192	189	185
2	215	200	188	177	210	196	185	175	189	179	171	182	174	167	176	170	164	159
3	198	179	163	151	194	175	161	150	169	157	147	164	153	145	159	150	142	138
4	183	160	144	131	179	158	142	130	153	139	128	148	136	127	143	133	125	121
5	170	145	127	115	165	142	126	114	138	124	113	134	122	112	130	119	110	106
6	157	131	114	101	154	129	113	101	126	111	100	122	109	99	119	108	99	94
7	146	120	103	91	143	118	102	90	115	100	90	112	99	89	109	98	88	85
8	137	110	93	82	134	109	93	81	106	91	81	103	90	80	101	89	80	76
9	128	101	85	74	125	100	85	74	98	84	74	96	83	73	94	82	73	69
10	120	94	78	68	118	93	78	67	91	77	67	89	76	67	87	75	67	63

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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

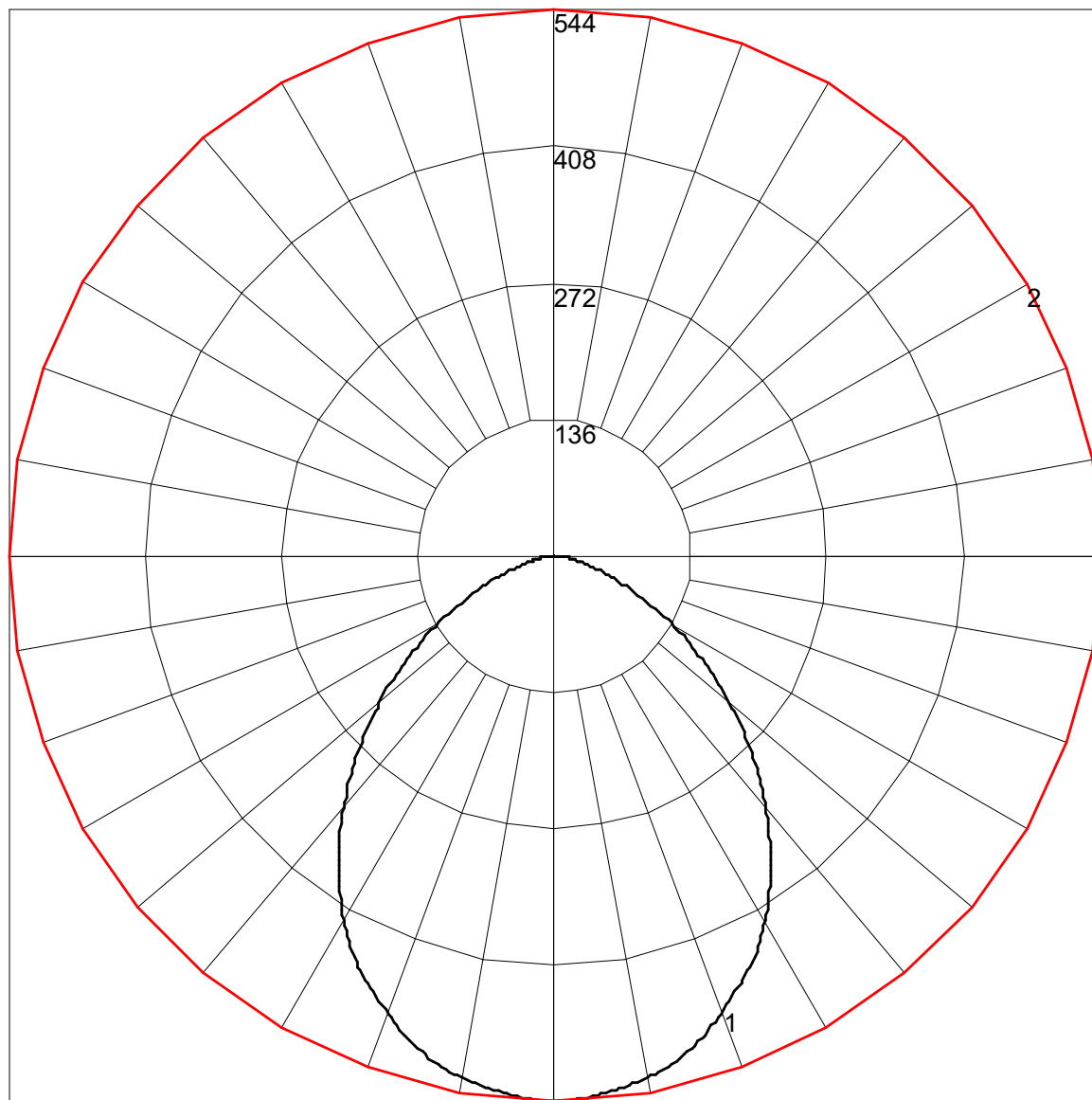
X=2H	Y=2H	20.7	22.1	21.0	22.5	22.8	20.7	22.1	21.0	22.5	22.8
	3H	21.6	22.9	22.0	23.3	23.6	21.6	22.9	22.0	23.3	23.6
	4H	21.8	23.0	22.2	23.4	23.8	21.8	23.0	22.2	23.4	23.8
	6H	21.9	23.1	22.3	23.4	23.8	21.9	23.1	22.3	23.4	23.8
	8H	21.9	23.0	22.4	23.4	23.8	21.9	23.0	22.4	23.4	23.8
	12H	22.0	23.0	22.4	23.4	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 = 543.823 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.)