

IES INDOOR REPORT

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

[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	1061
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	12.09
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

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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	44789	44789	44789
55	35657	35657	35657
65	24941	24941	24941
75	13336	13336	13336
85	9400	9400	9400

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CANDELA TABULATION

	<u>0</u>
0.0	502.328
0.5	502.328
1.0	502.134
1.5	501.844
2.0	501.553
2.5	501.263
3.0	500.778
3.5	500.294
4.0	499.616
4.5	498.938
5.0	498.163
5.5	497.388
6.0	496.516
6.5	495.548
7.0	494.579
7.5	493.611
8.0	492.545
8.5	491.576
9.0	490.608
9.5	489.639
10.0	488.574
10.5	487.411
11.0	486.152
11.5	484.796
12.0	483.343
12.5	481.890
13.0	480.340
13.5	478.694
14.0	476.950
14.5	475.110
15.0	473.173
15.5	471.235
16.0	469.201
16.5	467.070
17.0	464.746
17.5	462.324
18.0	459.806
18.5	457.093
19.0	454.381
19.5	451.572
20.0	448.666
20.5	445.857
21.0	443.145
21.5	440.530
22.0	437.915
22.5	435.396
23.0	432.878
23.5	430.359
24.0	427.744
24.5	425.129
25.0	422.417
25.5	419.511
26.0	416.508
26.5	413.215

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-12W-3000K_.IES****CANDELA TABULATION - (Cont.)**

27.0	409.921
27.5	406.434
28.0	403.044
28.5	399.557
29.0	395.876
29.5	392.099
30.0	388.321
30.5	384.350
31.0	380.378
31.5	376.310
32.0	372.339
32.5	368.174
33.0	364.106
33.5	359.941
34.0	355.775
34.5	351.610
35.0	347.445
35.5	343.183
36.0	338.825
36.5	334.466
37.0	329.913
37.5	325.361
38.0	320.808
38.5	316.256
39.0	311.703
39.5	307.054
40.0	302.501
40.5	297.949
41.0	293.396
41.5	288.844
42.0	284.194
42.5	279.642
43.0	275.089
43.5	270.440
44.0	265.790
44.5	261.141
45.0	256.492
45.5	251.842
46.0	247.193
46.5	242.543
47.0	237.991
47.5	233.438
48.0	228.789
48.5	224.236
49.0	219.587
49.5	215.034
50.0	210.385
50.5	205.929
51.0	201.377
51.5	196.824
52.0	192.272
52.5	187.719
53.0	183.264
53.5	178.808
54.0	174.449
54.5	169.993

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55.0	165.635
55.5	161.179
56.0	156.917
56.5	152.752
57.0	148.490
57.5	144.325
58.0	140.160
58.5	135.995
59.0	131.830
59.5	127.761
60.0	123.693
60.5	119.722
61.0	115.751
61.5	111.779
62.0	107.808
62.5	104.030
63.0	100.156
63.5	96.436
64.0	92.668
64.5	89.007
65.0	85.365
65.5	81.820
66.0	78.323
66.5	74.894
67.0	71.543
67.5	68.288
68.0	65.092
68.5	61.943
69.0	58.834
69.5	55.764
70.0	52.742
70.5	49.758
71.0	46.910
71.5	44.179
72.0	41.564
72.5	39.006
73.0	36.546
73.5	34.173
74.0	31.974
74.5	29.892
75.0	27.954
75.5	26.182
76.0	24.555
76.5	23.073
77.0	21.755
77.5	20.593
78.0	19.527
78.5	18.539
79.0	17.571
79.5	16.583
80.0	15.595
80.5	14.607
81.0	13.648
81.5	12.708
82.0	11.788
82.5	10.878

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CANDELA TABULATION - (Cont.)

83.0	10.006
83.5	9.134
84.0	8.272
84.5	7.439
85.0	6.635
85.5	5.850
86.0	5.076
86.5	4.320
87.0	3.555
87.5	2.790
88.0	2.034
88.5	1.288
89.0	0.668
89.5	0.271
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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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
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131.0	0.000
131.5	0.000
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132.5	0.000
133.0	0.000
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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	180.34	N.A.	17.00
0-30	374.26	N.A.	35.30
0-40	590.92	N.A.	55.70
0-60	936.79	N.A.	88.30
0-80	1053.87	N.A.	99.30
0-90	1061.41	N.A.	100.00
10-90	1014.18	N.A.	95.50
20-40	410.59	N.A.	38.70
20-50	608.20	N.A.	57.30
40-70	431.12	N.A.	40.60
60-80	117.08	N.A.	11.00
70-80	31.82	N.A.	3.00
80-90	7.55	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	1061.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	47.23
10-20	133.10
20-30	193.93
30-40	216.66
40-50	197.61
50-60	148.26
60-70	85.26
70-80	31.82
80-90	7.55
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	233	233	233	233	227	227	227	227	217	217	217	208	208	208	199	199	199	195
1	216	208	201	195	211	204	197	191	196	190	185	188	184	180	181	178	175	171
2	199	185	173	164	194	181	171	162	175	166	158	168	161	155	163	157	151	147
3	183	165	151	140	179	162	149	138	156	145	136	151	142	134	146	138	132	128
4	169	148	133	121	165	146	131	120	141	128	118	136	126	117	132	123	115	112
5	157	134	118	106	153	132	117	105	128	114	104	124	112	103	120	110	102	98
6	145	121	105	94	142	120	104	93	116	103	93	113	101	92	110	99	91	87
7	135	111	95	84	132	109	94	83	106	93	83	104	91	82	101	90	82	78
8	126	102	86	75	123	100	85	75	98	84	75	95	83	74	93	82	74	70
9	118	94	79	68	116	93	78	68	90	77	68	88	76	68	86	75	67	64
10	111	87	72	62	109	86	72	62	84	71	62	82	70	62	80	69	62	58

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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

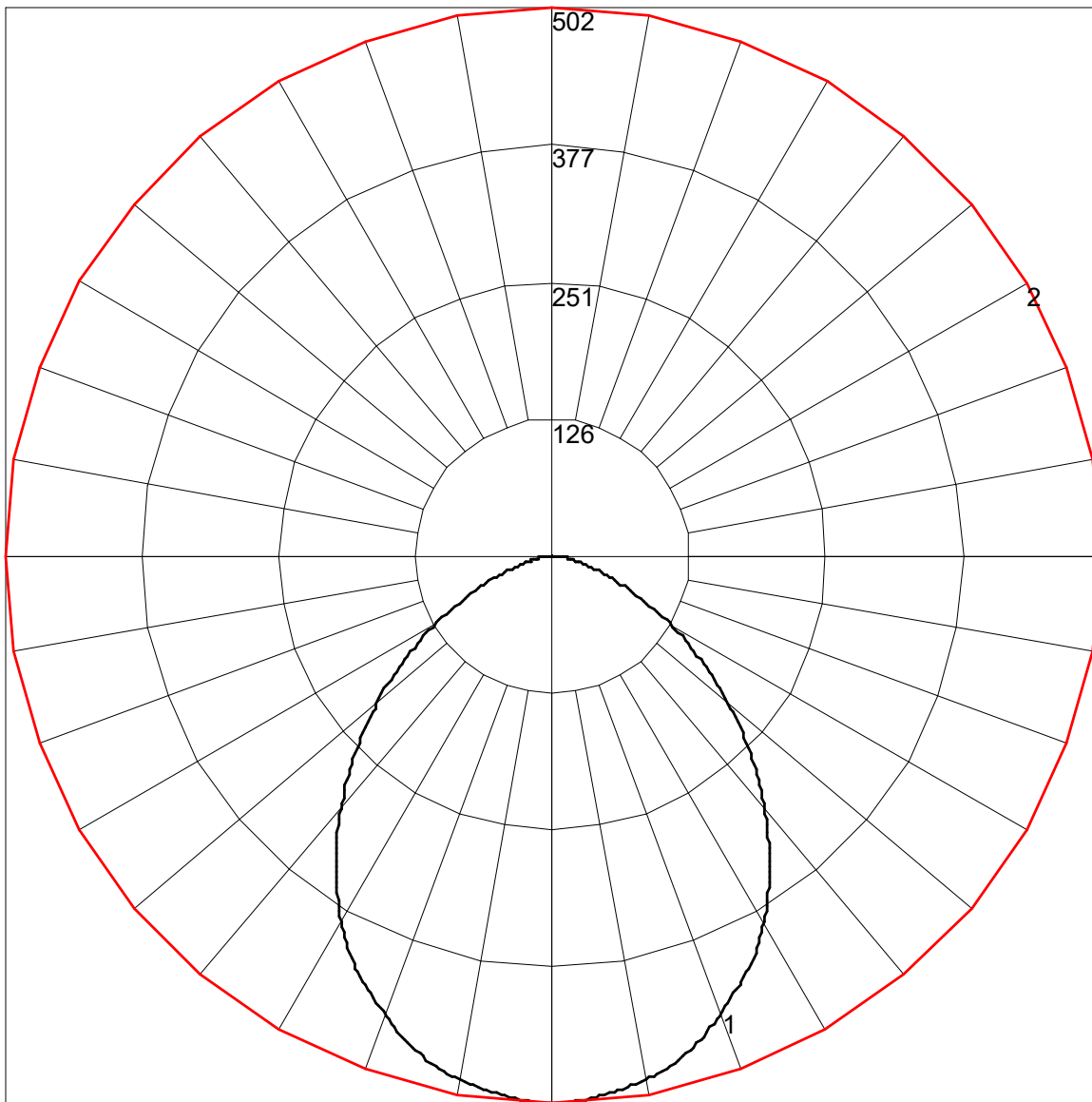
X=2H	Y=2H	20.7	22.1	21.0	22.5	22.8	20.7	22.1	21.0	22.5	22.8
	3H	21.6	22.9	22.0	23.3	23.6	21.6	22.9	22.0	23.3	23.6
	4H	21.8	23.0	22.2	23.4	23.8	21.8	23.0	22.2	23.4	23.8
	6H	21.9	23.1	22.3	23.4	23.8	21.9	23.1	22.3	23.4	23.8
	8H	21.9	23.0	22.4	23.4	23.8	21.9	23.0	22.4	23.4	23.8
	12H	22.0	23.0	22.4	23.4	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 = 502.328 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.)