

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-12W-4000K_.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-4000k

[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	1128
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	11.94
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-4000K_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	47607	47607	47607
55	37900	37900	37900
65	26510	26510	26510
75	14175	14175	14175
85	9992	9992	9992

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CANDELA TABULATION

	<u>0</u>
0.0	533.935
0.5	533.935
1.0	533.729
1.5	533.420
2.0	533.111
2.5	532.802
3.0	532.288
3.5	531.773
4.0	531.052
4.5	530.331
5.0	529.508
5.5	528.684
6.0	527.758
6.5	526.728
7.0	525.698
7.5	524.669
8.0	523.536
8.5	522.507
9.0	521.477
9.5	520.448
10.0	519.315
10.5	518.080
11.0	516.741
11.5	515.300
12.0	513.755
12.5	512.211
13.0	510.564
13.5	508.813
14.0	506.960
14.5	505.004
15.0	502.945
15.5	500.886
16.0	498.724
16.5	496.459
17.0	493.988
17.5	491.414
18.0	488.737
18.5	485.854
19.0	482.971
19.5	479.986
20.0	476.897
20.5	473.911
21.0	471.028
21.5	468.248
22.0	465.469
22.5	462.792
23.0	460.115
23.5	457.438
24.0	454.658
24.5	451.878
25.0	448.995
25.5	445.907
26.0	442.715
26.5	439.215

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CANDELA TABULATION - (Cont.)

27.0	435.714
27.5	432.008
28.0	428.404
28.5	424.698
29.0	420.785
29.5	416.770
30.0	412.755
30.5	408.533
31.0	404.312
31.5	399.988
32.0	395.767
32.5	391.340
33.0	387.015
33.5	382.588
34.0	378.161
34.5	373.734
35.0	369.307
35.5	364.777
36.0	360.144
36.5	355.511
37.0	350.672
37.5	345.833
38.0	340.994
38.5	336.155
39.0	331.316
39.5	326.374
40.0	321.535
40.5	316.696
41.0	311.857
41.5	307.018
42.0	302.076
42.5	297.237
43.0	292.398
43.5	287.456
44.0	282.514
44.5	277.572
45.0	272.630
45.5	267.688
46.0	262.746
46.5	257.804
47.0	252.965
47.5	248.126
48.0	243.184
48.5	238.345
49.0	233.404
49.5	228.565
50.0	223.623
50.5	218.887
51.0	214.048
51.5	209.209
52.0	204.370
52.5	199.531
53.0	194.795
53.5	190.059
54.0	185.426
54.5	180.690

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55.0	176.056
55.5	171.320
56.0	166.790
56.5	162.363
57.0	157.833
57.5	153.406
58.0	148.979
58.5	144.552
59.0	140.124
59.5	135.800
60.0	131.476
60.5	127.255
61.0	123.034
61.5	118.812
62.0	114.591
62.5	110.576
63.0	106.458
63.5	102.504
64.0	98.499
64.5	94.607
65.0	90.736
65.5	86.968
66.0	83.251
66.5	79.606
67.0	76.044
67.5	72.585
68.0	69.187
68.5	65.841
69.0	62.536
69.5	59.272
70.0	56.060
70.5	52.889
71.0	49.862
71.5	46.959
72.0	44.179
72.5	41.461
73.0	38.846
73.5	36.323
74.0	33.986
74.5	31.773
75.0	29.713
75.5	27.829
76.0	26.100
76.5	24.524
77.0	23.124
77.5	21.889
78.0	20.756
78.5	19.706
79.0	18.676
79.5	17.626
80.0	16.576
80.5	15.526
81.0	14.507
81.5	13.508
82.0	12.530
82.5	11.562

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4RCD-LS-9CS-WH-DIM-UNV-12W-4000K_.IES****CANDELA TABULATION - (Cont.)**

83.0	10.635
83.5	9.709
84.0	8.793
84.5	7.907
85.0	7.053
85.5	6.219
86.0	5.395
86.5	4.592
87.0	3.779
87.5	2.965
88.0	2.162
88.5	1.369
89.0	0.710
89.5	0.288
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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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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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	191.68	N.A.	17.00
0-30	397.81	N.A.	35.30
0-40	628.10	N.A.	55.70
0-60	995.73	N.A.	88.30
0-80	1120.18	N.A.	99.30
0-90	1128.2	N.A.	100.00
10-90	1078.00	N.A.	95.60
20-40	436.42	N.A.	38.70
20-50	646.47	N.A.	57.30
40-70	458.25	N.A.	40.60
60-80	124.44	N.A.	11.00
70-80	33.82	N.A.	3.00
80-90	8.02	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	1128.2	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	50.20
10-20	141.48
20-30	206.13
30-40	230.29
40-50	210.04
50-60	157.59
60-70	90.62
70-80	33.82
80-90	8.02
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	247	247	247	247	242	242	242	242	231	231	231	221	221	221	212	212	212	208
1	230	221	214	207	224	217	210	204	208	202	197	200	195	191	193	189	186	181
2	212	197	184	174	206	193	182	172	186	176	168	179	171	164	173	166	161	157
3	195	175	160	148	190	172	158	147	166	154	145	161	151	142	156	147	140	136
4	180	157	141	128	175	155	139	128	150	136	126	145	134	124	141	131	123	119
5	166	142	125	112	162	140	124	112	136	122	111	132	119	110	128	117	108	104
6	154	129	112	100	151	127	111	99	123	109	98	120	107	98	117	106	97	93
7	144	118	101	89	140	116	100	89	113	99	88	110	97	87	107	96	87	83
8	134	108	91	80	131	107	91	80	104	90	79	101	88	79	99	87	79	75
9	126	100	84	73	123	98	83	73	96	82	72	94	81	72	92	80	71	68
10	118	92	77	66	116	91	76	66	89	75	66	87	75	66	86	74	65	62

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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

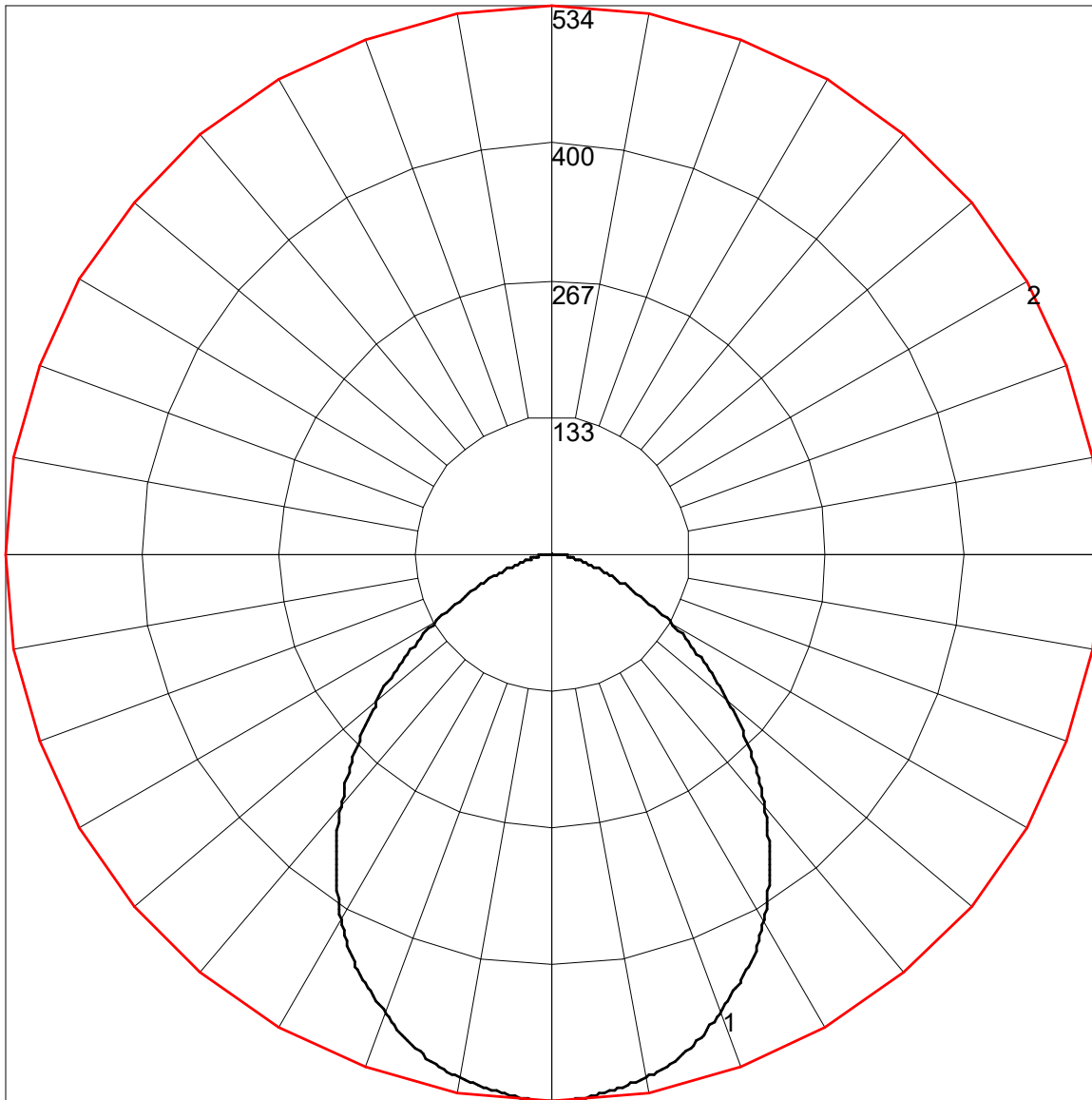
X=2H	Y=2H	20.7	22.1	21.0	22.5	22.8	20.7	22.1	21.0	22.5	22.8
	3H	21.6	22.9	22.0	23.3	23.6	21.6	22.9	22.0	23.3	23.6
	4H	21.8	23.0	22.2	23.4	23.8	21.8	23.0	22.2	23.4	23.8
	6H	21.9	23.1	22.3	23.4	23.8	21.9	23.1	22.3	23.4	23.8
	8H	21.9	23.0	22.4	23.4	23.8	21.9	23.0	22.4	23.4	23.8
	12H	22.0	23.0	22.4	23.4	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 = 533.935 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.)