

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4RCD-LS-9CS-SS-DIM-UNV-7W-5000K_.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-7W-5000k

[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	717
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
Total Luminaire Watts	7.1
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

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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	31008	31008	31008
55	20853	20853	20853
65	11145	11145	11145
75	1660	1660	1660
85	324	324	324

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CANDELA TABULATION

	<u>0</u>
0.0	383.918
0.5	383.857
1.0	383.797
1.5	383.616
2.0	383.375
2.5	383.073
3.0	382.711
3.5	382.289
4.0	381.806
4.5	381.324
5.0	380.781
5.5	380.178
6.0	379.514
6.5	378.851
7.0	378.127
7.5	377.403
8.0	376.679
8.5	375.956
9.0	375.232
9.5	374.448
10.0	373.664
10.5	372.759
11.0	371.854
11.5	370.829
12.0	369.683
12.5	368.597
13.0	367.391
13.5	366.064
14.0	364.737
14.5	363.349
15.0	361.962
15.5	360.454
16.0	358.946
16.5	357.257
17.0	355.569
17.5	353.699
18.0	351.769
18.5	349.778
19.0	347.667
19.5	345.496
20.0	343.324
20.5	341.213
21.0	339.162
21.5	337.112
22.0	335.121
22.5	333.131
23.0	331.200
23.5	329.210
24.0	327.220
24.5	325.229
25.0	323.118
25.5	320.886
26.0	318.474
26.5	315.940

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CANDELA TABULATION - (Cont.)

27.0	313.286
27.5	310.572
28.0	307.737
28.5	304.902
29.0	301.947
29.5	298.931
30.0	295.794
30.5	292.598
31.0	289.340
31.5	285.963
32.0	282.585
32.5	279.207
33.0	275.769
33.5	272.210
34.0	268.652
34.5	265.033
35.0	261.353
35.5	257.674
36.0	253.934
36.5	250.014
37.0	245.973
37.5	241.811
38.0	237.709
38.5	233.608
39.0	229.446
39.5	225.284
40.0	221.062
40.5	216.779
41.0	212.557
41.5	208.274
42.0	203.932
42.5	199.649
43.0	195.246
43.5	190.843
44.0	186.440
44.5	181.976
45.0	177.573
45.5	173.230
46.0	168.827
46.5	164.484
47.0	160.202
47.5	155.919
48.0	151.637
48.5	147.415
49.0	143.192
49.5	139.031
50.0	134.929
50.5	130.888
51.0	126.907
51.5	122.986
52.0	119.066
52.5	115.205
53.0	111.405
53.5	107.666
54.0	104.047
54.5	100.428

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CANDELA TABULATION - (Cont.)

55.0	96.869
55.5	93.371
56.0	89.933
56.5	86.615
57.0	83.298
57.5	80.041
58.0	76.844
58.5	73.707
59.0	70.631
59.5	67.615
60.0	64.660
60.5	61.704
61.0	58.827
61.5	55.998
62.0	53.260
62.5	50.582
63.0	47.970
63.5	45.395
64.0	42.922
64.5	40.521
65.0	38.144
65.5	35.810
66.0	33.488
66.5	31.202
67.0	28.994
67.5	26.841
68.0	24.754
68.5	22.733
69.0	20.803
69.5	18.909
70.0	17.082
70.5	15.314
71.0	13.638
71.5	12.051
72.0	10.549
72.5	9.144
73.0	7.811
73.5	6.575
74.0	5.422
74.5	4.397
75.0	3.480
75.5	2.660
76.0	1.918
76.5	1.351
77.0	0.995
77.5	0.832
78.0	0.772
78.5	0.718
79.0	0.670
79.5	0.621
80.0	0.573
80.5	0.531
81.0	0.489
81.5	0.446
82.0	0.410
82.5	0.374

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CANDELA TABULATION - (Cont.)

83.0	0.344
83.5	0.314
84.0	0.283
84.5	0.253
85.0	0.229
85.5	0.205
86.0	0.181
86.5	0.157
87.0	0.139
87.5	0.121
88.0	0.103
88.5	0.078
89.0	0.054
89.5	0.036
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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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

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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	137.93	N.A.	19.20
0-30	286.16	N.A.	39.90
0-40	448.73	N.A.	62.60
0-60	672.58	N.A.	93.80
0-80	716.59	N.A.	100.00
0-90	716.86	N.A.	100.00
10-90	680.75	N.A.	95.00
20-40	310.80	N.A.	43.40
20-50	447.49	N.A.	62.40
40-70	262.23	N.A.	36.60
60-80	44.01	N.A.	6.10
70-80	5.63	N.A.	0.80
80-90	0.27	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	716.86	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	36.11
10-20	101.82
20-30	148.24
30-40	162.57
40-50	136.69
50-60	87.16
60-70	38.38
70-80	5.63
80-90	0.27
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	134	134	134	134	130	130	130	130	125	125	125	119	119	119	114	114	114	112
1	125	121	118	114	122	119	115	112	114	111	109	110	108	106	106	104	103	100
2	116	109	103	98	114	107	101	97	103	99	95	100	96	93	96	93	91	88
3	108	98	91	85	105	96	90	84	93	87	83	90	85	81	88	84	80	78
4	100	89	80	74	98	87	80	74	85	78	73	82	76	72	80	75	71	69
5	93	81	72	66	91	79	71	65	77	70	65	75	69	64	73	68	63	61
6	86	73	65	58	84	72	64	58	71	63	58	69	62	57	67	61	57	55
7	81	67	59	52	79	66	58	52	65	57	52	63	57	52	62	56	51	49
8	75	62	53	47	74	61	53	47	60	52	47	58	52	47	57	51	47	45
9	71	57	49	43	69	57	49	43	55	48	43	54	48	43	53	47	43	41
10	67	53	45	40	65	53	45	40	51	44	39	50	44	39	50	43	39	37

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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

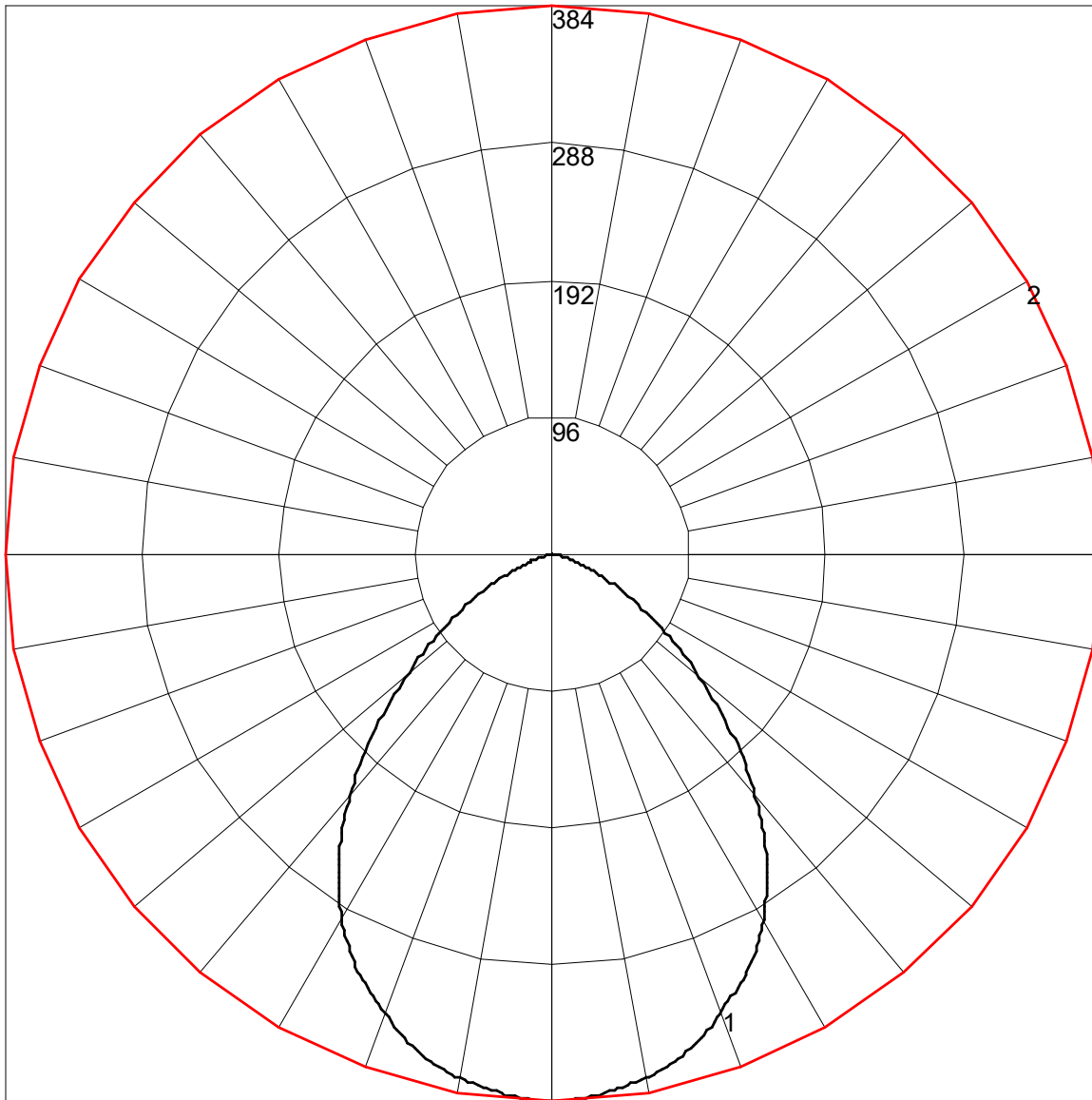
X=2H	Y=2H	20.0	21.4	20.3	21.7	22.0	20.0	21.4	20.3	21.7	22.0
	3H	20.4	21.6	20.7	21.9	22.3	20.4	21.6	20.7	21.9	22.3
	4H	20.3	21.5	20.7	21.8	22.2	20.3	21.5	20.7	21.8	22.2
	6H	20.2	21.3	20.6	21.7	22.1	20.2	21.3	20.6	21.7	22.1
	8H	20.2	21.2	20.6	21.6	22.0	20.2	21.2	20.6	21.6	22.0
	12H	20.2	21.1	20.6	21.5	21.9	20.2	21.1	20.6	21.5	21.9

UGR Viewed Endwise

4H	2H	20.2	21.3	20.6	21.7	22.0	20.2	21.3	20.6	21.7	22.0
	3H	20.6	21.5	21.0	21.9	22.3	20.6	21.5	21.0	21.9	22.3
	4H	20.5	21.4	21.0	21.8	22.2	20.5	21.4	21.0	21.8	22.2
	6H	20.5	21.2	20.9	21.6	22.1	20.5	21.2	20.9	21.6	22.1
	8H	20.4	21.1	20.9	21.5	22.0	20.4	21.1	20.9	21.5	22.0
	12H	20.4	21.0	20.8	21.4	21.9	20.4	21.0	20.8	21.4	21.9
8H	4H	20.4	21.1	20.9	21.5	22.0	20.4	21.1	20.9	21.5	22.0
	6H	20.3	20.9	20.8	21.4	21.9	20.3	20.9	20.8	21.4	21.9
	8H	20.3	20.8	20.8	21.3	21.8	20.3	20.8	20.8	21.3	21.8
	12H	20.2	20.7	20.7	21.2	21.7	20.2	20.7	20.7	21.2	21.7
12H	4H	20.4	21.0	20.9	21.5	21.9	20.4	21.0	20.9	21.5	21.9
	6H	20.3	20.8	20.8	21.2	21.8	20.3	20.8	20.8	21.2	21.8
	8H	20.2	20.7	20.7	21.2	21.7	20.2	20.7	20.7	21.2	21.7

Maximum UGR = 22.3

POLAR GRAPH



Maximum Candela = 383.918 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.)