

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P522090

Luminaire Tested: **RLLV4069SE010WHDM-3500K-UNIT**

Issue Date: 5/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P522090  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A1809075A001)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: RLLV4069SE010WHDM-3500K-UNIT  
Description: Surface Mount Downlight Fixture, Single Unit  
Light Source: (48) 3500K CCT, 94 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

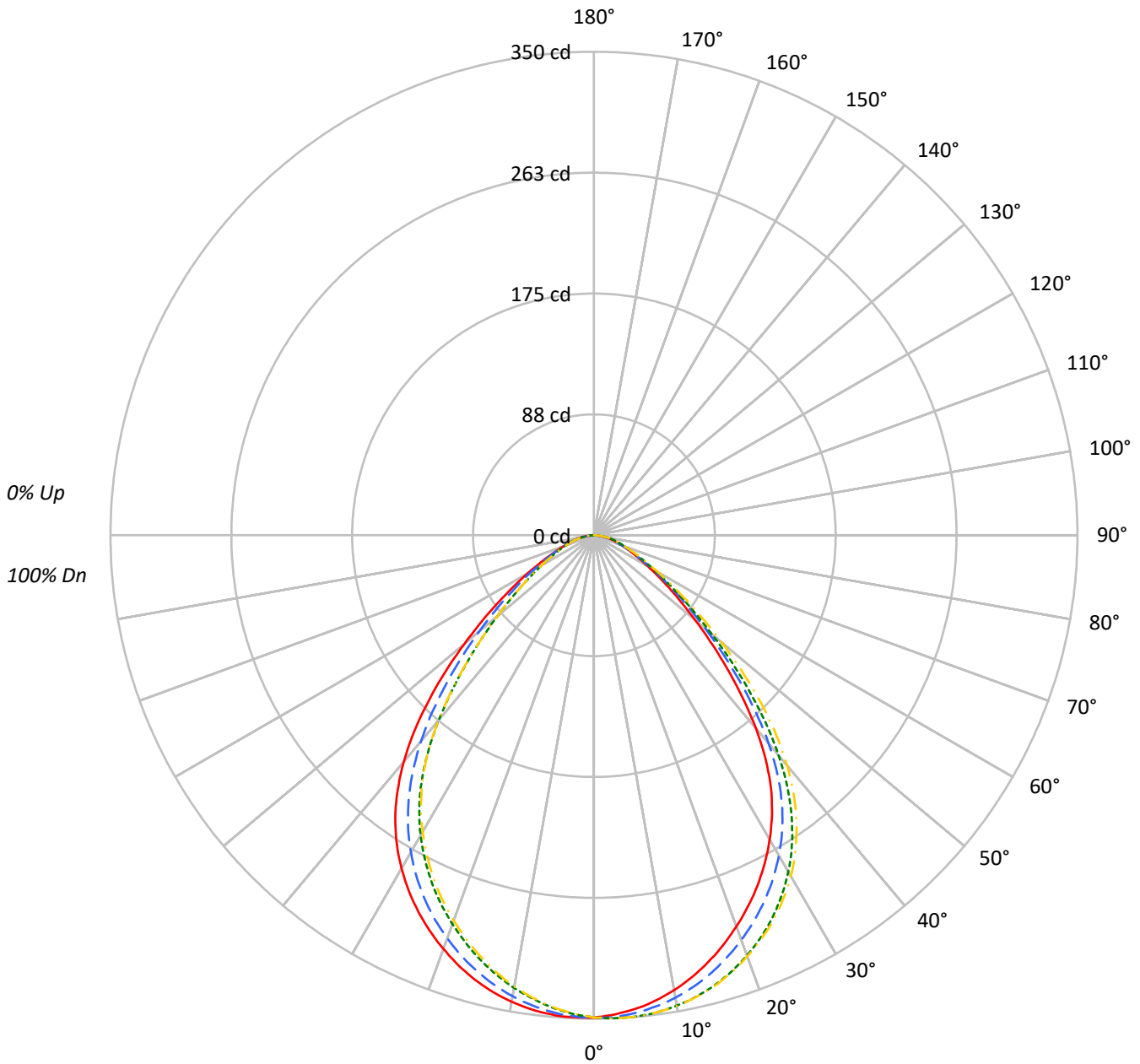
Lumens per Lamp: 644.87 (48 lamps)  
Luminaire Lumens: 640.0 lumens  
Efficiency: 2.1%  
Efficacy: 95.5 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.15 / 1.19  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 6.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P522090  
CATALOG NUMBER: RLLV4069SE010WHDM-3500K-UNIT

### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    - · - · 90°-270°    - · - · 135°-315°



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				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	50	30	10	0
RCR																					
0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	1	2	2	1	1
4	2	2	1	1	2	2	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1
5	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	43158	43158	43158	43158
5°	42691	43385	43212	42591
10°	41967	43398	43046	41766
15°	40919	43158	42608	40702
20°	39641	42574	41904	39405
25°	38183	41661	41020	37856
30°	36306	40145	39760	35807
35°	33691	37659	37825	32786
40°	29396	33542	34559	28170
45°	23788	27721	29504	22652
50°	18497	21477	23592	17593
55°	14308	16247	18100	13640
60°	11222	12606	13793	10851
65°	9037	10148	10645	8949
70°	7697	8637	8456	7842
75°	6876	8022	7497	7402
80°	5979	7687	7117	6334
85°	3545	6523	5672	3403



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	32.8	5.1	0.1
10°-20°	92.1	14.4	0.3
20°-30°	133.7	20.9	0.4
30°-40°	146.1	22.8	0.5
40°-50°	114.9	18.0	0.4
50°-60°	66.1	10.3	0.2
60°-70°	33.6	5.3	0.1
70°-80°	16.5	2.6	0.1
80°-90°	4.1	0.6	0.0
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	258.7	40.4	0.8
0°-40°	404.8	63.2	1.3
0°-60°	585.8	91.5	1.9
0°-90°	640.0	100.0	2.1
90°-120°	0.0	0.0	0.0
90°-150°	0.0	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	640.0	100.0	2.1

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	349	349	349	349	349	
5°	344	350	348	343	344	33
15°	320	337	333	318	320	90
25°	280	306	301	278	280	129
35°	223	250	251	217	223	138
45°	136	159	169	130	136	105
55°	66	75	84	63	66	60
65°	31	35	36	31	31	31
75°	14	17	16	16	14	15
85°	2	5	4	2	2	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2
0.5°	348.8	348.9	349.3	350.3	349.3	349.3	349.3	349.2	349.2	349.1	349.3
1°	348.5	348.8	349.3	350.3	349.5	349.5	349.4	349.3	349.3	349.1	349.2
1.5°	348.1	348.6	349.3	350.3	349.7	349.7	349.7	349.4	349.3	349.1	349.0
2°	347.7	348.3	349.2	350.3	349.9	349.9	349.9	349.5	349.3	349.1	348.8
2.5°	347.2	348.0	349.0	350.2	350.0	350.0	350.0	349.6	349.3	348.9	348.5
3°	346.7	347.6	348.7	350.1	350.0	350.1	350.0	349.6	349.2	348.6	348.2
3.5°	346.1	347.2	348.4	349.9	350.0	350.1	350.0	349.6	349.1	348.4	347.9
4°	345.5	346.7	348.0	349.7	350.0	350.1	350.0	349.5	348.9	348.1	347.5
4.5°	344.8	346.2	347.6	349.5	349.9	350.1	349.9	349.4	348.7	347.7	347.0
5°	344.1	345.6	347.1	349.2	349.7	350.0	349.7	349.3	348.3	347.3	346.5
5.5°	343.5	345.0	346.6	348.9	349.6	349.8	349.6	349.0	348.0	346.8	345.9
6°	342.7	344.3	346.0	348.4	349.3	349.6	349.4	348.7	347.7	346.3	345.3
6.5°	341.8	343.7	345.4	348.0	349.1	349.4	349.2	348.3	347.2	345.8	344.6
7°	340.8	342.9	344.7	347.4	348.8	349.1	348.8	347.9	346.8	345.1	344.0
7.5°	339.8	342.0	344.0	346.9	348.4	348.8	348.4	347.4	346.2	344.5	343.3
8°	338.8	341.2	343.4	346.2	347.9	348.4	348.0	346.9	345.6	343.9	342.5
8.5°	337.8	340.2	342.6	345.6	347.4	347.9	347.6	346.4	345.0	343.2	341.6
9°	336.7	339.2	341.7	344.9	346.9	347.4	347.1	345.8	344.3	342.4	340.8
9.5°	335.6	338.3	340.8	344.1	346.4	346.8	346.5	345.1	343.7	341.5	339.8
10°	334.4	337.2	339.9	343.4	345.8	346.2	345.9	344.4	343.0	340.6	338.8
10.5°	333.2	336.0	338.9	342.6	345.1	345.6	345.3	343.8	342.2	339.7	337.9
11°	331.9	334.8	337.9	341.7	344.4	344.9	344.6	343.1	341.3	338.7	336.8
11.5°	330.5	333.6	336.8	340.7	343.8	344.2	343.9	342.2	340.5	337.7	335.6
12°	329.1	332.4	335.7	339.7	343.0	343.5	343.2	341.4	339.5	336.7	334.5
12.5°	327.8	331.1	334.5	338.6	342.2	342.7	342.4	340.5	338.6	335.6	333.3
13°	326.2	329.8	333.4	337.6	341.3	341.9	341.6	339.5	337.6	334.5	332.1
13.5°	324.7	328.4	332.1	336.5	340.4	340.9	340.7	338.6	336.5	333.3	330.9
14°	323.1	327.0	330.8	335.3	339.4	340.0	339.7	337.6	335.4	332.1	329.5
14.5°	321.5	325.5	329.4	334.1	338.4	339.0	338.7	336.5	334.2	330.8	328.1
15°	319.8	324.0	328.0	332.9	337.3	338.0	337.7	335.4	333.0	329.5	326.8
15.5°	318.1	322.5	326.6	331.5	336.1	336.9	336.6	334.2	331.8	328.1	325.3
16°	316.5	320.8	325.1	330.1	334.9	335.8	335.4	333.1	330.5	326.7	323.8
16.5°	314.7	319.1	323.5	328.7	333.6	334.6	334.2	331.8	329.1	325.3	322.4
17°	312.9	317.4	322.1	327.4	332.5	333.3	333.0	330.5	327.8	323.7	320.8
17.5°	311.1	315.8	320.4	325.8	331.1	332.0	331.7	329.1	326.4	322.3	319.2
18°	309.2	314.0	318.7	324.3	329.7	330.6	330.4	327.8	324.9	320.6	317.5
18.5°	307.2	312.2	317.1	322.7	328.3	329.2	328.9	326.3	323.3	319.0	315.8
19°	305.4	310.4	315.3	321.2	326.9	327.9	327.6	324.8	321.9	317.3	314.0
19.5°	303.4	308.6	313.6	319.4	325.3	326.4	326.0	323.3	320.2	315.7	312.2
20°	301.4	306.6	311.8	317.7	323.7	324.8	324.5	321.8	318.6	314.0	310.4
20.5°	299.5	304.8	310.0	316.0	322.2	323.2	323.0	320.2	317.0	312.2	308.6
21°	297.4	302.9	308.1	314.3	320.5	321.6	321.5	318.5	315.4	310.4	306.7
21.5°	295.3	301.0	306.3	312.4	318.8	319.9	319.8	317.0	313.6	308.6	304.9
22°	293.2	298.9	304.3	310.6	317.1	318.1	318.1	315.3	311.9	306.8	302.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	291.0	296.9	302.3	308.8	315.3	316.4	316.4	313.6	310.1	305.0	301.0
23°	289.0	294.9	300.4	306.8	313.4	314.6	314.7	311.9	308.3	303.1	298.8
23.5°	286.8	292.7	298.4	304.8	311.5	312.7	312.9	310.1	306.5	301.2	296.7
24°	284.6	290.6	296.2	302.8	309.6	310.8	311.2	308.3	304.6	299.1	294.7
24.5°	282.3	288.5	294.2	300.7	307.6	308.8	309.3	306.4	302.7	296.9	292.5
25°	280.0	286.2	292.0	298.5	305.5	306.7	307.3	304.4	300.8	294.9	290.3
25.5°	277.6	283.9	289.8	296.3	303.3	304.7	305.4	302.4	298.7	292.7	287.9
26°	275.1	281.5	287.5	294.1	301.1	302.5	303.3	300.5	296.6	290.6	285.5
26.5°	272.8	279.2	285.3	291.7	298.8	300.3	301.2	298.4	294.6	288.4	283.1
27°	270.3	276.8	283.0	289.4	296.5	298.0	299.0	296.3	292.4	286.1	280.7
27.5°	267.8	274.4	280.5	287.0	294.2	295.8	296.8	294.2	290.3	283.8	278.3
28°	265.2	271.9	278.1	284.6	291.7	293.3	294.6	292.0	288.0	281.4	275.7
28.5°	262.6	269.3	275.6	282.0	289.3	290.7	292.2	289.8	285.7	279.0	273.3
29°	260.0	266.8	273.0	279.5	286.7	288.2	289.9	287.5	283.4	276.6	270.5
29.5°	257.2	264.1	270.4	276.8	284.0	285.5	287.4	285.2	280.9	274.2	267.8
30°	254.4	261.5	267.8	274.1	281.3	282.9	285.0	282.7	278.6	271.5	265.0
30.5°	251.7	258.7	265.0	271.2	278.6	280.1	282.4	280.2	276.0	269.0	262.3
31°	248.8	256.0	262.2	268.4	275.7	277.3	279.8	277.8	273.6	266.3	259.4
31.5°	245.8	253.2	259.4	265.5	272.9	274.4	277.1	275.1	270.9	263.5	256.5
32°	242.8	250.3	256.5	262.4	269.8	271.3	274.3	272.5	268.3	260.7	253.5
32.5°	239.8	247.3	253.5	259.3	266.7	268.2	271.4	269.6	265.5	257.9	250.4
33°	236.7	244.2	250.4	256.0	263.5	265.0	268.4	266.8	262.7	254.8	247.2
33.5°	233.3	241.0	247.3	252.8	260.0	261.8	265.3	264.0	259.8	251.9	243.9
34°	230.2	237.7	244.0	249.3	256.6	258.5	262.2	260.9	256.8	248.8	240.6
34.5°	226.8	234.4	240.7	245.8	253.2	254.9	259.0	257.9	253.7	245.7	237.3
35°	223.3	231.0	237.3	242.2	249.6	251.3	255.7	254.6	250.7	242.4	233.8
35.5°	219.7	227.4	233.6	238.5	245.9	247.5	252.4	251.5	247.5	239.1	230.2
36°	215.9	223.8	230.0	234.7	242.1	243.6	248.8	248.1	244.1	235.7	226.6
36.5°	212.0	220.0	226.2	230.9	238.1	239.8	245.2	244.7	240.7	232.2	222.8
37°	208.1	216.0	222.2	226.7	234.1	235.8	241.5	241.2	237.2	228.6	219.0
37.5°	204.2	212.1	218.3	222.6	230.0	231.7	237.7	237.5	233.5	224.9	215.2
38°	200.0	208.0	214.2	218.4	225.9	227.4	233.9	233.9	229.8	221.2	211.2
38.5°	195.6	203.9	209.9	214.0	221.5	223.2	230.1	230.0	226.1	217.1	207.2
39°	191.3	199.6	205.5	209.7	217.1	218.7	226.0	226.1	222.2	213.1	203.3
39.5°	186.8	195.1	201.1	205.2	212.6	214.1	221.8	222.0	218.3	209.1	199.0
40°	182.2	190.7	196.6	200.5	207.9	209.5	217.5	218.0	214.2	205.0	194.7
40.5°	177.7	186.0	192.1	195.8	203.3	204.8	213.1	213.7	210.0	200.6	190.4
41°	173.1	181.3	187.4	191.0	198.4	200.0	208.6	209.4	205.6	196.3	186.0
41.5°	168.4	176.7	182.7	186.1	193.7	195.2	204.1	205.1	201.3	192.1	181.6
42°	163.7	172.0	177.9	181.3	188.9	190.2	199.5	200.5	196.9	187.6	177.3
42.5°	159.0	167.3	173.1	176.5	183.9	185.2	194.6	195.8	192.4	183.0	172.8
43°	154.4	162.5	168.2	171.6	178.8	180.1	189.8	191.1	187.9	178.5	168.2
43.5°	149.7	157.7	163.4	166.7	173.8	175.0	184.9	186.4	183.2	173.7	163.7
44°	145.1	153.0	158.5	161.7	168.7	169.9	179.9	181.6	178.5	169.1	159.1
44.5°	140.6	148.3	153.7	156.7	163.7	164.8	174.9	176.8	173.6	164.6	154.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	136.1	143.6	149.1	151.9	158.6	159.8	169.8	172.0	168.8	160.0	150.3
45.5°	131.7	139.1	144.4	147.0	153.7	154.7	164.9	167.1	164.2	155.3	145.8
46°	127.4	134.7	139.7	142.3	148.8	149.6	159.8	162.1	159.5	150.6	141.4
46.5°	123.2	130.2	135.2	137.6	143.9	144.5	154.8	157.2	154.7	145.9	137.1
47°	119.0	125.8	130.6	132.9	139.0	139.6	149.7	152.3	150.0	141.3	132.7
47.5°	114.8	121.5	126.0	128.4	134.3	134.8	144.8	147.5	145.4	136.8	128.5
48°	111.0	117.3	121.8	123.8	129.6	130.0	139.9	142.7	140.7	132.4	124.4
48.5°	107.1	113.4	117.6	119.5	125.0	125.3	135.1	138.1	136.0	128.1	120.3
49°	103.3	109.4	113.6	115.1	120.4	120.6	130.3	133.5	131.5	123.8	116.2
49.5°	99.8	105.5	109.5	111.0	116.0	116.2	125.5	128.8	127.1	119.5	112.4
50°	96.2	101.9	105.6	106.9	111.7	111.8	120.9	124.2	122.7	115.2	108.6
50.5°	92.7	98.3	101.7	103.0	107.4	107.6	116.4	119.7	118.4	111.2	104.7
51°	89.3	94.7	98.0	99.1	103.4	103.4	112.0	115.3	114.1	107.3	101.1
51.5°	86.2	91.2	94.3	95.3	99.4	99.4	107.8	111.1	110.0	103.5	97.5
52°	83.1	87.9	90.9	91.7	95.6	95.6	103.5	106.9	105.9	99.7	94.0
52.5°	80.1	84.6	87.6	88.2	91.9	91.9	99.4	102.9	102.1	96.1	90.6
53°	77.1	81.5	84.2	84.9	88.4	88.2	95.6	98.9	98.4	92.5	87.4
53.5°	74.3	78.4	81.2	81.6	85.0	84.8	91.8	95.1	94.6	89.0	84.2
54°	71.6	75.6	77.9	78.4	81.7	81.5	88.1	91.3	91.0	85.7	81.2
54.5°	68.9	72.7	75.0	75.4	78.5	78.2	84.6	87.7	87.5	82.4	78.0
55°	66.4	70.0	72.1	72.4	75.4	75.1	81.2	84.2	84.0	79.3	75.2
55.5°	64.0	67.3	69.5	69.6	72.4	72.1	77.8	80.9	80.8	76.2	72.3
56°	61.5	64.8	66.7	66.9	69.7	69.5	74.7	77.5	77.5	73.3	69.7
56.5°	59.3	62.3	64.1	64.3	67.2	66.7	71.8	74.4	74.6	70.5	67.2
57°	57.0	60.0	61.6	61.8	64.5	64.0	68.9	71.4	71.7	67.9	64.6
57.5°	54.9	57.8	59.2	59.5	62.0	61.4	66.1	68.4	68.8	65.1	62.1
58°	52.8	55.6	56.9	57.2	59.6	59.1	63.3	65.7	66.0	62.5	59.7
58.5°	50.8	53.5	54.7	55.0	57.3	56.9	60.8	62.9	63.2	60.1	57.3
59°	49.1	51.4	52.6	52.7	55.3	54.7	58.3	60.4	60.7	57.7	55.3
59.5°	47.2	49.4	50.7	50.6	53.1	52.6	55.9	57.8	58.1	55.5	53.1
60°	45.4	47.5	48.6	48.7	51.0	50.7	53.7	55.5	55.8	53.2	50.9
60.5°	43.8	45.7	46.6	46.8	49.1	48.6	51.6	52.9	53.5	50.9	49.0
61°	42.1	44.0	44.8	45.1	47.2	46.7	49.4	50.8	51.2	49.0	47.0
61.5°	40.3	42.3	43.0	43.4	45.4	45.0	47.3	48.6	49.0	46.9	45.3
62°	38.8	40.5	41.4	41.6	43.8	43.2	45.4	46.5	46.9	45.0	43.5
62.5°	37.4	39.0	39.8	40.0	42.0	41.7	43.6	44.6	45.1	43.2	41.8
63°	36.1	37.4	38.2	38.4	40.4	40.0	41.8	42.8	43.2	41.5	40.0
63.5°	34.7	36.1	36.7	36.9	39.0	38.6	40.0	40.8	41.4	39.9	38.5
64°	33.4	34.7	35.1	35.4	37.6	37.0	38.5	39.1	39.6	38.2	37.1
64.5°	32.1	33.3	33.7	34.1	36.2	35.5	36.9	37.4	37.9	36.6	35.6
65°	30.9	32.0	32.4	32.9	34.7	34.2	35.4	35.8	36.4	35.0	34.3
65.5°	29.8	30.7	31.0	31.5	33.5	33.0	34.0	34.3	34.7	33.5	33.0
66°	28.7	29.6	29.8	30.3	32.3	31.7	32.7	32.9	33.2	32.2	31.6
66.5°	27.8	28.6	28.9	29.2	31.0	30.5	31.3	31.5	31.7	30.8	30.4
67°	26.5	27.4	27.9	28.0	29.8	29.4	30.0	30.1	30.4	29.7	29.4





TEST NUMBER: P522090

CATALOG NUMBER: RLLV4069SE010WHDM-3500K-UNIT

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	25.6	26.3	26.4	27.0	28.9	28.3	28.9	29.1	29.1	28.4	28.1
68°	24.7	25.4	25.5	25.9	27.9	27.2	27.9	27.8	28.0	27.2	27.2
68.5°	23.8	24.4	24.5	24.8	26.6	26.2	26.5	26.5	26.6	26.0	26.1
69°	23.0	23.4	23.5	24.0	25.7	25.1	25.7	25.5	25.6	24.9	25.0
69.5°	22.1	22.7	22.6	23.0	24.6	24.4	24.5	24.5	24.5	24.1	24.2
70°	21.3	21.7	21.6	22.2	23.9	23.3	23.6	23.4	23.4	23.1	23.2
70.5°	20.4	21.0	20.9	21.2	23.0	22.6	22.8	22.5	22.5	22.1	22.3
71°	19.5	20.0	20.0	20.5	22.2	21.7	21.8	21.4	21.4	21.2	21.5
71.5°	18.8	19.3	19.4	19.7	21.4	21.0	21.0	20.7	20.6	20.4	20.9
72°	18.2	18.6	18.6	19.2	20.8	20.1	20.0	19.7	19.6	19.5	19.9
72.5°	17.7	17.8	17.8	18.4	20.0	19.4	19.3	19.1	19.0	18.7	19.3
73°	16.8	17.2	17.1	17.7	19.3	18.7	18.5	18.4	18.2	18.0	18.6
73.5°	16.2	16.5	16.5	16.9	18.7	18.0	17.8	17.7	17.6	17.4	17.8
74°	15.8	15.9	16.0	16.4	17.9	17.4	17.0	16.9	16.8	16.7	17.1
74.5°	15.3	15.3	15.3	15.9	17.6	16.8	16.4	16.2	16.0	16.1	16.6
75°	14.4	15.0	14.7	15.3	16.8	16.1	15.9	15.8	15.7	15.4	15.9
75.5°	13.8	14.2	14.3	14.6	16.0	15.5	15.1	15.1	15.1	14.9	15.3
76°	13.4	13.7	13.9	14.2	15.7	15.0	14.4	14.4	14.3	14.4	15.0
76.5°	12.7	13.2	13.2	13.8	15.0	14.4	14.1	14.0	13.8	14.0	14.2
77°	12.1	12.5	12.5	13.0	14.3	13.9	13.5	13.5	13.3	13.3	13.9
77.5°	11.5	12.0	12.1	12.4	13.8	13.3	12.8	12.9	12.7	12.6	13.1
78°	10.9	11.5	11.4	11.9	13.3	12.6	12.4	12.5	12.3	12.1	12.4
78.5°	10.5	10.8	10.9	11.1	12.5	12.1	12.0	12.0	11.8	11.5	12.0
79°	9.5	10.2	10.2	10.8	12.0	11.4	11.4	11.2	11.1	11.0	11.1
79.5°	9.1	9.5	9.4	10.0	11.4	10.9	10.8	10.9	10.7	10.4	10.7
80°	8.4	9.1	9.1	9.2	10.8	10.4	10.2	10.3	10.0	9.6	9.9
80.5°	7.7	8.4	8.3	8.8	10.2	9.7	9.6	9.5	9.3	9.2	9.1
81°	7.4	7.6	7.6	8.1	9.3	9.1	9.1	9.1	9.0	8.5	8.5
81.5°	6.6	7.3	7.4	7.4	9.0	8.6	8.5	8.5	8.2	7.8	8.0
82°	5.9	6.4	6.6	6.8	8.1	7.9	8.0	7.8	7.5	7.4	7.5
82.5°	5.5	5.8	5.9	6.2	7.5	7.5	7.4	7.5	7.2	6.6	6.7
83°	4.8	5.5	5.5	5.6	7.0	6.7	6.7	6.7	6.4	5.9	5.8
83.5°	4.1	4.7	4.8	5.0	6.2	6.0	6.1	5.9	5.7	5.6	5.6
84°	3.9	4.0	4.1	4.6	5.7	5.7	5.7	5.6	5.4	4.8	4.8
84.5°	3.1	3.7	3.9	3.9	5.0	5.0	5.0	4.9	4.7	4.1	4.0
85°	2.5	2.9	3.1	3.2	4.6	4.4	4.6	4.2	4.0	3.9	3.7
85.5°	2.3	2.3	2.5	2.8	3.9	3.9	3.9	3.9	3.7	3.1	2.9
86°	1.8	2.2	2.3	2.3	3.3	3.2	3.2	3.1	2.9	2.5	2.4
86.5°	1.6	1.5	1.7	2.1	2.8	2.8	2.7	2.5	2.4	2.3	2.2
87°	0.6	0.8	1.4	1.3	2.3	2.3	2.3	2.3	2.2	1.8	1.4
87.5°	0.5	0.5	0.6	0.7	2.1	2.1	2.0	1.7	1.5	1.6	0.9
88°	0.0	0.0	0.5	0.5	1.4	1.4	1.4	1.6	0.9	0.6	0.5
88.5°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.6	0.5	0.5	0.0
89°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.3	0.0	0.3
89.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P522090

CATALOG NUMBER: RLLV4069SE010WHDM-3500K-UNIT

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P522090

CATALOG NUMBER: RLLV4069SE010WHDM-3500K-UNIT

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	349.2	349.2	349.2	349.2	349.2	349.2
0.5°	349.9	348.6	348.6	348.5	348.6	348.8
1°	349.7	348.3	348.2	348.1	348.2	348.5
1.5°	349.4	347.8	347.7	347.6	347.8	348.1
2°	349.1	347.3	347.1	347.1	347.3	347.7
2.5°	348.8	346.8	346.6	346.5	346.8	347.2
3°	348.3	346.2	346.0	345.8	346.2	346.7
3.5°	347.8	345.5	345.3	345.1	345.5	346.1
4°	347.3	344.8	344.5	344.4	344.8	345.5
4.5°	346.7	344.0	343.9	343.6	344.1	344.8
5°	346.1	343.3	343.0	342.8	343.4	344.1
5.5°	345.4	342.4	342.1	341.9	342.5	343.5
6°	344.6	341.5	341.2	340.9	341.6	342.7
6.5°	343.9	340.5	340.2	339.9	340.7	341.8
7°	343.1	339.5	339.2	338.8	339.7	340.8
7.5°	342.3	338.5	338.1	337.8	338.6	339.8
8°	341.4	337.4	337.0	336.7	337.5	338.8
8.5°	340.4	336.3	335.8	335.5	336.3	337.8
9°	339.4	335.2	334.5	334.3	335.1	336.7
9.5°	338.4	334.0	333.3	333.1	333.9	335.6
10°	337.3	332.8	332.1	331.8	332.7	334.4
10.5°	336.2	331.5	330.7	330.3	331.4	333.2
11°	335.0	330.2	329.3	328.9	330.0	331.9
11.5°	333.8	328.8	327.9	327.5	328.7	330.5
12°	332.7	327.4	326.5	326.0	327.3	329.1
12.5°	331.3	326.0	325.0	324.5	325.7	327.8
13°	330.0	324.5	323.5	322.8	324.2	326.2
13.5°	328.6	322.9	322.0	321.3	322.7	324.7
14°	327.2	321.4	320.3	319.5	321.1	323.1
14.5°	325.7	319.8	318.6	317.8	319.4	321.5
15°	324.1	318.1	317.0	316.1	317.7	319.8
15.5°	322.6	316.4	315.2	314.3	316.0	318.1
16°	321.1	314.7	313.4	312.5	314.1	316.5
16.5°	319.4	312.9	311.6	310.7	312.3	314.7
17°	317.7	311.1	309.7	308.7	310.5	312.9
17.5°	316.0	309.2	307.9	306.8	308.6	311.1
18°	314.2	307.3	306.0	304.9	306.7	309.2
18.5°	312.4	305.4	304.0	302.8	304.8	307.2
19°	310.6	303.5	302.0	300.9	302.8	305.4
19.5°	308.8	301.5	300.0	298.8	300.8	303.4
20°	306.8	299.6	297.9	296.7	298.7	301.4
20.5°	305.0	297.5	296.0	294.7	296.7	299.5
21°	302.9	295.5	293.9	292.6	294.7	297.4
21.5°	301.0	293.3	291.7	290.5	292.5	295.3
22°	298.9	291.2	289.6	288.2	290.5	293.2



TEST NUMBER: P522090

CATALOG NUMBER: RLLV4069SE010WHDM-3500K-UNIT

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	296.7	289.1	287.4	286.0	288.2	291.0
23°	294.8	286.9	285.1	283.9	285.9	289.0
23.5°	292.5	284.7	282.8	281.5	283.7	286.8
24°	290.4	282.3	280.5	279.2	281.4	284.6
24.5°	288.1	280.0	278.2	276.8	279.1	282.3
25°	285.7	277.6	275.8	274.4	276.7	280.0
25.5°	283.3	275.0	273.5	271.9	274.3	277.6
26°	280.9	272.6	270.9	269.3	271.8	275.1
26.5°	278.6	270.0	268.4	266.9	269.3	272.8
27°	276.0	267.6	265.8	264.3	266.8	270.3
27.5°	273.5	264.9	263.3	261.8	264.2	267.8
28°	270.8	262.2	260.7	259.0	261.7	265.2
28.5°	268.2	259.4	258.0	256.3	259.0	262.6
29°	265.4	256.7	255.2	253.5	256.3	260.0
29.5°	262.6	253.7	252.5	250.8	253.5	257.2
30°	259.8	250.9	249.7	248.0	250.7	254.4
30.5°	256.8	248.0	246.8	245.1	247.9	251.7
31°	253.8	244.8	243.9	242.2	245.0	248.8
31.5°	250.8	241.8	240.9	239.1	242.1	245.8
32°	247.7	238.5	237.8	236.2	239.1	242.8
32.5°	244.4	235.3	234.7	233.0	236.0	239.8
33°	241.1	231.9	231.5	229.8	232.8	236.7
33.5°	237.7	228.4	228.1	226.6	229.6	233.3
34°	234.3	224.9	224.7	223.3	226.3	230.2
34.5°	230.7	221.2	221.3	219.9	222.9	226.8
35°	227.0	217.3	217.7	216.3	219.5	223.3
35.5°	223.3	213.5	214.0	212.7	215.9	219.7
36°	219.4	209.5	210.3	208.9	212.2	215.9
36.5°	215.5	205.4	206.4	205.0	208.4	212.0
37°	211.4	201.2	202.4	201.1	204.5	208.1
37.5°	207.4	197.0	198.3	197.1	200.3	204.2
38°	203.3	192.7	194.2	192.9	196.2	200.0
38.5°	199.0	188.3	190.0	188.6	191.9	195.6
39°	194.6	183.8	185.7	184.1	187.7	191.3
39.5°	190.4	179.2	181.2	179.6	183.3	186.8
40°	186.0	174.6	176.7	175.1	178.7	182.2
40.5°	181.6	170.1	172.1	170.6	174.1	177.7
41°	177.2	165.6	167.4	166.2	169.5	173.1
41.5°	172.7	161.0	162.7	161.6	164.9	168.4
42°	168.0	156.5	158.2	157.1	160.4	163.7
42.5°	163.4	151.8	153.6	152.4	155.9	159.0
43°	158.9	147.1	149.0	147.8	151.4	154.4
43.5°	154.4	142.6	144.5	143.3	146.7	149.7
44°	149.9	138.2	139.9	138.9	142.1	145.1
44.5°	145.5	133.8	135.5	134.4	137.7	140.6



TEST NUMBER: P522090

CATALOG NUMBER: RLLV4069SE010WHDM-3500K-UNIT

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	141.1	129.6	130.9	130.1	133.2	136.1
45.5°	136.7	125.3	126.7	125.7	128.9	131.7
46°	132.3	121.2	122.5	121.6	124.6	127.4
46.5°	128.0	117.0	118.5	117.4	120.4	123.2
47°	123.8	113.0	114.4	113.4	116.3	119.0
47.5°	119.9	109.3	110.5	109.4	112.3	114.8
48°	115.8	105.4	106.7	105.7	108.5	111.0
48.5°	111.9	101.9	102.9	102.1	104.7	107.1
49°	108.2	98.4	99.3	98.6	101.1	103.3
49.5°	104.4	94.8	95.8	95.1	97.6	99.8
50°	100.8	91.5	92.5	91.8	94.2	96.2
50.5°	97.3	88.2	89.1	88.3	90.8	92.7
51°	93.8	85.1	86.0	85.2	87.5	89.3
51.5°	90.5	82.1	82.8	82.2	84.3	86.2
52°	87.4	79.1	79.7	79.2	81.2	83.1
52.5°	84.2	76.3	77.0	76.4	78.2	80.1
53°	81.1	73.5	74.1	73.6	75.5	77.1
53.5°	78.1	70.9	71.5	71.0	72.7	74.3
54°	75.2	68.3	68.9	68.3	70.1	71.6
54.5°	72.5	65.8	66.4	66.0	67.5	68.9
55°	69.9	63.3	63.9	63.5	65.0	66.4
55.5°	67.4	61.2	61.4	61.2	62.5	64.0
56°	64.8	58.9	59.3	59.0	60.4	61.5
56.5°	62.4	56.8	57.2	56.8	58.1	59.3
57°	60.2	54.7	55.3	54.7	56.1	57.0
57.5°	57.9	52.7	53.3	52.7	53.9	54.9
58°	55.9	50.7	51.2	50.7	52.0	52.8
58.5°	53.8	49.0	49.3	49.0	50.2	50.8
59°	51.7	47.2	47.5	47.3	48.2	49.1
59.5°	49.9	45.5	45.8	45.5	46.4	47.2
60°	47.9	43.9	44.3	43.9	44.8	45.4
60.5°	46.2	42.3	42.6	42.3	43.3	43.8
61°	44.5	40.7	41.2	40.7	41.7	42.1
61.5°	42.9	39.4	39.8	39.4	40.0	40.3
62°	41.2	38.0	38.3	38.0	38.5	38.8
62.5°	39.9	36.7	36.8	36.6	37.0	37.4
63°	38.4	35.2	35.6	35.1	35.7	36.1
63.5°	37.0	34.0	34.4	34.0	34.6	34.7
64°	35.4	32.9	33.2	32.8	33.2	33.4
64.5°	34.2	31.7	32.0	31.7	32.0	32.1
65°	32.9	30.6	31.0	30.6	30.8	30.9
65.5°	31.7	29.7	29.8	29.5	29.7	29.8
66°	30.6	28.6	28.9	28.5	28.8	28.7
66.5°	29.7	27.9	28.0	27.7	27.8	27.8
67°	28.5	26.6	26.9	26.5	26.6	26.5



TEST NUMBER: P522090

CATALOG NUMBER: RLLV4069SE010WHDM-3500K-UNIT

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	27.6	25.9	26.0	25.8	25.8	25.6
68°	26.4	24.8	25.1	24.7	24.7	24.7
68.5°	25.7	24.1	24.4	24.0	24.0	23.8
69°	24.7	23.2	23.5	23.1	23.0	23.0
69.5°	23.9	22.6	22.9	22.4	22.3	22.1
70°	23.1	21.7	22.0	21.5	21.5	21.3
70.5°	22.4	21.2	21.2	21.0	20.9	20.4
71°	21.4	20.3	20.4	20.1	20.0	19.5
71.5°	20.7	19.6	19.7	19.5	19.3	18.8
72°	19.9	18.9	19.3	18.7	18.7	18.2
72.5°	19.4	18.5	18.6	18.0	17.9	17.7
73°	18.7	17.8	17.8	17.6	17.5	16.8
73.5°	18.0	17.1	17.2	16.9	16.7	16.2
74°	17.7	16.7	16.6	16.2	16.0	15.8
74.5°	16.8	16.1	15.9	15.7	15.6	15.3
75°	16.2	15.5	15.4	15.2	15.0	14.4
75.5°	15.9	15.0	15.1	14.4	14.3	13.8
76°	15.2	14.3	14.3	13.9	13.7	13.4
76.5°	14.4	13.6	13.7	13.3	13.2	12.7
77°	13.8	12.9	12.9	12.6	12.4	12.1
77.5°	13.3	12.2	12.3	12.0	11.9	11.5
78°	12.6	11.6	11.7	11.2	11.2	10.9
78.5°	12.1	10.9	10.9	10.8	10.7	10.5
79°	11.2	10.2	10.2	9.9	9.8	9.5
79.5°	10.7	9.3	9.5	9.2	9.1	9.1
80°	9.9	8.9	9.0	8.6	8.5	8.4
80.5°	9.2	8.2	8.2	7.8	8.0	7.7
81°	8.7	7.5	7.4	7.5	7.4	7.4
81.5°	7.8	7.0	6.8	6.6	6.7	6.6
82°	7.5	6.0	6.1	5.8	5.8	5.9
82.5°	6.6	5.7	5.6	5.1	5.5	5.5
83°	5.8	4.8	4.8	4.6	4.7	4.8
83.5°	5.3	4.0	4.0	3.9	4.0	4.1
84°	4.7	3.7	3.7	3.2	3.7	3.9
84.5°	4.0	2.9	2.9	2.7	2.9	3.1
85°	3.3	2.4	2.3	2.3	2.3	2.5
85.5°	2.8	2.1	2.1	1.7	2.2	2.3
86°	2.3	1.4	1.4	1.4	1.5	1.8
86.5°	1.7	0.9	0.8	0.7	1.0	1.6
87°	1.3	0.6	0.5	0.5	0.5	0.6
87.5°	0.7	0.0	0.0	0.0	0.3	0.5
88°	0.5	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0
89°	0.3	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P522090

CATALOG NUMBER: RLLV4069SE010WHDM-3500K-UNIT

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)