

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: P522091

Luminaire Tested: **RLLV4069SE010WHDM-4000K-UNIT**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522091
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-4000K-UNIT
Description: Surface Mount Downlight Fixture, Single Unit
Light Source: (48) 4000K CCT, 94 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

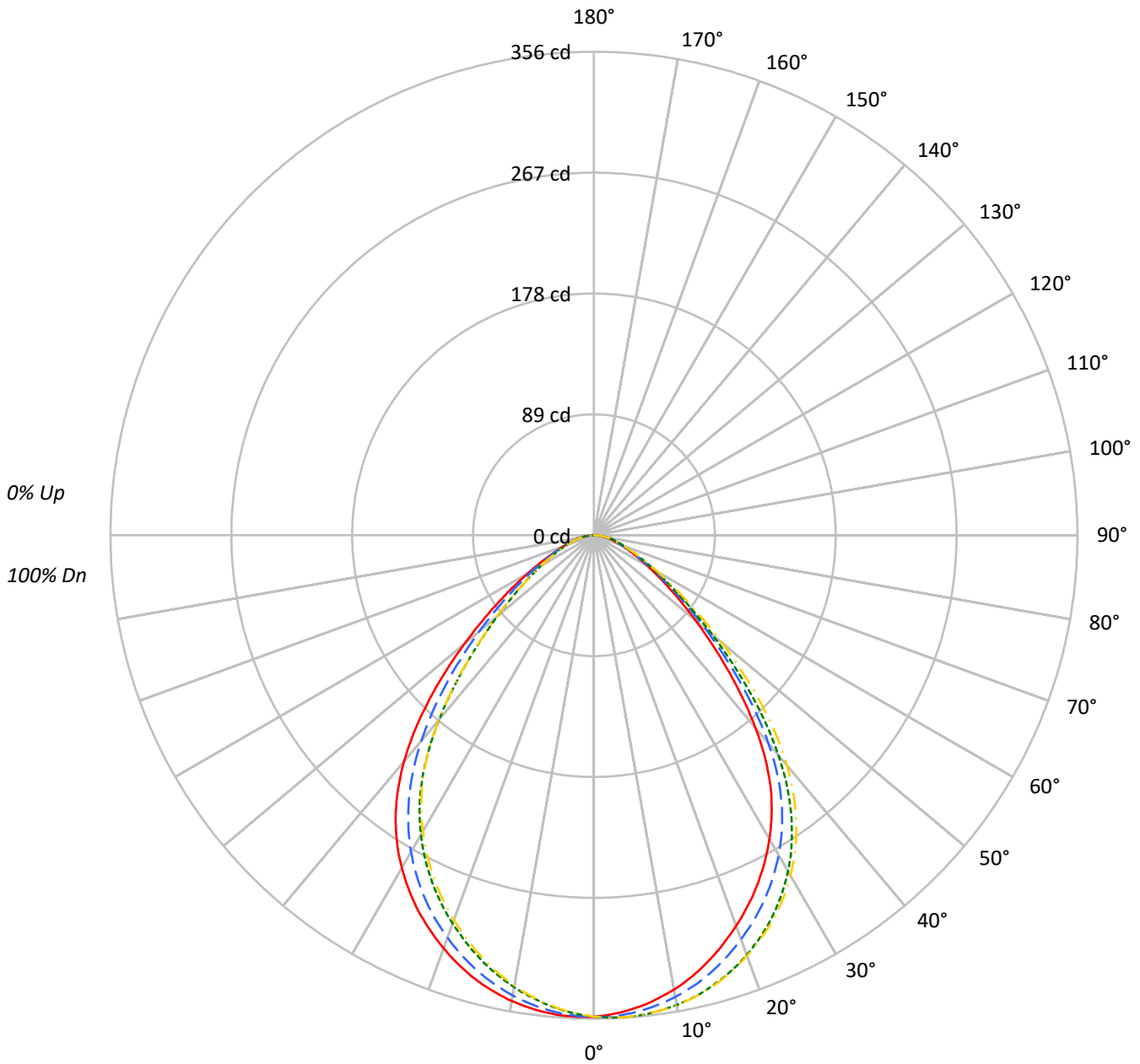
Lumens per Lamp: 644.87 (48 lamps)
Luminaire Lumens: 650.0 lumens
Efficiency: 2.1%
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.15 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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: P522091
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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	2	2	2	2	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	2	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	2	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°	43826	43826	43826	43826
5°	43361	44068	43882	43249
10°	42632	44075	43711	42419
15°	41559	43824	43273	41341
20°	40273	43245	42561	40023
25°	38770	42302	41661	38442
30°	36877	40773	40373	36363
35°	34219	38248	38414	33299
40°	29848	34059	35091	28621
45°	24173	28158	29976	23002
50°	18785	21823	23958	17862
55°	14523	16506	18380	13855
60°	11420	12804	13991	11024
65°	9183	10323	10820	9095
70°	7805	8745	8564	7950
75°	7020	8118	7640	7545
80°	6121	7829	7260	6477
85°	3545	6665	5814	3403



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	33.4	5.1	0.1
10°-20°	93.6	14.4	0.3
20°-30°	135.8	20.9	0.4
30°-40°	148.4	22.8	0.5
40°-50°	116.7	18.0	0.4
50°-60°	67.1	10.3	0.2
60°-70°	34.1	5.3	0.1
70°-80°	16.8	2.6	0.1
80°-90°	4.2	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°	262.7	40.4	0.8
0°-40°	411.1	63.2	1.3
0°-60°	594.9	91.5	1.9
0°-90°	650.0	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°	650.0	100.0	2.1

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	355	355	355	355	355	
5°	350	355	354	349	350	33
15°	325	342	338	323	325	91
25°	284	310	306	282	284	131
35°	227	254	255	221	227	140
45°	138	161	172	132	138	107
55°	67	77	85	64	67	61
65°	31	35	37	31	31	32
75°	15	17	16	16	15	16
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°	354.6	354.6	354.6	354.6	354.6	354.6	354.6	354.6	354.6	354.6	354.6
0.5°	354.2	354.3	354.8	355.8	354.7	354.7	354.7	354.6	354.6	354.5	354.7
1°	353.9	354.2	354.8	355.8	355.0	355.0	354.9	354.8	354.7	354.5	354.6
1.5°	353.5	354.0	354.7	355.8	355.2	355.2	355.2	354.9	354.7	354.5	354.4
2°	353.1	353.7	354.6	355.8	355.4	355.4	355.4	355.0	354.8	354.5	354.2
2.5°	352.6	353.4	354.4	355.7	355.5	355.5	355.5	355.1	354.7	354.3	353.9
3°	352.1	353.0	354.1	355.6	355.5	355.6	355.5	355.1	354.6	354.0	353.6
3.5°	351.5	352.6	353.8	355.4	355.5	355.6	355.5	355.1	354.5	353.8	353.3
4°	350.9	352.1	353.4	355.2	355.5	355.6	355.5	355.0	354.3	353.5	352.9
4.5°	350.2	351.6	353.0	355.0	355.4	355.6	355.4	354.9	354.1	353.1	352.4
5°	349.5	351.0	352.5	354.6	355.2	355.5	355.2	354.7	353.7	352.7	351.9
5.5°	348.8	350.4	352.0	354.3	355.1	355.3	355.1	354.4	353.4	352.2	351.3
6°	348.0	349.7	351.4	353.8	354.8	355.1	354.9	354.1	353.1	351.7	350.7
6.5°	347.1	349.0	350.8	353.4	354.5	354.9	354.6	353.7	352.6	351.2	350.0
7°	346.1	348.2	350.1	352.8	354.2	354.5	354.2	353.3	352.2	350.5	349.4
7.5°	345.1	347.3	349.4	352.3	353.8	354.2	353.8	352.8	351.6	349.9	348.6
8°	344.1	346.5	348.7	351.6	353.3	353.8	353.4	352.3	351.0	349.2	347.8
8.5°	343.0	345.5	347.9	351.0	352.8	353.3	353.0	351.8	350.4	348.5	346.9
9°	341.9	344.5	347.0	350.3	352.3	352.8	352.5	351.2	349.7	347.7	346.1
9.5°	340.9	343.5	346.1	349.5	351.8	352.2	351.9	350.5	349.0	346.8	345.1
10°	339.7	342.4	345.2	348.7	351.2	351.6	351.3	349.8	348.3	345.9	344.1
10.5°	338.4	341.2	344.2	347.9	350.5	351.0	350.7	349.1	347.5	345.0	343.1
11°	337.1	340.1	343.1	347.0	349.8	350.3	350.0	348.4	346.6	344.0	342.0
11.5°	335.7	338.9	342.0	346.0	349.1	349.6	349.3	347.5	345.8	342.9	340.9
12°	334.3	337.6	340.9	345.0	348.3	348.8	348.5	346.7	344.8	341.9	339.8
12.5°	332.9	336.3	339.8	343.9	347.5	348.0	347.7	345.8	343.8	340.9	338.6
13°	331.3	335.0	338.7	342.8	346.6	347.2	346.9	344.8	342.8	339.8	337.3
13.5°	329.8	333.6	337.3	341.7	345.7	346.2	346.0	343.8	341.7	338.6	336.1
14°	328.2	332.1	336.0	340.6	344.7	345.3	345.0	342.8	340.7	337.3	334.7
14.5°	326.5	330.6	334.6	339.4	343.6	344.3	344.0	341.7	339.5	336.0	333.3
15°	324.8	329.1	333.2	338.1	342.5	343.2	342.9	340.7	338.2	334.7	331.9
15.5°	323.1	327.5	331.7	336.7	341.3	342.1	341.8	339.5	337.0	333.3	330.4
16°	321.4	325.8	330.2	335.3	340.2	341.0	340.7	338.3	335.7	331.8	328.9
16.5°	319.6	324.1	328.6	333.9	338.9	339.9	339.5	337.0	334.3	330.4	327.4
17°	317.8	322.4	327.1	332.5	337.7	338.6	338.2	335.7	332.9	328.8	325.8
17.5°	315.9	320.7	325.4	330.9	336.3	337.2	336.9	334.3	331.5	327.3	324.2
18°	314.0	318.9	323.7	329.4	334.9	335.8	335.6	332.9	330.0	325.6	322.5
18.5°	312.0	317.1	322.0	327.8	333.5	334.4	334.1	331.4	328.4	324.0	320.7
19°	310.1	315.2	320.2	326.2	332.0	333.0	332.7	329.9	326.9	322.3	318.9
19.5°	308.2	313.4	318.5	324.4	330.4	331.5	331.1	328.4	325.2	320.6	317.1
20°	306.2	311.4	316.6	322.7	328.8	329.9	329.6	326.8	323.6	318.9	315.2
20.5°	304.2	309.5	314.8	320.9	327.2	328.3	328.1	325.2	321.9	317.1	313.4
21°	302.1	307.7	312.9	319.2	325.5	326.6	326.5	323.5	320.3	315.2	311.5
21.5°	299.9	305.7	311.0	317.3	323.8	324.9	324.8	321.9	318.5	313.4	309.6
22°	297.8	303.6	309.0	315.4	322.0	323.1	323.1	320.2	316.8	311.6	307.7



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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°	295.6	301.6	307.1	313.6	320.2	321.3	321.3	318.5	314.9	309.7	305.7
23°	293.5	299.5	305.1	311.6	318.3	319.5	319.6	316.7	313.1	307.9	303.5
23.5°	291.3	297.3	303.1	309.5	316.3	317.6	317.8	314.9	311.2	305.9	301.4
24°	289.0	295.2	300.9	307.6	314.4	315.6	316.0	313.1	309.3	303.8	299.3
24.5°	286.7	293.0	298.8	305.4	312.4	313.6	314.1	311.1	307.5	301.6	297.1
25°	284.3	290.7	296.6	303.2	310.2	311.5	312.1	309.1	305.5	299.5	294.8
25.5°	281.9	288.3	294.3	301.0	308.1	309.4	310.1	307.2	303.4	297.3	292.4
26°	279.4	285.9	292.0	298.7	305.8	307.3	308.1	305.2	301.3	295.1	290.0
26.5°	277.0	283.5	289.7	296.3	303.5	305.0	305.9	303.1	299.2	292.9	287.5
27°	274.6	281.1	287.4	293.9	301.2	302.7	303.7	301.0	297.0	290.6	285.1
27.5°	272.0	278.6	284.9	291.5	298.8	300.4	301.5	298.8	294.8	288.2	282.6
28°	269.4	276.1	282.4	289.0	296.3	297.9	299.2	296.6	292.5	285.8	280.0
28.5°	266.7	273.6	279.9	286.4	293.8	295.3	296.8	294.3	290.2	283.3	277.5
29°	264.1	271.0	277.2	283.8	291.2	292.7	294.4	292.0	287.8	280.9	274.8
29.5°	261.2	268.3	274.7	281.1	288.4	290.0	291.9	289.6	285.3	278.4	272.0
30°	258.4	265.6	272.0	278.3	285.7	287.3	289.4	287.1	282.9	275.8	269.2
30.5°	255.6	262.8	269.2	275.5	282.9	284.5	286.8	284.6	280.3	273.2	266.4
31°	252.7	260.0	266.3	272.6	280.0	281.6	284.1	282.1	277.8	270.5	263.5
31.5°	249.6	257.1	263.5	269.7	277.1	278.6	281.4	279.4	275.2	267.6	260.5
32°	246.6	254.2	260.5	266.5	274.1	275.6	278.5	276.7	272.5	264.8	257.5
32.5°	243.5	251.1	257.5	263.4	270.9	272.4	275.7	273.9	269.7	261.9	254.3
33°	240.4	248.0	254.3	260.0	267.6	269.2	272.6	271.0	266.8	258.8	251.0
33.5°	237.0	244.7	251.1	256.7	264.1	265.9	269.5	268.1	263.9	255.8	247.7
34°	233.8	241.5	247.8	253.2	260.6	262.5	266.3	265.0	260.8	252.7	244.3
34.5°	230.4	238.1	244.4	249.6	257.1	258.9	263.1	261.9	257.7	249.5	241.0
35°	226.8	234.6	241.0	245.9	253.5	255.2	259.7	258.6	254.6	246.1	237.5
35.5°	223.1	231.0	237.3	242.3	249.7	251.3	256.3	255.4	251.3	242.9	233.8
36°	219.2	227.3	233.6	238.4	245.8	247.4	252.7	252.0	247.9	239.4	230.1
36.5°	215.3	223.4	229.7	234.5	241.9	243.5	249.0	248.5	244.4	235.9	226.3
37°	211.3	219.4	225.7	230.3	237.8	239.5	245.2	244.9	240.9	232.2	222.4
37.5°	207.4	215.4	221.7	226.1	233.6	235.3	241.5	241.3	237.2	228.4	218.5
38°	203.1	211.2	217.5	221.8	229.4	231.0	237.6	237.6	233.4	224.6	214.5
38.5°	198.7	207.1	213.1	217.3	225.0	226.7	233.7	233.6	229.6	220.5	210.5
39°	194.3	202.7	208.8	212.9	220.5	222.1	229.5	229.6	225.7	216.4	206.5
39.5°	189.7	198.2	204.3	208.4	215.9	217.4	225.3	225.5	221.7	212.3	202.1
40°	185.0	193.7	199.7	203.7	211.1	212.7	220.9	221.4	217.5	208.2	197.8
40.5°	180.4	188.9	195.1	198.9	206.5	208.0	216.4	217.0	213.2	203.8	193.4
41°	175.8	184.1	190.3	194.0	201.5	203.2	211.8	212.6	208.9	199.4	188.9
41.5°	171.1	179.4	185.5	189.0	196.7	198.3	207.3	208.3	204.5	195.1	184.4
42°	166.3	174.7	180.6	184.1	191.8	193.2	202.6	203.7	200.0	190.5	180.0
42.5°	161.5	169.9	175.8	179.2	186.7	188.1	197.7	198.9	195.4	185.8	175.5
43°	156.8	165.0	170.9	174.3	181.6	182.9	192.8	194.1	190.8	181.2	170.9
43.5°	152.0	160.2	166.0	169.3	176.6	177.8	187.8	189.3	186.0	176.5	166.3
44°	147.3	155.4	161.0	164.2	171.4	172.6	182.7	184.4	181.2	171.8	161.6
44.5°	142.8	150.6	156.1	159.1	166.3	167.4	177.7	179.5	176.4	167.2	157.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	138.3	145.9	151.4	154.2	161.1	162.3	172.5	174.7	171.5	162.5	152.6
45.5°	133.8	141.3	146.6	149.3	156.1	157.1	167.5	169.7	166.8	157.7	148.0
46°	129.4	136.8	141.9	144.6	151.1	151.9	162.3	164.6	162.0	152.9	143.7
46.5°	125.1	132.2	137.3	139.8	146.1	146.7	157.2	159.6	157.1	148.1	139.3
47°	120.8	127.8	132.6	135.0	141.2	141.8	152.0	154.7	152.3	143.6	134.8
47.5°	116.6	123.4	128.0	130.4	136.4	136.9	147.0	149.8	147.6	139.0	130.5
48°	112.8	119.1	123.7	125.7	131.6	132.0	142.1	145.0	142.9	134.5	126.3
48.5°	108.8	115.1	119.4	121.3	126.9	127.2	137.2	140.3	138.2	130.1	122.2
49°	104.9	111.2	115.3	116.9	122.3	122.5	132.3	135.6	133.6	125.7	118.0
49.5°	101.4	107.2	111.3	112.8	117.8	118.0	127.5	130.8	129.1	121.3	114.1
50°	97.7	103.5	107.3	108.6	113.5	113.6	122.8	126.1	124.6	117.0	110.3
50.5°	94.1	99.8	103.3	104.6	109.1	109.3	118.2	121.5	120.2	113.0	106.4
51°	90.7	96.2	99.5	100.7	105.0	105.0	113.7	117.1	115.8	109.0	102.7
51.5°	87.5	92.6	95.8	96.8	101.0	101.0	109.5	112.9	111.8	105.1	99.0
52°	84.4	89.2	92.3	93.1	97.1	97.1	105.1	108.6	107.6	101.3	95.5
52.5°	81.3	85.9	88.9	89.6	93.3	93.3	101.0	104.5	103.7	97.6	92.0
53°	78.3	82.7	85.5	86.2	89.8	89.6	97.1	100.5	99.9	93.9	88.7
53.5°	75.5	79.7	82.4	82.8	86.3	86.1	93.2	96.6	96.1	90.4	85.5
54°	72.7	76.8	79.2	79.7	82.9	82.7	89.5	92.7	92.4	87.0	82.4
54.5°	70.0	73.9	76.2	76.6	79.8	79.5	85.9	89.0	88.8	83.6	79.3
55°	67.4	71.1	73.3	73.6	76.6	76.3	82.4	85.5	85.3	80.6	76.4
55.5°	65.0	68.4	70.6	70.7	73.6	73.3	79.1	82.1	82.0	77.4	73.5
56°	62.5	65.8	67.7	68.0	70.8	70.6	75.9	78.8	78.8	74.5	70.8
56.5°	60.2	63.3	65.1	65.3	68.3	67.7	72.9	75.6	75.8	71.6	68.3
57°	57.9	60.9	62.6	62.8	65.5	65.0	70.0	72.5	72.8	69.0	65.6
57.5°	55.7	58.7	60.1	60.4	63.0	62.4	67.1	69.5	69.9	66.1	63.1
58°	53.6	56.4	57.8	58.1	60.5	60.0	64.3	66.7	67.0	63.5	60.6
58.5°	51.6	54.3	55.5	55.8	58.2	57.8	61.7	63.9	64.2	61.0	58.2
59°	49.8	52.2	53.4	53.5	56.1	55.5	59.2	61.3	61.6	58.6	56.1
59.5°	48.0	50.1	51.4	51.3	53.9	53.4	56.7	58.7	59.0	56.3	53.9
60°	46.2	48.3	49.3	49.4	51.8	51.4	54.5	56.3	56.6	54.0	51.7
60.5°	44.5	46.5	47.4	47.6	49.8	49.3	52.4	53.7	54.3	51.7	49.7
61°	42.8	44.7	45.5	45.8	48.0	47.5	50.1	51.6	52.0	49.7	47.8
61.5°	41.0	43.0	43.7	44.1	46.2	45.7	48.1	49.3	49.7	47.7	46.0
62°	39.4	41.2	42.1	42.3	44.5	43.9	46.2	47.3	47.7	45.7	44.2
62.5°	38.0	39.6	40.4	40.6	42.7	42.4	44.3	45.3	45.8	43.9	42.5
63°	36.7	38.0	38.8	39.0	41.1	40.7	42.5	43.5	43.9	42.2	40.7
63.5°	35.2	36.7	37.3	37.5	39.6	39.2	40.7	41.5	42.1	40.5	39.1
64°	33.9	35.3	35.7	36.0	38.2	37.6	39.1	39.7	40.2	38.8	37.7
64.5°	32.6	33.8	34.2	34.6	36.8	36.1	37.5	38.0	38.5	37.2	36.2
65°	31.4	32.5	32.9	33.4	35.3	34.7	36.0	36.4	37.0	35.6	34.8
65.5°	30.3	31.2	31.5	32.0	34.0	33.5	34.5	34.8	35.3	34.0	33.5
66°	29.1	30.1	30.3	30.8	32.8	32.2	33.2	33.4	33.7	32.7	32.1
66.5°	28.2	29.0	29.3	29.6	31.5	31.0	31.8	32.0	32.2	31.3	30.9
67°	26.9	27.8	28.3	28.4	30.3	29.9	30.5	30.6	30.9	30.2	29.9



TEST NUMBER: P522091

CATALOG NUMBER: RLLV4069SE010WHDM-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	26.0	26.7	26.8	27.4	29.3	28.7	29.3	29.5	29.5	28.8	28.5
68°	25.1	25.8	25.9	26.3	28.3	27.6	28.3	28.2	28.4	27.6	27.6
68.5°	24.1	24.8	24.9	25.2	27.0	26.6	26.9	26.9	27.0	26.4	26.5
69°	23.3	23.7	23.8	24.3	26.1	25.5	26.1	25.9	26.0	25.3	25.4
69.5°	22.4	23.0	22.9	23.3	25.0	24.8	24.9	24.9	24.9	24.5	24.6
70°	21.6	22.0	21.9	22.5	24.2	23.6	23.9	23.7	23.7	23.4	23.5
70.5°	20.7	21.3	21.2	21.5	23.3	22.9	23.1	22.8	22.8	22.4	22.6
71°	19.8	20.3	20.3	20.8	22.5	22.0	22.1	21.7	21.7	21.5	21.8
71.5°	19.1	19.6	19.7	20.0	21.7	21.3	21.3	21.0	20.9	20.7	21.2
72°	18.4	18.8	18.8	19.5	21.1	20.4	20.3	20.0	19.9	19.8	20.2
72.5°	17.9	18.0	18.0	18.6	20.3	19.7	19.6	19.4	19.3	19.0	19.6
73°	17.0	17.4	17.3	17.9	19.6	19.0	18.7	18.6	18.4	18.2	18.8
73.5°	16.4	16.7	16.7	17.1	18.9	18.2	18.0	17.9	17.8	17.6	18.0
74°	16.1	16.2	16.2	16.6	18.1	17.6	17.2	17.1	17.0	16.9	17.3
74.5°	15.6	15.6	15.6	16.2	17.8	17.0	16.6	16.4	16.2	16.3	16.8
75°	14.7	15.3	15.0	15.6	17.0	16.3	16.2	16.1	16.0	15.7	16.2
75.5°	14.1	14.5	14.6	14.9	16.2	15.8	15.4	15.4	15.4	15.2	15.6
76°	13.7	14.0	14.2	14.5	16.0	15.3	14.7	14.7	14.6	14.7	15.3
76.5°	12.9	13.4	13.4	14.1	15.3	14.7	14.4	14.3	14.1	14.3	14.5
77°	12.3	12.7	12.7	13.2	14.6	14.2	13.8	13.8	13.6	13.5	14.2
77.5°	11.7	12.2	12.3	12.6	14.1	13.5	13.0	13.1	12.9	12.8	13.3
78°	11.1	11.7	11.6	12.1	13.5	12.8	12.6	12.7	12.5	12.3	12.6
78.5°	10.7	11.0	11.1	11.3	12.7	12.3	12.2	12.2	12.0	11.7	12.2
79°	9.7	10.4	10.4	11.0	12.2	11.6	11.6	11.4	11.3	11.2	11.3
79.5°	9.3	9.7	9.6	10.2	11.6	11.1	11.0	11.1	10.9	10.6	10.9
80°	8.6	9.3	9.3	9.4	11.0	10.6	10.4	10.5	10.2	9.8	10.1
80.5°	7.8	8.6	8.5	9.0	10.4	9.9	9.8	9.7	9.5	9.4	9.3
81°	7.5	7.7	7.7	8.3	9.5	9.3	9.3	9.3	9.2	8.7	8.7
81.5°	6.7	7.4	7.5	7.5	9.2	8.8	8.7	8.7	8.4	7.9	8.1
82°	6.0	6.5	6.7	6.9	8.3	8.0	8.2	7.9	7.6	7.5	7.6
82.5°	5.6	5.9	6.0	6.3	7.6	7.6	7.5	7.6	7.3	6.7	6.8
83°	4.9	5.6	5.6	5.7	7.1	6.8	6.8	6.8	6.5	6.0	5.9
83.5°	4.2	4.8	4.9	5.1	6.3	6.1	6.2	6.0	5.8	5.7	5.7
84°	4.0	4.1	4.2	4.7	5.8	5.8	5.8	5.7	5.5	4.9	4.9
84.5°	3.2	3.8	4.0	4.0	5.1	5.1	5.1	5.0	4.8	4.2	4.1
85°	2.5	3.0	3.2	3.3	4.7	4.5	4.7	4.3	4.1	4.0	3.8
85.5°	2.3	2.3	2.5	2.9	4.0	4.0	4.0	4.0	3.8	3.2	3.0
86°	1.8	2.2	2.3	2.3	3.4	3.3	3.3	3.2	3.0	2.5	2.4
86.5°	1.6	1.5	1.7	2.1	2.9	2.9	2.8	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: P522091

CATALOG NUMBER: RLLV4069SE010WHDM-4000K-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: P522091

CATALOG NUMBER: RLLV4069SE010WHDM-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	354.6	354.6	354.6	354.6	354.6	354.6
0.5°	355.4	354.0	354.0	353.9	354.0	354.2
1°	355.2	353.7	353.6	353.5	353.6	353.9
1.5°	354.9	353.2	353.1	353.0	353.2	353.5
2°	354.5	352.7	352.5	352.5	352.7	353.1
2.5°	354.2	352.2	352.0	351.9	352.2	352.6
3°	353.7	351.6	351.4	351.2	351.6	352.1
3.5°	353.2	350.9	350.7	350.5	350.9	351.5
4°	352.7	350.2	349.9	349.8	350.2	350.9
4.5°	352.1	349.4	349.2	348.9	349.5	350.2
5°	351.5	348.6	348.3	348.1	348.7	349.5
5.5°	350.8	347.7	347.4	347.2	347.8	348.8
6°	350.0	346.8	346.5	346.2	346.9	348.0
6.5°	349.3	345.8	345.5	345.2	346.0	347.1
7°	348.4	344.8	344.5	344.1	345.0	346.1
7.5°	347.6	343.7	343.3	343.0	343.8	345.1
8°	346.7	342.6	342.2	341.9	342.7	344.1
8.5°	345.7	341.5	341.0	340.8	341.5	343.0
9°	344.7	340.5	339.8	339.6	340.4	341.9
9.5°	343.6	339.3	338.6	338.3	339.2	340.9
10°	342.5	338.0	337.3	337.0	337.9	339.7
10.5°	341.4	336.7	335.9	335.5	336.6	338.4
11°	340.3	335.4	334.5	334.1	335.2	337.1
11.5°	339.1	334.0	333.1	332.6	333.9	335.7
12°	337.9	332.5	331.6	331.1	332.4	334.3
12.5°	336.5	331.1	330.1	329.6	330.8	332.9
13°	335.2	329.6	328.6	327.9	329.3	331.3
13.5°	333.8	328.0	327.0	326.3	327.8	329.8
14°	332.3	326.4	325.3	324.5	326.1	328.2
14.5°	330.8	324.8	323.6	322.8	324.4	326.5
15°	329.2	323.1	321.9	321.0	322.7	324.8
15.5°	327.7	321.3	320.1	319.2	320.9	323.1
16°	326.1	319.6	318.3	317.4	319.0	321.4
16.5°	324.4	317.8	316.4	315.5	317.2	319.6
17°	322.7	315.9	314.5	313.5	315.3	317.8
17.5°	320.9	314.0	312.7	311.6	313.4	315.9
18°	319.1	312.1	310.7	309.6	311.5	314.0
18.5°	317.3	310.1	308.7	307.6	309.5	312.0
19°	315.4	308.3	306.8	305.6	307.6	310.1
19.5°	313.6	306.3	304.7	303.5	305.5	308.2
20°	311.6	304.3	302.6	301.4	303.4	306.2
20.5°	309.7	302.2	300.6	299.3	301.4	304.2
21°	307.7	300.1	298.5	297.2	299.3	302.1
21.5°	305.7	297.9	296.3	295.0	297.1	299.9
22°	303.6	295.8	294.1	292.7	295.0	297.8



TEST NUMBER: P522091

CATALOG NUMBER: RLLV4069SE010WHDM-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	301.4	293.6	291.9	290.5	292.7	295.6
23°	299.4	291.4	289.5	288.3	290.4	293.5
23.5°	297.1	289.1	287.2	285.9	288.1	291.3
24°	294.9	286.7	284.9	283.5	285.8	289.0
24.5°	292.6	284.3	282.5	281.1	283.4	286.7
25°	290.2	281.9	280.1	278.6	281.0	284.3
25.5°	287.7	279.3	277.7	276.1	278.5	281.9
26°	285.3	276.8	275.2	273.6	276.0	279.4
26.5°	282.9	274.3	272.6	271.1	273.6	277.0
27°	280.3	271.8	270.0	268.5	271.0	274.6
27.5°	277.7	269.1	267.4	265.9	268.4	272.0
28°	275.1	266.3	264.8	263.1	265.8	269.4
28.5°	272.4	263.5	262.0	260.3	263.1	266.7
29°	269.6	260.7	259.2	257.5	260.3	264.1
29.5°	266.7	257.7	256.4	254.7	257.5	261.2
30°	263.9	254.8	253.6	251.8	254.6	258.4
30.5°	260.8	251.8	250.6	248.9	251.7	255.6
31°	257.8	248.6	247.7	245.9	248.8	252.7
31.5°	254.7	245.5	244.6	242.9	245.8	249.6
32°	251.5	242.3	241.6	239.9	242.9	246.6
32.5°	248.2	239.0	238.4	236.7	239.7	243.5
33°	244.8	235.5	235.1	233.4	236.5	240.4
33.5°	241.5	232.0	231.7	230.1	233.2	237.0
34°	238.0	228.4	228.2	226.8	229.8	233.8
34.5°	234.3	224.6	224.7	223.3	226.4	230.4
35°	230.6	220.7	221.1	219.7	222.9	226.8
35.5°	226.8	216.8	217.3	216.0	219.2	223.1
36°	222.8	212.7	213.5	212.1	215.5	219.2
36.5°	218.8	208.7	209.7	208.2	211.6	215.3
37°	214.7	204.4	205.6	204.3	207.7	211.3
37.5°	210.7	200.1	201.4	200.2	203.5	207.4
38°	206.5	195.7	197.2	195.9	199.3	203.1
38.5°	202.1	191.2	193.0	191.5	194.9	198.7
39°	197.7	186.6	188.6	187.0	190.6	194.3
39.5°	193.4	182.0	184.0	182.4	186.1	189.7
40°	188.9	177.4	179.4	177.9	181.5	185.0
40.5°	184.4	172.8	174.8	173.3	176.9	180.4
41°	179.9	168.2	170.0	168.8	172.2	175.8
41.5°	175.4	163.5	165.3	164.1	167.5	171.1
42°	170.7	158.9	160.7	159.5	162.9	166.3
42.5°	166.0	154.1	156.0	154.8	158.3	161.5
43°	161.4	149.4	151.3	150.1	153.7	156.8
43.5°	156.8	144.9	146.7	145.6	149.0	152.0
44°	152.2	140.4	142.1	141.1	144.4	147.3
44.5°	147.7	135.9	137.6	136.5	139.9	142.8



TEST NUMBER: P522091

CATALOG NUMBER: RLLV4069SE010WHDM-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	143.3	131.6	133.0	132.1	135.3	138.3
45.5°	138.9	127.2	128.7	127.7	130.9	133.8
46°	134.4	123.1	124.4	123.5	126.5	129.4
46.5°	130.0	118.8	120.3	119.2	122.3	125.1
47°	125.7	114.7	116.1	115.1	118.1	120.8
47.5°	121.7	111.0	112.3	111.2	114.0	116.6
48°	117.6	107.1	108.4	107.4	110.2	112.8
48.5°	113.6	103.5	104.5	103.7	106.4	108.8
49°	109.9	99.9	100.9	100.1	102.7	104.9
49.5°	106.1	96.3	97.3	96.6	99.1	101.4
50°	102.4	92.9	93.9	93.2	95.7	97.7
50.5°	98.8	89.6	90.5	89.7	92.2	94.1
51°	95.3	86.4	87.3	86.5	88.8	90.7
51.5°	91.9	83.3	84.1	83.4	85.6	87.5
52°	88.7	80.4	81.0	80.5	82.4	84.4
52.5°	85.5	77.5	78.2	77.6	79.5	81.3
53°	82.3	74.7	75.3	74.8	76.7	78.3
53.5°	79.4	72.0	72.6	72.1	73.9	75.5
54°	76.4	69.4	70.0	69.4	71.2	72.7
54.5°	73.7	66.8	67.4	67.0	68.6	70.0
55°	71.0	64.3	64.9	64.5	66.0	67.4
55.5°	68.5	62.1	62.4	62.1	63.5	65.0
56°	65.8	59.8	60.2	59.9	61.3	62.5
56.5°	63.4	57.7	58.1	57.7	59.0	60.2
57°	61.1	55.5	56.1	55.5	57.0	57.9
57.5°	58.8	53.5	54.1	53.5	54.7	55.7
58°	56.7	51.5	52.0	51.5	52.8	53.6
58.5°	54.6	49.7	50.0	49.7	50.9	51.6
59°	52.5	48.0	48.3	48.1	48.9	49.8
59.5°	50.6	46.3	46.6	46.3	47.2	48.0
60°	48.7	44.6	45.0	44.6	45.5	46.2
60.5°	47.0	43.0	43.3	43.0	44.0	44.5
61°	45.2	41.4	41.9	41.4	42.4	42.8
61.5°	43.6	40.0	40.4	40.0	40.6	41.0
62°	41.9	38.6	38.9	38.6	39.1	39.4
62.5°	40.5	37.3	37.4	37.2	37.6	38.0
63°	39.0	35.8	36.2	35.7	36.3	36.7
63.5°	37.6	34.5	34.9	34.5	35.1	35.2
64°	36.0	33.4	33.7	33.3	33.7	33.9
64.5°	34.7	32.2	32.5	32.2	32.5	32.6
65°	33.4	31.1	31.5	31.1	31.3	31.4
65.5°	32.2	30.2	30.3	30.0	30.2	30.3
66°	31.1	29.0	29.3	28.9	29.2	29.1
66.5°	30.2	28.3	28.4	28.1	28.2	28.2
67°	28.9	27.0	27.3	26.9	27.0	26.9



TEST NUMBER: P522091

CATALOG NUMBER: RLLV4069SE010WHDM-4000K-UNIT

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	28.0	26.3	26.4	26.2	26.2	26.0
68°	26.8	25.2	25.5	25.1	25.1	25.1
68.5°	26.1	24.5	24.8	24.3	24.3	24.1
69°	25.1	23.5	23.8	23.4	23.3	23.3
69.5°	24.2	22.9	23.2	22.7	22.6	22.4
70°	23.4	22.0	22.3	21.8	21.8	21.6
70.5°	22.7	21.5	21.5	21.3	21.2	20.7
71°	21.7	20.6	20.7	20.4	20.3	19.8
71.5°	21.0	19.9	20.0	19.8	19.6	19.1
72°	20.2	19.2	19.6	19.0	18.9	18.4
72.5°	19.7	18.7	18.8	18.2	18.1	17.9
73°	18.9	18.0	18.0	17.8	17.7	17.0
73.5°	18.2	17.3	17.4	17.1	16.9	16.4
74°	17.9	16.9	16.8	16.4	16.2	16.1
74.5°	17.0	16.3	16.2	16.0	15.9	15.6
75°	16.4	15.8	15.7	15.5	15.3	14.7
75.5°	16.2	15.3	15.4	14.7	14.6	14.1
76°	15.5	14.6	14.6	14.2	14.0	13.7
76.5°	14.7	13.9	14.0	13.6	13.4	12.9
77°	14.1	13.1	13.1	12.8	12.6	12.3
77.5°	13.6	12.4	12.5	12.2	12.1	11.7
78°	12.8	11.8	11.9	11.4	11.4	11.1
78.5°	12.3	11.1	11.1	11.0	10.9	10.7
79°	11.4	10.4	10.4	10.1	10.0	9.7
79.5°	10.9	9.5	9.7	9.4	9.3	9.3
80°	10.1	9.1	9.2	8.8	8.7	8.6
80.5°	9.4	8.4	8.4	7.9	8.1	7.8
81°	8.9	7.6	7.5	7.6	7.5	7.5
81.5°	7.9	7.1	6.9	6.7	6.8	6.7
82°	7.6	6.1	6.2	5.9	5.9	6.0
82.5°	6.7	5.8	5.7	5.2	5.6	5.6
83°	5.9	4.9	4.9	4.7	4.8	4.9
83.5°	5.4	4.1	4.1	4.0	4.1	4.2
84°	4.8	3.8	3.8	3.3	3.8	4.0
84.5°	4.1	3.0	3.0	2.8	3.0	3.2
85°	3.4	2.4	2.3	2.3	2.3	2.5
85.5°	2.9	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: P522091

CATALOG NUMBER: RLLV4069SE010WHDM-4000K-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)