

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: NEO-RAY

Report Number: P333021-930

Luminaire Tested: **S124RDIW-S350D770U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333021-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S350D770U930-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 770 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3669.7 lumens
Efficiency: N/A
Efficacy: 120.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

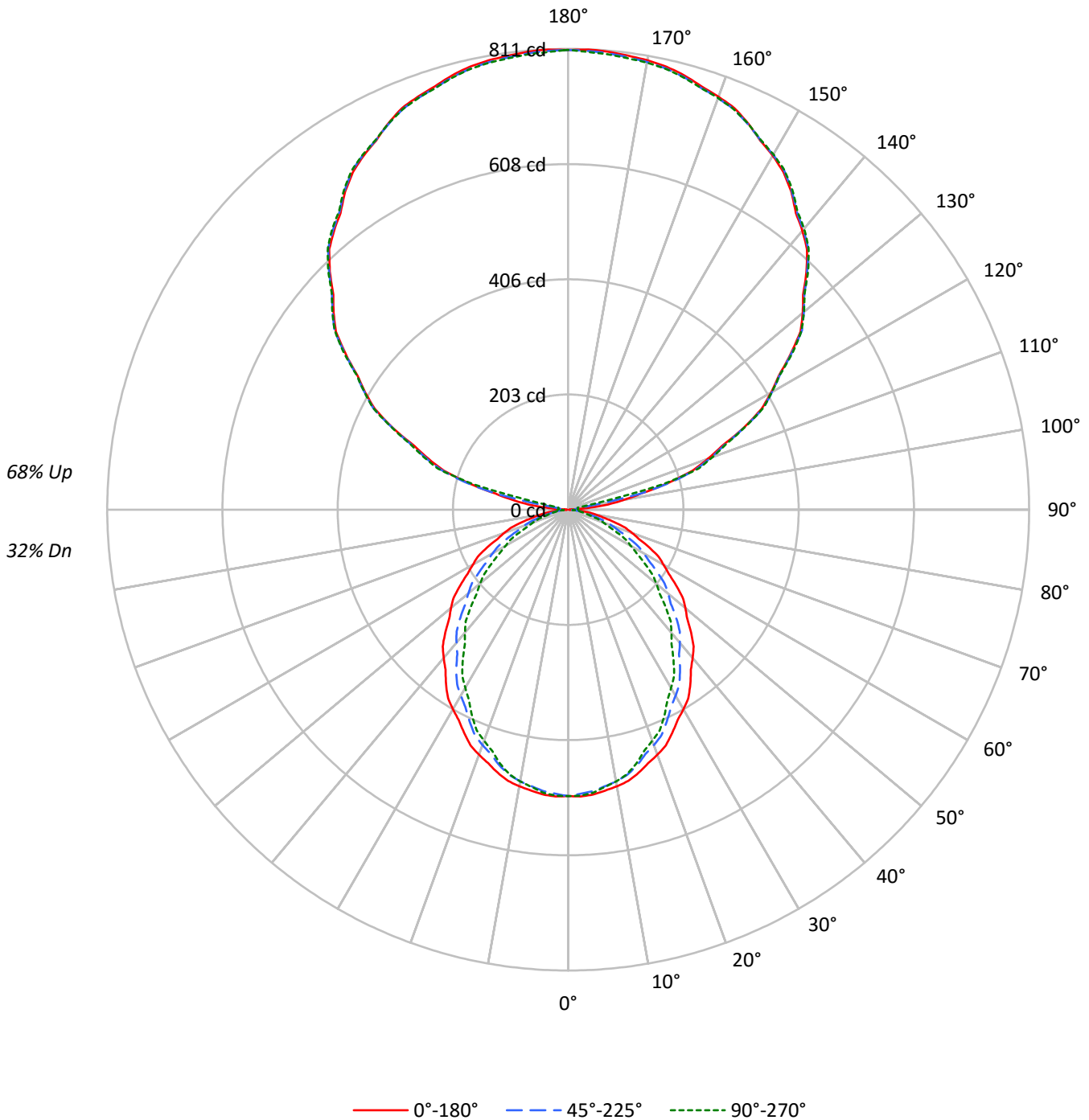
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P333021-930

CATALOG NUMBER: S124RDIW-S350D770U930-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P333021-930

CATALOG NUMBER: S124RDIW-S350D770U930-4F0-1E-UDD-F

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	0
RCR																		
0	103	103	103	103	92	92	92	92	73	73	73	56	56	56	39	39	39	32
1	94	90	86	83	84	81	78	75	64	62	60	49	48	46	35	34	34	27
2	86	78	73	68	77	71	66	62	56	53	50	43	41	39	31	30	28	23
3	78	69	62	57	70	62	56	52	50	46	42	38	36	33	28	26	24	20
4	71	61	54	48	64	55	49	44	44	40	36	34	31	28	25	23	21	17
5	66	54	47	41	59	49	43	38	40	35	31	31	27	25	22	20	18	15
6	60	49	41	35	54	44	37	33	36	31	27	28	24	22	20	18	16	13
7	56	44	36	31	50	40	33	29	32	27	24	25	22	19	19	16	15	12
8	52	40	32	27	46	36	30	25	29	25	21	23	20	17	17	15	13	10
9	48	36	29	24	43	33	27	22	27	22	19	21	18	15	16	13	12	9
10	45	33	26	22	40	30	24	20	25	20	17	20	16	14	15	12	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4069	4069	4069
5°	4078	4028	4053
10°	4052	3980	3980
15°	4006	3896	3867
20°	3942	3786	3716
25°	3861	3657	3564
30°	3781	3522	3375
35°	3693	3381	3183
40°	3587	3222	2977
45°	3490	3062	2767
50°	3378	2880	2545
55°	3258	2688	2303
60°	3127	2480	2055
65°	3007	2220	1813
70°	2832	1931	1539
75°	2611	1603	1251
80°	2278	1223	1148
85°	1936	1112	1037



TEST NUMBER: P333021-930

CATALOG NUMBER: S124RDIW-S350D770U930-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.3	1.3
10°-20°	132.0	3.6
20°-30°	190.6	5.2
30°-40°	216.1	5.9
40°-50°	208.7	5.7
50°-60°	173.5	4.7
60°-70°	119.8	3.3
70°-80°	60.7	1.7
80°-90°	17.9	0.5
90°-100°	27.7	0.8
100°-110°	176.5	4.8
110°-120°	337.5	9.2
120°-130°	428.5	11.7
130°-140°	458.5	12.5
140°-150°	428.7	11.7
150°-160°	345.7	9.4
160°-170°	223.0	6.1
170°-180°	76.9	2.1
0°-30°	370.0	10.1
0°-40°	586.1	16.0
0°-60°	968.3	26.4
0°-90°	1166.8	31.8
90°-120°	541.7	14.8
90°-150°	1857.3	50.6
90°-180°	2503.0	68.2
0°-180°	3669.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	504	504	504	504	504	
5°	503	502	497	501	500	48
15°	479	475	466	465	463	135
25°	433	426	411	404	400	200
35°	375	362	343	330	323	234
45°	306	291	268	250	242	236
55°	232	216	191	172	164	207
65°	157	140	116	100	95	155
75°	84	69	51	43	40	88
85°	21	13	12	11	11	24
90°	2	8	13	17	18	3
95°	33	14	13	17	18	43
105°	182	186	189	193	172	191
115°	340	342	341	342	342	335
125°	478	480	479	481	482	427
135°	593	593	595	596	597	457
145°	684	686	686	686	688	427
155°	750	750	749	751	749	346
165°	791	788	788	792	787	223
175°	809	806	806	811	804	77
180°	809	809	809	809	809	



TEST NUMBER: P333021-930

CATALOG NUMBER: S124RDIW-S350D770U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	504.0	504.0	504.0	504.0	504.0	504.0	504.0	504.0	504.0	504.0	504.0
2.5°	505.2	504.9	504.7	504.4	504.1	503.6	502.9	502.1	501.3	500.6	501.3
5°	503.2	502.9	502.6	502.2	501.8	501.2	500.1	499.1	498.1	497.1	497.9
7.5°	498.6	498.3	498.0	497.6	497.3	496.4	495.0	493.7	492.4	491.1	491.5
10°	494.3	493.9	493.5	493.1	492.6	491.6	490.1	488.5	487.0	485.5	485.8
12.5°	488.8	488.3	487.8	487.3	486.8	485.7	483.8	482.0	480.2	478.3	478.6
15°	479.3	478.5	477.8	477.0	476.2	474.7	472.6	470.4	468.3	466.2	466.0
17.5°	467.8	466.7	465.5	464.5	463.3	461.5	458.9	456.3	453.8	451.2	450.7
20°	458.9	457.7	456.6	455.5	454.4	452.4	449.5	446.5	443.6	440.7	440.0
22.5°	449.0	447.7	446.5	445.2	443.9	441.7	438.6	435.5	432.4	429.3	428.3
25°	433.4	431.9	430.3	428.8	427.2	424.7	421.2	417.7	414.1	410.6	409.1
27.5°	417.0	415.1	413.1	411.2	409.3	406.4	402.7	398.9	395.2	391.4	389.6
30°	405.6	403.4	401.3	399.2	397.1	394.0	389.9	385.9	381.8	377.8	375.7
32.5°	393.5	391.1	388.7	386.3	383.8	380.6	376.4	372.3	368.1	363.9	361.4
35°	374.7	371.9	369.2	366.5	363.7	360.2	356.0	351.6	347.4	343.1	340.1
37.5°	354.6	351.7	348.9	346.1	343.2	339.5	334.7	330.0	325.2	320.5	317.2
40°	340.4	337.5	334.7	331.9	329.1	325.2	320.3	315.4	310.5	305.7	302.1
42.5°	326.8	323.8	320.8	317.9	315.0	310.9	305.8	300.7	295.6	290.5	286.8
45°	305.7	302.5	299.3	296.1	292.9	288.8	283.6	278.5	273.4	268.2	264.0
47.5°	283.8	280.5	277.3	273.9	270.7	266.4	261.1	255.7	250.3	245.0	240.6
50°	269.0	265.6	262.3	258.9	255.6	251.2	245.7	240.2	234.7	229.3	224.9
52.5°	253.9	250.5	247.3	244.0	240.8	236.3	230.6	225.0	219.4	213.8	209.5
55°	231.5	228.1	224.7	221.3	217.8	213.3	207.7	202.2	196.6	191.0	186.5
57.5°	209.5	205.9	202.4	198.8	195.2	190.7	185.2	179.7	174.2	168.7	164.2
60°	193.7	190.3	186.9	183.4	180.0	175.5	170.1	164.5	159.1	153.6	149.1
62.5°	179.5	175.9	172.4	168.8	165.3	160.7	155.1	149.4	143.8	138.2	134.0
65°	157.4	153.8	150.1	146.4	142.7	138.1	132.6	127.1	121.6	116.2	112.5
67.5°	134.5	131.0	127.4	123.9	120.4	116.1	111.0	105.9	100.8	95.7	92.5
70°	120.0	116.4	112.8	109.3	105.6	101.3	96.4	91.6	86.7	81.8	79.0
72.5°	104.6	101.3	98.1	94.8	91.6	87.6	83.0	78.4	73.8	69.1	66.8
75°	83.7	80.6	77.4	74.2	71.0	67.4	63.4	59.4	55.4	51.4	49.3
77.5°	62.6	59.9	57.2	54.5	51.9	48.8	45.6	42.3	39.1	35.8	34.7
80°	49.0	46.6	44.0	41.6	39.1	36.5	34.0	31.4	28.8	26.3	26.0
82.5°	37.3	35.0	32.7	30.4	28.1	26.3	24.8	23.3	21.9	20.4	20.2
85°	20.9	19.2	17.4	15.7	13.9	13.0	12.7	12.5	12.2	12.0	11.8
87.5°	7.5	7.2	6.9	6.7	6.4	6.4	6.5	6.7	6.8	7.0	7.1
90°	1.8	3.3	4.8	6.3	7.7	9.0	10.1	11.2	12.2	13.3	14.1
92.5°	7.7	7.7	7.8	7.8	7.9	8.6	9.6	10.7	11.7	12.8	13.6
95°	33.3	28.7	24.1	19.6	15.0	12.8	12.9	13.0	13.2	13.3	14.1
97.5°	70.7	73.5	76.4	79.2	82.1	76.0	61.0	46.0	31.0	16.0	16.1
100°	99.2	101.7	104.1	106.5	108.9	100.9	82.3	63.8	45.2	26.7	24.4
102.5°	131.2	133.0	134.8	136.6	138.3	137.9	135.6	133.1	130.7	128.3	103.6
105°	182.1	183.0	183.8	184.6	185.4	186.1	186.8	187.4	188.2	188.8	190.0
107.5°	229.5	229.9	230.3	230.7	231.1	231.8	232.7	233.6	234.5	235.4	236.0
110°	261.5	261.9	262.3	262.7	263.0	263.7	264.5	265.3	266.1	266.8	267.2



TEST NUMBER: P333021-930

CATALOG NUMBER: S124RDIW-S350D770U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	292.4	293.2	293.9	294.6	295.3	295.9	296.3	296.6	297.0	297.4	297.3
115°	340.1	340.6	341.0	341.3	341.7	341.9	341.7	341.6	341.4	341.3	341.6
117.5°	383.1	383.6	384.2	384.7	385.2	385.6	386.0	386.2	386.5	386.9	386.8
120°	412.1	412.7	413.2	413.8	414.3	414.5	414.3	414.3	414.1	413.9	414.3
122.5°	439.3	439.5	439.9	440.2	440.5	440.8	441.0	441.2	441.3	441.6	441.7
125°	478.1	478.7	479.2	479.7	480.2	480.4	480.1	479.9	479.6	479.3	479.7
127.5°	514.9	515.0	515.2	515.3	515.4	515.8	516.4	517.1	517.6	518.3	518.2
130°	538.6	538.7	538.9	539.0	539.2	539.4	539.8	540.2	540.6	541.0	541.2
132.5°	560.4	560.7	560.9	561.1	561.3	561.7	562.2	562.8	563.3	563.8	563.9
135°	593.0	593.0	592.8	592.6	592.6	592.7	593.3	593.8	594.4	594.9	595.2
137.5°	622.0	622.1	622.2	622.2	622.2	622.6	623.1	623.7	624.4	624.9	625.2
140°	640.9	641.2	641.4	641.7	642.0	642.2	642.5	642.8	643.0	643.4	643.7
142.5°	657.9	658.4	658.8	659.3	659.7	660.1	660.2	660.4	660.6	660.7	661.0
145°	683.9	684.3	684.7	685.1	685.5	685.7	685.7	685.7	685.7	685.7	685.8
147.5°	704.6	705.3	706.0	706.8	707.6	707.8	707.8	707.6	707.4	707.4	707.4
150°	719.6	720.1	720.6	721.2	721.7	721.9	721.8	721.6	721.5	721.4	721.4
152.5°	732.1	732.5	733.0	733.4	733.9	733.9	733.7	733.5	733.3	733.0	733.2
155°	749.8	750.0	750.1	750.2	750.4	750.2	749.8	749.4	749.0	748.6	749.2
157.5°	764.8	764.7	764.6	764.5	764.4	764.1	763.7	763.2	762.7	762.3	763.0
160°	773.4	773.0	772.7	772.3	771.8	771.5	771.4	771.3	771.1	771.0	771.8
162.5°	781.1	780.6	780.2	779.7	779.1	778.8	778.7	778.5	778.4	778.3	779.1
165°	791.0	790.3	789.6	789.0	788.3	788.0	788.0	788.0	788.0	788.0	789.0
167.5°	798.7	798.0	797.4	796.6	795.9	795.6	795.5	795.4	795.3	795.2	796.4
170°	803.1	802.3	801.4	800.6	799.9	799.5	799.6	799.8	799.9	800.1	801.1
172.5°	806.0	805.2	804.4	803.6	802.7	802.4	802.6	802.7	802.8	803.0	804.0
175°	809.1	808.3	807.6	806.7	805.9	805.6	805.7	805.8	806.0	806.1	807.3
177.5°	810.6	809.8	809.1	808.3	807.6	807.3	807.6	807.7	808.0	808.1	809.0
180°	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1



TEST NUMBER: P333021-930

CATALOG NUMBER: S124RDIW-S350D770U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	504.0	504.0	504.0	504.0	504.0	504.0	504.0	504.0
2.5°	502.1	502.9	503.6	503.9	503.9	503.9	503.8	503.7
5°	498.8	499.6	500.5	500.8	500.7	500.5	500.3	500.1
7.5°	492.1	492.7	493.3	493.3	493.1	492.8	492.5	492.3
10°	486.2	486.5	486.8	486.8	486.5	486.2	485.8	485.5
12.5°	478.7	479.0	479.2	479.1	478.6	478.1	477.6	477.1
15°	465.9	465.7	465.5	465.1	464.5	463.9	463.3	462.7
17.5°	450.2	449.8	449.3	448.6	447.7	446.8	445.9	445.0
20°	439.4	438.6	438.0	437.1	435.9	434.8	433.7	432.6
22.5°	427.2	426.2	425.2	424.2	423.3	422.4	421.5	420.5
25°	407.6	406.3	404.8	403.7	402.8	401.9	401.0	400.1
27.5°	387.8	386.0	384.2	382.7	381.4	380.2	379.0	377.7
30°	373.5	371.4	369.2	367.5	366.1	364.8	363.4	362.0
32.5°	359.0	356.4	354.0	352.0	350.7	349.4	348.1	346.8
35°	337.2	334.4	331.4	329.2	327.7	326.1	324.6	323.0
37.5°	314.0	310.7	307.4	305.0	303.5	301.9	300.4	298.8
40°	298.4	294.8	291.2	288.7	287.1	285.6	284.1	282.5
42.5°	283.2	279.5	275.8	273.2	271.6	269.9	268.3	266.8
45°	259.8	255.6	251.4	248.5	247.0	245.4	243.9	242.4
47.5°	236.3	231.9	227.6	224.5	222.8	221.1	219.4	217.8
50°	220.6	216.4	212.1	209.1	207.5	205.9	204.2	202.6
52.5°	205.0	200.7	196.4	193.3	191.7	190.0	188.3	186.5
55°	182.1	177.7	173.2	170.2	168.5	166.9	165.3	163.6
57.5°	159.6	155.2	150.6	147.7	146.5	145.3	144.0	142.8
60°	144.6	140.2	135.7	132.8	131.4	130.1	128.7	127.3
62.5°	130.0	125.8	121.7	119.1	118.0	116.9	115.8	114.7
65°	108.8	105.1	101.4	99.1	98.0	97.0	96.0	94.9
67.5°	89.4	86.2	83.0	80.9	79.7	78.6	77.5	76.3
70°	76.1	73.3	70.5	68.6	67.8	66.9	66.0	65.2
72.5°	64.3	61.9	59.5	57.9	57.1	56.3	55.5	54.7
75°	47.4	45.4	43.5	42.2	41.7	41.2	40.7	40.1
77.5°	33.5	32.4	31.2	30.6	30.4	30.2	30.1	29.9
80°	25.8	25.4	25.2	25.0	24.9	24.9	24.8	24.7
82.5°	20.0	19.8	19.6	19.5	19.4	19.3	19.2	19.2
85°	11.7	11.4	11.3	11.2	11.2	11.2	11.2	11.2
87.5°	7.2	7.3	7.3	7.5	7.6	7.7	7.8	8.0
90°	14.9	15.7	16.6	17.0	17.4	17.6	17.9	18.2
92.5°	14.4	15.2	16.1	16.5	16.6	16.6	16.6	16.7
95°	14.9	15.7	16.6	17.0	17.1	17.3	17.4	17.5
97.5°	16.1	16.2	16.3	16.4	16.6	16.7	16.8	17.0
100°	22.1	19.7	17.4	16.4	16.6	16.7	16.8	17.0
102.5°	79.0	54.3	29.7	17.3	17.4	17.4	17.4	17.4
105°	191.3	192.4	193.6	191.8	187.0	182.1	177.3	172.5
107.5°	236.6	237.2	237.8	238.3	238.9	239.4	239.9	240.4
110°	267.4	267.7	268.0	268.3	268.7	269.1	269.5	269.9



TEST NUMBER: P333021-930

CATALOG NUMBER: S124RDIW-S350D770U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	297.3	297.3	297.2	297.4	297.9	298.4	299.0	299.5
115°	341.9	342.1	342.4	342.5	342.5	342.5	342.5	342.5
117.5°	386.7	386.7	386.6	386.5	386.5	386.5	386.4	386.4
120°	414.5	414.7	415.0	415.0	414.7	414.5	414.3	413.9
122.5°	441.9	442.1	442.2	442.1	441.9	441.6	441.3	441.1
125°	480.1	480.5	480.9	481.2	481.4	481.4	481.6	481.8
127.5°	518.1	518.0	518.0	517.9	517.8	517.6	517.6	517.5
130°	541.3	541.4	541.6	541.6	541.6	541.6	541.6	541.6
132.5°	564.0	564.2	564.4	564.4	564.3	564.1	564.0	563.9
135°	595.4	595.7	596.0	596.2	596.5	596.8	597.0	597.3
137.5°	625.5	625.8	626.1	626.2	626.1	626.1	626.0	625.9
140°	644.1	644.5	644.9	645.2	645.3	645.5	645.6	645.7
142.5°	661.4	661.6	661.9	662.1	662.1	662.1	662.2	662.2
145°	685.9	686.1	686.2	686.4	686.6	687.0	687.2	687.5
147.5°	707.5	707.7	707.8	707.9	708.0	708.2	708.3	708.4
150°	721.4	721.4	721.4	721.5	721.6	721.7	721.9	721.9
152.5°	733.4	733.6	733.9	733.9	733.9	733.8	733.7	733.6
155°	749.7	750.2	750.7	750.8	750.4	750.0	749.6	749.3
157.5°	763.7	764.4	765.1	765.1	764.4	763.7	763.0	762.3
160°	772.7	773.4	774.2	774.2	773.4	772.7	771.8	771.0
162.5°	779.9	780.6	781.5	781.5	780.6	779.6	778.7	777.8
165°	790.1	791.2	792.2	792.2	791.0	789.8	788.6	787.3
167.5°	797.6	798.7	800.0	799.9	798.5	797.2	795.8	794.5
170°	802.2	803.3	804.4	804.2	802.9	801.5	800.2	798.8
172.5°	805.1	806.2	807.2	807.1	805.6	804.2	802.7	801.3
175°	808.5	809.8	811.0	810.7	809.1	807.6	805.9	804.3
177.5°	809.9	810.7	811.6	811.4	810.1	808.8	807.6	806.2
180°	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1

(END OF REPORT)