

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: P332730-940

Luminaire Tested: **S124DIW-S350D1050U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332730-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S350D1050U940-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4528.9 lumens
Efficiency: N/A
Efficacy: 119.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

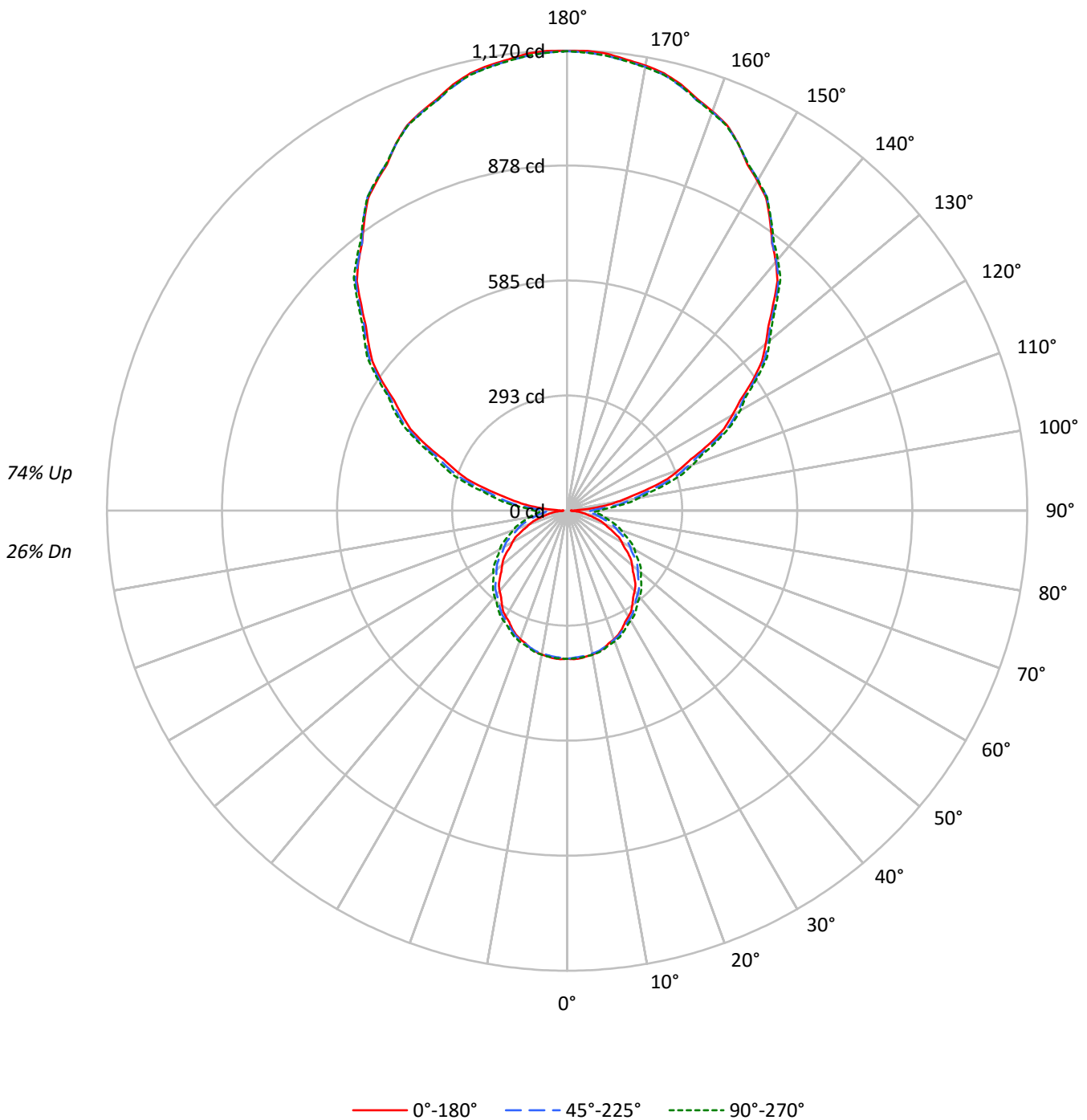
Input Watts (W): 38
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332730-940

CATALOG NUMBER: S124DIW-S350D1050U940-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P332730-940

CATALOG NUMBER: S124DIW-S350D1050U940-4F0-1E-UDD-D1

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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	34	34	34	26
1	92	88	84	80	82	78	75	72	61	58	56	44	43	42	29	29	28	21
2	83	76	70	65	74	68	63	58	53	49	46	39	36	34	26	24	23	17
3	76	67	59	54	67	60	53	48	46	42	38	34	31	29	22	21	19	14
4	69	59	51	45	61	52	46	41	41	36	32	30	27	24	20	18	16	12
5	63	52	44	38	56	47	40	35	36	31	28	27	23	21	18	16	14	10
6	58	46	39	33	52	42	35	30	33	28	24	24	21	18	16	14	12	9
7	54	42	34	29	48	37	31	26	29	24	21	22	18	16	15	13	11	8
8	50	38	30	25	44	34	27	23	27	22	18	20	16	14	13	11	10	7
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	12	10	9	6
10	43	31	24	20	38	28	22	18	22	18	14	17	13	11	11	9	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3043	3043	3043
5°	3053	2974	2982
10°	3033	2925	2923
15°	3006	2869	2854
20°	2965	2807	2785
25°	2919	2737	2710
30°	2869	2668	2634
35°	2812	2597	2566
40°	2768	2530	2497
45°	2700	2466	2436
50°	2643	2396	2373
55°	2585	2328	2298
60°	2493	2242	2231
65°	2392	2149	2146
70°	2271	2045	2049
75°	2101	1926	1961
80°	1913	1816	1875
85°	1676	1717	1825



TEST NUMBER: P332730-940

CATALOG NUMBER: S124DIW-S350D1050U940-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.7	0.8
10°-20°	102.3	2.3
20°-30°	154.6	3.4
30°-40°	187.1	4.1
40°-50°	197.8	4.4
50°-60°	186.2	4.1
60°-70°	154.4	3.4
70°-80°	108.5	2.4
80°-90°	64.8	1.4
90°-100°	113.5	2.5
100°-110°	255.2	5.6
110°-120°	405.4	9.0
120°-130°	521.0	11.5
130°-140°	578.0	12.8
140°-150°	564.6	12.5
150°-160°	474.1	10.5
160°-170°	315.4	7.0
170°-180°	110.5	2.4
0°-30°	292.6	6.5
0°-40°	479.7	10.6
0°-60°	863.6	19.1
0°-90°	1191.4	26.3
90°-120°	774.1	17.1
90°-150°	2437.6	53.8
90°-180°	3338.0	73.7
0°-180°	4528.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	377	377	377	377	377	
5°	377	376	373	376	376	36
15°	362	362	361	364	364	102
25°	331	333	335	339	340	152
35°	290	295	299	304	306	181
45°	241	249	257	264	267	187
55°	189	198	211	219	222	168
65°	131	144	159	169	173	130
75°	73	88	106	117	122	77
85°	22	40	59	71	76	24
90°	10	36	62	79	84	8
95°	60	82	105	119	123	65
105°	214	224	243	256	262	228
115°	396	401	412	420	422	391
125°	575	576	584	590	592	513
135°	741	746	749	754	754	573
145°	899	902	903	905	904	563
155°	1030	1030	1029	1032	1029	474
165°	1121	1118	1116	1121	1118	316
175°	1166	1162	1161	1166	1161	111
180°	1168	1168	1168	1168	1168	



TEST NUMBER: P332730-940

CATALOG NUMBER: S124DIW-S350D1050U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9
2.5°	378.3	378.0	377.8	377.6	377.4	376.9	376.4	375.8	375.1	374.5	375.1
5°	377.4	377.0	376.7	376.5	376.2	375.8	375.1	374.4	373.8	373.1	373.9
7.5°	374.2	374.0	373.8	373.6	373.4	373.1	372.6	372.0	371.5	371.0	371.8
10°	371.4	371.3	371.2	371.1	371.0	370.8	370.3	369.8	369.3	368.9	369.7
12.5°	367.7	367.7	367.7	367.7	367.7	367.5	367.1	366.8	366.5	366.2	366.9
15°	361.7	361.9	361.9	362.0	362.1	362.0	361.7	361.4	361.1	360.9	361.7
17.5°	353.6	353.8	354.1	354.4	354.6	354.8	354.7	354.6	354.6	354.5	355.4
20°	347.8	348.0	348.4	348.7	348.9	349.1	349.2	349.3	349.4	349.5	350.4
22.5°	341.3	341.7	342.1	342.4	342.8	343.0	343.2	343.4	343.6	343.8	344.6
25°	330.9	331.4	332.1	332.6	333.1	333.6	333.9	334.1	334.4	334.7	335.7
27.5°	319.2	320.1	320.9	321.7	322.5	323.2	323.6	324.0	324.5	324.9	325.8
30°	311.5	312.3	313.0	313.7	314.5	315.2	315.8	316.5	317.2	317.8	318.9
32.5°	303.1	304.0	304.9	305.8	306.7	307.5	308.2	308.9	309.7	310.4	311.6
35°	289.5	290.7	291.8	292.9	294.1	295.1	296.0	296.9	297.9	298.8	300.1
37.5°	276.0	277.2	278.6	279.8	281.2	282.3	283.6	284.7	285.9	287.0	288.4
40°	267.2	268.4	269.7	270.8	272.1	273.3	274.6	276.0	277.2	278.6	280.0
42.5°	257.1	258.4	259.8	261.2	262.5	263.9	265.6	267.1	268.6	270.1	271.7
45°	241.4	243.2	245.0	246.7	248.5	250.3	252.1	253.9	255.7	257.4	259.0
47.5°	226.5	228.4	230.2	232.0	233.8	235.8	237.8	240.0	242.0	244.1	245.7
50°	215.7	217.8	219.8	221.9	223.9	226.0	228.1	230.2	232.2	234.3	236.1
52.5°	204.9	207.0	209.0	211.1	213.1	215.3	217.7	220.1	222.4	224.8	226.7
55°	189.1	191.1	193.1	195.0	197.0	199.4	202.2	205.0	207.8	210.6	212.5
57.5°	171.5	173.9	176.3	178.8	181.2	183.8	186.6	189.4	192.2	195.0	197.2
60°	160.0	162.4	164.9	167.3	169.7	172.5	175.6	178.7	181.7	184.9	187.0
62.5°	148.8	151.5	154.2	156.9	159.4	162.4	165.4	168.5	171.7	174.8	176.9
65°	130.8	133.8	136.9	139.8	142.9	146.0	149.1	152.3	155.5	158.7	161.0
67.5°	113.5	116.7	119.9	123.1	126.3	129.6	133.0	136.4	139.8	143.2	145.6
70°	101.7	104.9	108.1	111.3	114.5	117.9	121.5	125.0	128.6	132.2	134.6
72.5°	90.2	93.5	96.8	100.0	103.3	106.8	110.6	114.4	118.2	122.0	124.4
75°	72.6	76.1	79.5	83.0	86.5	90.2	94.2	98.1	102.0	105.9	108.6
77.5°	56.2	59.8	63.5	67.1	70.8	74.7	78.8	83.0	87.1	91.2	93.9
80°	46.0	49.8	53.5	57.2	61.0	64.9	69.1	73.2	77.3	81.5	84.3
82.5°	35.8	39.8	43.7	47.6	51.5	55.5	59.7	63.8	67.9	72.1	74.9
85°	22.4	26.3	30.2	34.2	38.2	42.2	46.5	50.6	54.8	59.1	61.9
87.5°	13.0	17.3	21.6	25.9	30.1	34.4	38.9	43.3	47.7	52.2	55.1
90°	9.5	15.4	21.4	27.4	33.3	39.1	44.8	50.4	56.0	61.6	65.5
92.5°	25.8	31.7	37.5	43.4	49.4	54.9	60.1	65.2	70.4	75.5	78.9
95°	59.7	64.6	69.5	74.4	79.3	84.4	89.6	94.9	100.1	105.4	108.5
97.5°	99.7	103.8	107.9	112.0	116.1	120.8	126.4	131.8	137.2	142.7	145.9
100°	131.1	134.4	137.6	140.8	144.1	148.5	153.9	159.3	164.8	170.3	173.3
102.5°	164.3	166.8	169.2	171.7	174.2	178.1	183.2	188.5	193.7	198.9	202.0
105°	214.3	216.3	218.5	220.5	222.6	225.8	230.1	234.3	238.6	242.8	245.8
107.5°	267.5	269.3	271.1	272.9	274.6	277.2	280.6	284.0	287.4	290.8	293.6
110°	303.3	305.0	306.7	308.4	310.1	312.5	315.7	318.7	321.8	324.9	326.6



TEST NUMBER: P332730-940

CATALOG NUMBER: S124DIW-S350D1050U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	340.5	341.8	343.0	344.3	345.5	347.5	350.3	353.0	355.8	358.6	360.6
115°	396.4	397.3	398.1	399.0	399.8	401.4	404.1	406.7	409.3	411.9	413.8
117.5°	449.4	450.0	450.8	451.4	452.1	453.7	456.2	458.7	461.2	463.8	465.0
120°	484.5	485.5	486.7	487.8	488.8	490.4	492.6	494.6	496.8	498.9	499.8
122.5°	521.4	521.7	522.1	522.5	522.9	524.2	526.5	528.8	531.1	533.3	534.6
125°	575.3	575.2	575.2	575.1	575.0	576.0	578.1	580.2	582.4	584.5	585.9
127.5°	624.6	625.1	625.5	626.1	626.6	627.6	629.0	630.5	632.0	633.5	634.8
130°	658.9	659.4	660.0	660.4	660.9	661.9	663.4	664.9	666.5	668.0	669.2
132.5°	694.3	694.6	695.0	695.4	695.7	696.4	697.4	698.5	699.5	700.5	701.8
135°	740.7	741.9	743.1	744.3	745.5	746.5	747.1	747.7	748.4	749.0	750.2
137.5°	791.7	792.1	792.6	793.0	793.5	794.1	794.7	795.3	795.9	796.7	797.5
140°	825.6	825.9	826.2	826.5	826.8	827.1	827.2	827.2	827.3	827.4	828.4
142.5°	856.3	856.8	857.1	857.5	857.8	857.9	857.7	857.5	857.3	857.1	858.1
145°	899.3	899.9	900.6	901.3	902.1	902.5	902.8	902.9	903.1	903.3	903.7
147.5°	941.9	942.7	943.6	944.5	945.4	945.7	945.6	945.4	945.2	945.0	944.9
150°	967.9	968.6	969.3	970.0	970.7	971.1	971.1	971.1	971.1	971.1	971.1
152.5°	992.1	992.6	993.1	993.5	994.0	994.3	994.4	994.6	994.8	995.0	995.4
155°	1029.8	1029.8	1029.8	1029.8	1029.8	1029.7	1029.5	1029.3	1029.1	1028.9	1029.7
157.5°	1061.6	1061.2	1060.9	1060.5	1060.2	1060.0	1059.9	1059.9	1059.8	1059.8	1060.4
160°	1080.4	1080.2	1080.0	1079.8	1079.6	1079.4	1079.1	1079.0	1078.8	1078.6	1079.1
162.5°	1097.7	1097.3	1096.7	1096.2	1095.6	1095.3	1095.1	1094.9	1094.7	1094.5	1095.6
165°	1121.1	1120.4	1119.8	1119.3	1118.7	1118.1	1117.8	1117.3	1117.0	1116.5	1117.8
167.5°	1138.9	1138.1	1137.3	1136.4	1135.6	1135.1	1135.2	1135.2	1135.2	1135.3	1136.5
170°	1149.1	1148.1	1147.0	1146.0	1145.0	1144.6	1144.9	1145.0	1145.2	1145.4	1146.7
172.5°	1156.3	1155.4	1154.6	1153.8	1152.9	1152.5	1152.5	1152.6	1152.6	1152.6	1154.1
175°	1166.2	1165.2	1164.2	1163.2	1162.2	1161.6	1161.4	1161.2	1161.0	1160.8	1162.2
177.5°	1169.5	1168.7	1167.9	1167.1	1166.3	1165.8	1165.8	1165.8	1165.8	1165.8	1167.0
180°	1168.1	1168.1	1168.1	1168.1	1168.1	1168.1	1168.1	1168.1	1168.1	1168.1	1168.1



TEST NUMBER: P332730-940

CATALOG NUMBER: S124DIW-S350D1050U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9
2.5°	375.6	376.1	376.7	376.8	376.8	376.7	376.7	376.6
5°	374.6	375.3	376.1	376.5	376.4	376.2	376.1	376.0
7.5°	372.6	373.4	374.3	374.7	374.6	374.5	374.4	374.3
10°	370.6	371.4	372.3	372.6	372.6	372.5	372.4	372.3
12.5°	367.7	368.5	369.3	369.6	369.6	369.6	369.6	369.5
15°	362.6	363.4	364.3	364.6	364.5	364.4	364.4	364.3
17.5°	356.2	357.1	358.0	358.4	358.3	358.2	358.2	358.1
20°	351.3	352.3	353.2	353.7	353.7	353.7	353.7	353.7
22.5°	345.6	346.5	347.5	348.0	348.2	348.3	348.5	348.7
25°	336.8	337.8	338.9	339.4	339.5	339.6	339.7	339.7
27.5°	326.8	327.8	328.8	329.3	329.4	329.5	329.6	329.8
30°	319.9	320.9	321.9	322.5	322.7	323.0	323.2	323.3
32.5°	312.7	314.0	315.1	315.8	316.0	316.2	316.4	316.6
35°	301.5	302.7	304.1	304.9	305.1	305.4	305.8	306.0
37.5°	289.7	291.0	292.3	293.2	293.5	293.7	294.1	294.4
40°	281.4	282.8	284.2	285.1	285.4	285.9	286.2	286.6
42.5°	273.2	274.8	276.3	277.3	277.6	277.9	278.2	278.5
45°	260.6	262.3	263.9	264.8	265.4	265.8	266.3	266.7
47.5°	247.4	249.0	250.7	251.7	252.4	252.9	253.4	254.0
50°	238.0	239.9	241.7	243.0	243.5	244.1	244.7	245.2
52.5°	228.5	230.4	232.3	233.5	234.1	234.6	235.2	235.8
55°	214.4	216.2	218.1	219.4	219.9	220.4	221.1	221.6
57.5°	199.5	201.7	203.9	205.3	205.8	206.3	206.9	207.4
60°	189.2	191.4	193.5	194.9	195.7	196.4	197.2	198.0
62.5°	179.1	181.2	183.3	184.9	185.6	186.3	187.1	187.8
65°	163.4	165.8	168.1	169.6	170.4	171.1	171.9	172.6
67.5°	148.0	150.4	152.8	154.4	155.1	155.8	156.5	157.3
70°	137.1	139.7	142.2	143.8	144.5	145.2	145.8	146.4
72.5°	126.9	129.4	131.8	133.4	134.1	134.8	135.6	136.3
75°	111.2	113.8	116.5	118.2	119.0	119.8	120.7	121.5
77.5°	96.6	99.2	101.9	103.7	104.6	105.5	106.4	107.3
80°	87.1	89.9	92.7	94.5	95.2	96.0	96.8	97.5
82.5°	77.8	80.7	83.6	85.4	86.2	87.0	87.9	88.7
85°	64.7	67.5	70.4	72.2	73.1	74.1	75.0	76.0
87.5°	58.1	61.1	64.0	66.0	66.9	67.8	68.7	69.6
90°	69.5	73.5	77.4	79.9	81.1	82.2	83.4	84.5
92.5°	82.3	85.6	89.0	91.2	92.2	93.2	94.2	95.1
95°	111.6	114.8	117.9	119.9	120.7	121.6	122.4	123.3
97.5°	149.0	152.2	155.4	157.4	158.2	159.0	159.8	160.6
100°	176.1	179.1	182.0	183.8	184.5	185.1	185.8	186.5
102.5°	205.0	208.0	211.1	213.0	213.9	214.8	215.7	216.6
105°	248.8	251.7	254.7	256.8	258.2	259.5	260.8	262.2
107.5°	296.6	299.4	302.3	304.1	304.7	305.3	305.9	306.6
110°	328.4	330.1	331.9	333.4	334.8	336.2	337.5	338.9



TEST NUMBER: P332730-940

CATALOG NUMBER: S124DIW-S350D1050U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	362.6	364.6	366.6	368.0	368.9	369.8	370.7	371.5
115°	415.6	417.5	419.4	420.5	421.0	421.4	421.9	422.3
117.5°	466.3	467.5	468.8	469.6	469.9	470.3	470.6	471.0
120°	500.6	501.5	502.4	503.4	504.5	505.7	506.8	508.0
122.5°	535.7	536.9	538.1	538.7	538.7	538.6	538.6	538.5
125°	587.3	588.7	590.0	590.8	591.0	591.1	591.3	591.5
127.5°	636.1	637.4	638.6	639.4	639.8	640.1	640.4	640.7
130°	670.5	671.8	673.1	673.6	673.3	673.2	672.9	672.6
132.5°	702.9	704.2	705.4	706.1	706.4	706.6	706.9	707.1
135°	751.3	752.3	753.5	753.9	753.9	753.9	753.9	753.9
137.5°	798.3	799.2	800.0	800.8	801.3	801.9	802.5	803.1
140°	829.5	830.5	831.4	832.1	832.4	832.7	832.9	833.2
142.5°	859.2	860.1	861.2	861.9	862.2	862.6	862.9	863.3
145°	904.1	904.5	904.8	904.8	904.6	904.4	904.2	903.9
147.5°	944.9	944.9	944.8	944.8	944.9	944.9	945.0	945.1
150°	971.1	971.1	971.1	971.0	970.8	970.6	970.4	970.2
152.5°	995.9	996.4	996.8	996.8	996.3	995.8	995.2	994.8
155°	1030.6	1031.4	1032.2	1032.2	1031.4	1030.6	1029.7	1028.9
157.5°	1061.0	1061.6	1062.2	1062.2	1061.5	1060.8	1060.2	1059.4
160°	1079.8	1080.4	1081.0	1080.8	1079.8	1078.8	1077.8	1076.7
162.5°	1096.6	1097.7	1098.9	1098.9	1097.9	1096.9	1095.8	1094.8
165°	1118.9	1120.2	1121.3	1121.5	1120.7	1119.9	1119.1	1118.3
167.5°	1137.7	1138.9	1140.1	1140.1	1138.9	1137.6	1136.4	1135.1
170°	1147.8	1149.1	1150.2	1150.1	1148.8	1147.4	1145.9	1144.5
172.5°	1155.4	1156.7	1158.2	1158.1	1156.7	1155.3	1153.9	1152.4
175°	1163.6	1165.0	1166.4	1166.4	1165.0	1163.6	1162.2	1160.8
177.5°	1168.1	1169.2	1170.4	1170.3	1168.9	1167.7	1166.4	1165.1
180°	1168.1	1168.1	1168.1	1168.1	1168.1	1168.1	1168.1	1168.1

(END OF REPORT)