

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: P331407-940

Luminaire Tested: **SA2XXDIP-C865D925U940-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331407-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D925U940-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

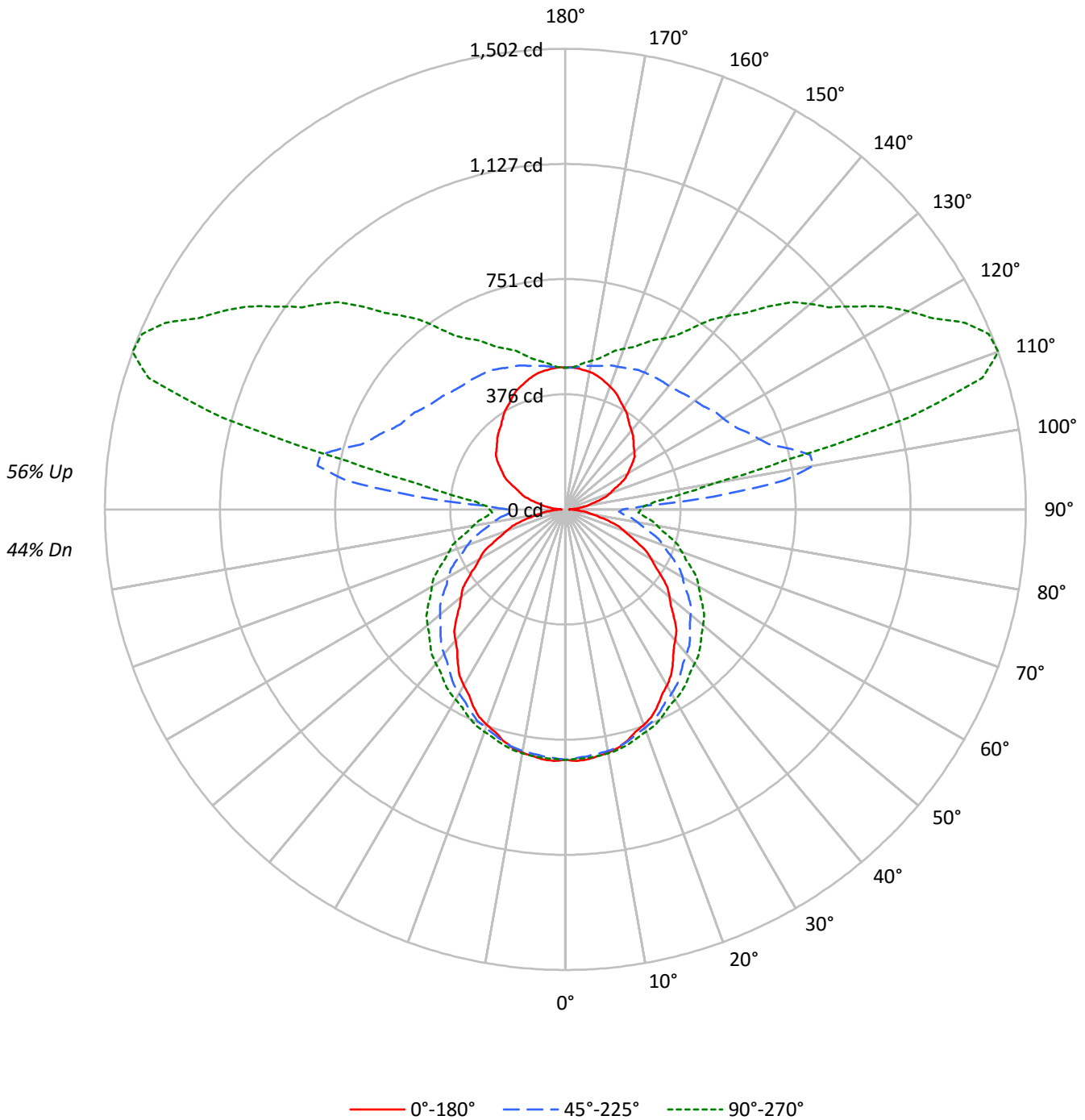
Lumens per Lamp: N/A
Luminaire Lumens: 6339.3 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 60.5
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: P331407-940
CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P331407-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-D4

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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44
1	95	90	86	82	87	82	79	75	68	65	63	55	53	51	42	41	40	34
2	86	78	71	66	78	71	66	61	59	55	51	47	44	42	37	34	33	28
3	78	68	60	54	71	62	56	50	51	46	42	41	38	35	32	29	27	23
4	71	60	52	45	65	55	48	42	45	40	36	37	32	29	28	25	23	19
5	65	53	45	39	59	49	41	36	40	35	30	33	28	25	25	22	20	16
6	60	48	39	33	54	44	36	31	36	31	26	29	25	22	23	20	17	14
7	55	43	35	29	50	39	32	27	33	27	23	27	22	19	21	18	15	12
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	14	11
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	18	14	12	10
10	44	32	25	20	41	30	23	19	25	20	16	21	16	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13183	13183	13183
5°	13247	12690	12640
10°	13163	12315	12177
15°	12982	11917	11686
20°	12752	11492	11215
25°	12527	11082	10786
30°	12206	10661	10357
35°	11884	10253	10054
40°	11544	9907	9750
45°	11222	9597	9493
50°	10875	9317	9238
55°	10513	9015	8977
60°	10070	8702	8703
65°	9607	8336	8376
70°	9087	7940	8025
75°	8422	7553	7701
80°	7376	7159	7372
85°	6374	6817	7118



TEST NUMBER: P331407-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.2
10°-20°	221.8	3.5
20°-30°	336.2	5.3
30°-40°	409.5	6.5
40°-50°	440.5	6.9
50°-60°	427.8	6.7
60°-70°	373.5	5.9
70°-80°	287.6	4.5
80°-90°	197.2	3.1
90°-100°	318.0	5.0
100°-110°	725.0	11.4
110°-120°	731.2	11.5
120°-130°	584.9	9.2
130°-140°	456.0	7.2
140°-150°	335.9	5.3
150°-160°	234.2	3.7
160°-170°	137.9	2.2
170°-180°	44.9	0.7
0°-30°	635.4	10.0
0°-40°	1044.8	16.5
0°-60°	1913.1	30.2
0°-90°	2771.4	43.7
90°-120°	1774.2	28.0
90°-150°	3151.0	49.7
90°-180°	3568.0	56.3
0°-180°	6339.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	819	815	808	815	814	78
15°	781	783	783	793	793	220
25°	710	718	729	742	747	326
35°	612	632	654	679	689	382
45°	502	534	575	610	624	387
55°	385	428	489	530	547	344
65°	263	321	390	437	454	261
75°	146	212	288	336	354	154
85°	43	116	192	240	258	46
90°	13	93	186	231	247	10
95°	41	142	485	311	297	41
105°	114	206	761	1320	1159	122
115°	196	262	623	1244	1439	194
125°	269	320	571	993	1153	240
135°	314	376	537	812	935	243
145°	358	411	522	654	721	225
155°	407	439	506	573	595	187
165°	443	457	485	514	522	125
175°	462	462	466	472	471	44
180°	463	463	463	463	463	



TEST NUMBER: P331407-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	821.2	820.6	819.9	819.3	818.7	817.6	816.1	814.7	813.2	811.7	812.8
5°	818.8	818.1	817.3	816.5	815.6	814.5	812.9	811.3	809.8	808.2	809.8
7.5°	811.5	810.9	810.4	809.9	809.4	808.5	807.3	806.1	804.9	803.7	805.6
10°	805.8	805.3	804.8	804.2	803.7	803.1	802.3	801.5	800.7	799.9	802.0
12.5°	796.3	796.5	796.6	796.7	796.7	796.5	795.9	795.3	794.8	794.2	796.3
15°	781.0	781.5	782.0	782.6	783.0	783.3	783.3	783.3	783.3	783.3	785.7
17.5°	761.1	762.1	763.3	764.4	765.4	766.4	767.3	768.1	769.0	769.8	772.3
20°	747.8	749.1	750.5	751.8	753.0	754.3	755.3	756.3	757.4	758.5	761.3
22.5°	733.6	735.1	736.6	738.2	739.7	741.2	742.7	744.1	745.6	747.1	750.0
25°	710.0	711.8	713.6	715.5	717.3	719.4	721.8	724.2	726.5	728.9	732.0
27.5°	681.5	684.6	687.5	690.5	693.6	696.4	699.2	702.0	704.8	707.6	711.6
30°	662.6	666.0	669.5	672.9	676.3	679.8	683.1	686.5	690.0	693.4	697.6
32.5°	641.8	645.6	649.4	653.4	657.2	661.1	665.1	669.2	673.2	677.3	682.2
35°	611.7	616.2	620.7	625.2	629.6	634.4	639.4	644.4	649.3	654.3	660.1
37.5°	579.1	584.2	589.4	594.5	599.7	605.5	612.0	618.5	624.9	631.4	637.8
40°	557.3	563.1	568.9	574.7	580.4	586.9	594.0	601.1	608.2	615.3	622.1
42.5°	536.5	542.2	548.0	553.8	559.6	566.6	574.7	582.9	591.0	599.2	606.6
45°	501.7	508.8	515.9	523.0	530.1	538.2	547.4	556.7	565.9	575.1	583.2
47.5°	467.3	475.1	482.9	490.6	498.3	507.6	518.4	529.1	539.9	550.7	559.2
50°	443.7	451.8	460.0	468.1	476.4	486.3	498.1	510.0	521.8	533.7	542.6
52.5°	421.0	429.5	438.2	446.7	455.3	465.8	478.3	490.7	503.2	515.7	524.8
55°	384.6	394.0	403.5	413.0	422.4	434.0	447.6	461.4	475.0	488.7	498.1
57.5°	348.6	359.3	370.0	380.6	391.3	403.6	417.5	431.5	445.4	459.3	469.6
60°	323.1	334.3	345.6	357.0	368.3	381.4	396.4	411.3	426.3	441.4	451.4
62.5°	300.3	312.0	323.8	335.5	347.2	360.6	375.6	390.6	405.6	420.5	431.1
65°	262.7	275.5	288.5	301.3	314.2	328.4	343.9	359.4	375.0	390.5	401.3
67.5°	228.1	241.6	255.0	268.5	282.0	296.7	312.5	328.4	344.3	360.2	371.0
70°	203.5	217.2	230.9	244.5	258.2	273.2	289.5	305.8	322.1	338.4	349.7
72.5°	180.8	194.9	209.0	223.1	237.2	252.4	269.0	285.5	302.0	318.5	329.7
75°	145.5	160.2	175.0	189.8	204.5	220.3	237.0	253.9	270.7	287.5	298.8
77.5°	111.5	126.9	142.3	157.7	173.1	189.3	206.4	223.6	240.6	257.7	268.9
80°	88.7	104.8	120.8	136.9	152.9	169.4	186.5	203.7	220.7	237.8	248.9
82.5°	69.8	85.6	101.5	117.3	133.1	149.7	167.0	184.3	201.6	218.9	230.0
85°	42.6	58.9	75.2	91.5	107.8	124.4	141.2	158.0	174.9	191.7	202.8
87.5°	23.4	39.6	56.0	72.0	88.0	104.8	122.5	140.6	158.5	175.5	186.0
90°	12.8	30.7	49.5	66.5	83.6	102.2	123.5	146.6	168.7	186.5	196.1
92.5°	21.8	40.8	61.3	79.5	99.7	123.3	159.6	204.1	245.6	263.3	255.7
95°	40.6	56.5	77.8	98.2	124.8	160.2	216.9	310.1	429.1	484.9	451.3
97.5°	59.0	74.8	95.2	118.3	145.7	183.0	249.6	372.6	559.3	721.5	760.4
100°	76.8	89.2	106.9	130.9	158.5	195.6	257.4	380.8	587.7	821.4	959.3
102.5°	92.2	103.1	120.0	143.1	170.5	207.1	264.9	375.7	568.0	818.3	1029.3
105°	114.5	125.6	139.6	160.5	187.7	223.3	278.7	371.7	532.2	761.3	1007.2
107.5°	139.9	148.8	161.0	179.3	204.8	239.6	293.2	375.4	509.9	701.0	918.9
110°	156.0	164.9	175.4	192.3	216.2	251.1	303.2	380.1	501.6	671.1	863.7



TEST NUMBER: P331407-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	171.7	179.7	190.1	205.5	227.8	262.7	312.6	385.4	496.2	648.8	822.9
115°	196.1	203.4	211.6	225.2	245.9	277.3	327.4	393.5	491.7	622.8	771.2
117.5°	220.2	225.6	232.8	244.2	263.1	294.5	340.8	402.7	489.3	604.7	734.8
120°	235.9	240.4	246.8	255.9	274.7	305.4	350.7	409.2	488.3	594.1	714.4
122.5°	250.7	254.0	259.8	268.9	287.1	318.0	360.4	414.8	488.2	585.5	696.4
125°	269.4	272.1	277.3	288.0	305.9	334.9	375.4	423.9	487.5	570.6	669.4
127.5°	285.0	288.3	295.5	307.0	323.9	352.8	390.7	433.4	488.2	559.1	644.3
130°	294.3	297.6	306.2	318.4	335.9	363.5	400.1	439.5	489.5	552.0	627.8
132.5°	302.8	306.8	316.2	329.0	347.3	374.3	408.2	445.6	490.8	545.6	613.3
135°	314.4	318.0	328.7	342.1	362.5	388.7	419.8	453.6	491.9	537.2	593.4
137.5°	326.5	330.7	341.4	355.6	375.9	399.5	428.8	459.0	492.5	530.1	577.6
140°	335.8	339.1	349.6	363.5	382.8	406.1	433.3	461.5	492.2	525.7	568.1
142.5°	345.1	347.7	357.3	371.3	389.9	411.5	437.7	464.7	492.8	523.8	560.4
145°	357.8	361.3	370.2	383.6	401.4	421.0	445.0	469.9	494.8	521.5	551.6
147.5°	372.7	375.4	383.9	396.2	411.0	428.5	451.0	473.0	495.5	518.4	543.4
150°	382.7	385.3	392.4	404.0	417.4	433.4	453.9	474.3	494.8	516.2	537.5
152.5°	392.6	393.9	401.0	411.2	423.8	438.4	456.7	475.0	493.4	512.6	532.5
155°	406.7	407.6	413.0	422.8	432.5	445.9	461.0	476.1	491.2	506.4	523.3
157.5°	418.5	419.4	423.7	432.1	440.0	451.2	464.0	476.1	487.1	500.0	514.6
160°	426.3	427.2	430.7	437.8	445.0	454.8	465.5	476.1	485.0	495.7	508.2
162.5°	434.1	433.5	437.1	442.8	449.2	456.9	466.2	475.4	482.9	492.1	502.5
165°	443.2	442.3	444.1	449.4	453.9	459.2	467.3	473.5	478.8	485.0	493.0
167.5°	450.7	449.6	451.2	454.6	457.8	461.2	467.1	472.3	474.7	478.8	483.8
170°	455.7	453.9	454.8	457.4	459.2	461.9	466.4	470.8	472.6	475.2	478.8
172.5°	458.5	457.4	456.9	459.6	460.7	462.6	465.7	468.7	469.8	471.0	473.9
175°	461.9	461.0	460.1	461.9	461.9	462.8	464.6	466.4	465.5	466.4	467.3
177.5°	463.5	462.1	461.4	462.8	462.8	462.8	463.5	464.9	463.5	462.8	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8



TEST NUMBER: P331407-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	813.8	814.8	815.9	816.3	815.8	815.4	814.9	814.6
5°	811.3	812.9	814.5	815.1	814.8	814.6	814.3	814.0
7.5°	807.4	809.3	811.3	812.1	811.8	811.5	811.3	811.0
10°	804.1	806.2	808.3	809.2	809.0	808.7	808.4	808.2
12.5°	798.4	800.5	802.6	803.5	803.3	803.0	802.7	802.5
15°	788.0	790.4	792.8	793.8	793.5	793.3	793.0	792.8
17.5°	774.8	777.2	779.7	781.0	781.0	781.0	781.0	781.0
20°	764.3	767.1	770.0	771.5	771.5	771.5	771.5	771.5
22.5°	752.9	755.8	758.7	760.4	760.7	761.2	761.6	762.1
25°	735.2	738.3	741.5	743.5	744.2	745.0	745.8	746.6
27.5°	715.6	719.6	723.5	725.9	726.5	727.0	727.6	728.2
30°	701.8	706.0	710.2	712.7	713.5	714.3	715.1	715.9
32.5°	687.0	691.8	696.6	699.8	701.2	702.6	704.0	705.4
35°	665.9	671.7	677.5	681.3	683.1	685.0	686.8	688.7
37.5°	644.2	650.6	657.0	661.2	663.2	665.1	667.1	669.1
40°	628.9	635.8	642.7	647.2	649.6	651.9	654.3	656.7
42.5°	614.1	621.6	629.1	634.0	636.3	638.7	641.1	643.5
45°	591.4	599.5	607.7	613.1	615.7	618.3	621.0	623.6
47.5°	567.8	576.2	584.8	590.5	593.3	596.3	599.1	602.1
50°	551.5	560.4	569.4	575.3	578.2	581.1	584.0	586.9
52.5°	534.0	543.1	552.2	558.4	561.5	564.6	567.7	570.8
55°	507.7	517.1	526.6	533.0	536.4	539.8	543.2	546.6
57.5°	479.7	489.9	500.2	507.0	510.4	513.9	517.4	520.8
60°	461.4	471.4	481.3	488.1	491.9	495.5	499.2	502.9
62.5°	441.8	452.4	463.0	470.1	473.5	477.0	480.5	483.9
65°	412.1	422.8	433.6	440.7	444.1	447.5	450.9	454.3
67.5°	381.9	392.8	403.8	411.0	414.6	418.1	421.7	425.3
70°	361.1	372.3	383.6	390.8	394.0	397.2	400.4	403.5
72.5°	340.7	351.8	362.9	370.3	374.2	377.9	381.7	385.5
75°	310.1	321.5	332.8	340.1	343.6	347.0	350.4	353.8
77.5°	280.3	291.5	302.7	310.2	313.9	317.5	321.3	324.9
80°	259.9	271.0	282.0	289.4	293.0	296.8	300.4	304.1
82.5°	241.0	252.0	263.1	270.4	273.8	277.2	280.7	284.2
85°	213.7	224.8	235.9	243.3	246.9	250.6	254.2	258.0
87.5°	196.6	207.0	218.0	225.2	228.6	232.0	235.4	238.7
90°	205.7	214.5	226.8	234.4	237.6	240.8	244.0	247.1
92.5°	245.8	245.1	248.0	249.2	251.6	252.0	255.8	257.5
95°	389.2	344.9	317.5	304.5	296.1	292.1	292.7	296.7
97.5°	689.5	600.2	513.7	455.8	416.4	397.6	387.7	383.3
100°	950.3	849.7	737.5	636.1	565.2	529.8	506.8	493.7
102.5°	1119.1	1103.8	1024.0	916.1	838.8	776.3	747.1	728.3
105°	1201.5	1311.3	1332.0	1308.7	1256.4	1204.1	1168.8	1159.1
107.5°	1124.1	1284.4	1385.8	1434.8	1444.6	1444.4	1439.7	1426.0
110°	1059.9	1227.6	1350.0	1428.6	1469.7	1489.5	1500.5	1502.4



TEST NUMBER: P331407-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1000.6	1161.9	1292.1	1381.3	1437.4	1468.6	1486.7	1494.4
115°	926.0	1070.9	1195.4	1292.4	1358.5	1402.4	1428.4	1439.3
117.5°	867.3	995.4	1108.9	1200.2	1267.2	1313.2	1340.2	1349.7
120°	836.6	954.3	1056.0	1142.1	1207.3	1252.1	1280.8	1292.5
122.5°	811.3	919.5	1016.0	1094.0	1152.4	1196.0	1221.4	1231.3
125°	773.5	872.3	957.7	1029.2	1083.2	1119.4	1144.0	1153.4
127.5°	736.3	825.7	906.1	972.1	1019.4	1053.5	1075.0	1083.0
130°	712.4	795.2	871.8	934.8	980.4	1012.8	1032.7	1042.0
132.5°	689.2	766.1	836.8	896.1	941.1	973.5	991.9	1000.4
135°	656.8	721.0	785.3	839.0	879.3	910.8	929.0	934.6
137.5°	629.5	683.5	734.9	781.8	818.4	845.4	861.3	868.4
140°	612.4	659.3	704.5	746.5	776.6	801.3	816.2	823.1
142.5°	598.9	638.6	677.2	712.2	740.7	763.0	776.3	778.7
145°	580.8	611.7	640.9	668.1	690.8	707.2	717.5	721.4
147.5°	567.1	590.5	612.2	631.5	649.8	662.5	669.2	671.5
150°	558.9	578.5	597.2	613.1	626.5	637.2	642.6	643.5
152.5°	551.1	569.2	585.1	599.0	609.4	618.7	622.6	622.8
155°	540.2	554.5	567.8	577.6	587.4	593.6	597.2	595.4
157.5°	527.5	539.5	550.7	558.4	565.3	570.4	572.0	572.0
160°	519.7	529.5	539.3	545.5	551.8	556.2	557.1	557.1
162.5°	511.9	520.2	528.6	533.4	539.7	542.7	543.6	542.9
165°	500.2	506.4	512.6	516.2	519.7	523.3	523.3	522.4
167.5°	488.9	493.7	498.0	501.2	502.8	504.8	504.6	503.5
170°	483.2	485.9	489.5	491.2	492.1	494.8	493.9	492.1
172.5°	476.8	478.8	481.6	482.7	483.6	484.8	483.9	482.9
175°	469.9	470.8	471.7	472.6	472.6	473.5	472.6	470.8
177.5°	464.9	464.9	465.7	465.7	465.7	465.7	464.9	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8

(END OF REPORT)