

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: P331409-930

Luminaire Tested: **SA2XXDIP-C865D925U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331409-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D925U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

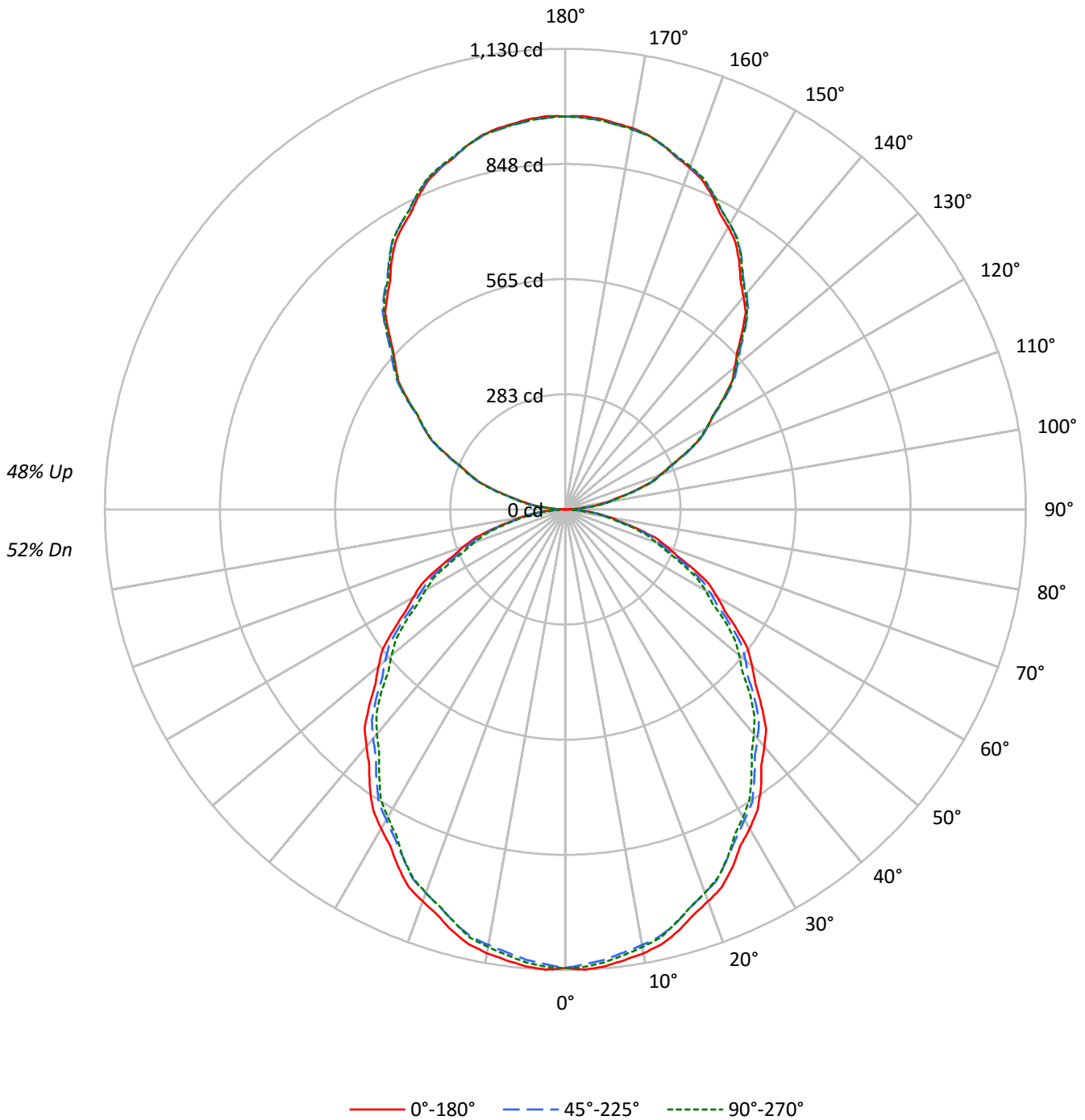
Lumens per Lamp: N/A
Luminaire Lumens: 5562.3 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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: P331409-930
CATALOG NUMBER: SA2XXDIP-C865D925U930-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331409-930

CATALOG NUMBER: SA2XXDIP-C865D925U930-4F0-1E-UDD-F1

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	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	98	94	90	86	91	87	83	80	74	71	69	62	60	59	51	50	49	43
2	89	82	76	71	82	76	71	66	65	61	57	54	51	49	45	43	41	36
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	40	37	35	31
4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26
5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26	23
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	26	23	20
7	58	46	38	32	54	43	36	31	37	31	27	32	27	24	26	23	20	18
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16
9	50	38	31	26	47	36	29	24	31	26	22	27	22	19	22	19	17	14
10	47	35	28	23	44	33	26	22	29	23	20	25	20	17	21	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18166	18166	18166
5°	18235	17973	18078
10°	18126	17790	17879
15°	17904	17560	17541
20°	17584	17213	17194
25°	17268	16787	16787
30°	16861	16397	16257
35°	16484	15928	15693
40°	16008	15460	15163
45°	15536	14995	14625
50°	15028	14511	13996
55°	14494	13948	13430
60°	13905	13275	12788
65°	13268	12607	12027
70°	12463	11797	11235
75°	11335	10861	10593
80°	10060	9754	9252
85°	8225	7818	7003



TEST NUMBER: P331409-930

CATALOG NUMBER: SA2XXDIP-C865D925U930-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.8	1.9
10°-20°	297.7	5.4
20°-30°	437.6	7.9
30°-40°	508.3	9.1
40°-50°	507.7	9.1
50°-60°	442.8	8.0
60°-70°	327.4	5.9
70°-80°	185.4	3.3
80°-90°	53.7	1.0
90°-100°	61.1	1.1
100°-110°	189.8	3.4
110°-120°	324.3	5.8
120°-130°	426.5	7.7
130°-140°	478.7	8.6
140°-150°	469.4	8.4
150°-160°	393.7	7.1
160°-170°	261.1	4.7
170°-180°	91.3	1.6
0°-30°	841.1	15.1
0°-40°	1349.3	24.3
0°-60°	2299.8	41.3
0°-90°	2866.3	51.5
90°-120°	575.2	10.3
90°-150°	1949.8	35.1
90°-180°	2696.0	48.5
0°-180°	5562.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1125	1125	1125	1125	1125	
5°	1125	1120	1109	1117	1115	107
15°	1071	1064	1050	1054	1049	301
25°	969	960	942	944	942	446
35°	836	825	808	802	796	522
45°	680	672	657	645	640	525
55°	515	508	496	483	477	460
65°	347	341	330	320	315	343
75°	182	179	174	168	170	194
85°	44	43	42	39	38	51
90°	1	11	28	27	28	4
95°	42	50	52	52	50	49
105°	175	177	179	180	181	185
115°	326	330	329	328	326	322
125°	474	480	478	476	475	423
135°	613	621	623	622	620	473
145°	744	749	754	755	752	464
155°	850	853	855	859	857	391
165°	925	924	924	929	926	261
175°	962	960	958	964	959	91
180°	964	964	964	964	964	



TEST NUMBER: P331409-930

CATALOG NUMBER: SA2XXDIP-C865D925U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1125.1	1125.1	1125.1	1125.1	1125.1	1125.1	1125.1	1125.1	1125.1	1125.1	1125.1
2.5°	1130.3	1129.4	1128.4	1127.5	1126.5	1124.9	1122.8	1120.7	1118.6	1116.5	1118.4
5°	1125.1	1124.1	1123.2	1122.3	1121.3	1119.5	1116.9	1114.2	1111.6	1108.9	1110.8
7.5°	1115.2	1113.7	1112.2	1110.7	1109.2	1107.1	1104.4	1101.7	1099.0	1096.3	1098.3
10°	1105.6	1104.0	1102.3	1100.6	1098.9	1096.7	1093.7	1090.9	1088.0	1085.1	1087.0
12.5°	1092.7	1091.2	1089.7	1088.2	1086.7	1084.5	1081.7	1078.7	1075.9	1073.0	1074.3
15°	1071.1	1069.6	1068.1	1066.7	1065.3	1063.0	1059.9	1056.7	1053.6	1050.5	1051.4
17.5°	1043.3	1041.9	1040.5	1039.0	1037.5	1035.3	1032.1	1028.9	1025.7	1022.5	1023.7
20°	1023.4	1022.0	1020.6	1019.1	1017.7	1015.3	1011.9	1008.5	1005.2	1001.8	1002.5
22.5°	1003.6	1001.5	999.5	997.4	995.5	992.9	989.7	986.5	983.3	980.2	980.3
25°	969.3	967.4	965.5	963.6	961.6	958.6	954.6	950.5	946.4	942.3	942.8
27.5°	930.4	928.7	926.9	925.2	923.5	921.0	917.8	914.5	911.3	908.1	907.4
30°	904.4	902.5	900.6	898.7	896.7	894.0	890.4	886.8	883.1	879.5	878.8
32.5°	876.8	875.2	873.7	872.1	870.6	867.9	864.1	860.3	856.6	852.7	851.4
35°	836.3	833.9	831.4	829.1	826.6	823.5	819.7	815.9	812.0	808.1	806.7
37.5°	790.6	788.5	786.4	784.2	782.2	779.2	775.3	771.5	767.6	763.8	762.0
40°	759.5	757.6	755.6	753.7	751.8	748.9	745.0	741.2	737.4	733.5	731.3
42.5°	729.2	727.2	725.3	723.4	721.5	718.6	714.8	710.9	707.0	703.2	700.8
45°	680.4	678.8	677.1	675.5	673.8	671.1	667.5	663.9	660.3	656.7	654.0
47.5°	632.0	630.5	628.8	627.3	625.7	623.0	619.2	615.5	611.7	608.0	605.2
50°	598.3	597.0	595.9	594.7	593.5	591.2	587.8	584.4	581.1	577.7	574.4
52.5°	565.4	563.8	562.2	560.6	559.1	556.7	553.5	550.3	547.1	544.0	541.2
55°	514.9	513.6	512.1	510.6	509.2	507.0	504.2	501.2	498.4	495.5	492.6
57.5°	464.3	463.2	462.0	460.9	459.7	457.5	454.4	451.2	448.0	444.8	442.1
60°	430.6	429.6	428.7	427.7	426.7	424.6	421.2	417.8	414.5	411.1	408.5
62.5°	397.7	396.2	394.6	393.1	391.5	389.5	386.9	384.3	381.6	379.1	376.7
65°	347.3	345.8	344.4	342.9	341.5	339.6	337.2	334.8	332.4	330.0	327.8
67.5°	296.0	294.8	293.7	292.5	291.4	289.8	287.6	285.4	283.2	281.0	279.4
70°	264.0	263.0	262.0	261.1	260.2	258.5	256.4	254.2	252.1	249.9	248.3
72.5°	231.1	230.2	229.2	228.2	227.2	226.1	224.7	223.3	221.8	220.5	218.8
75°	181.7	181.2	180.8	180.3	179.9	179.0	177.8	176.6	175.4	174.1	172.8
77.5°	137.6	136.8	136.0	135.2	134.4	133.7	133.2	132.7	132.2	131.8	131.0
80°	108.2	107.9	107.7	107.5	107.2	106.9	106.4	105.9	105.4	104.9	104.2
82.5°	80.5	80.5	80.4	80.3	80.3	80.1	79.8	79.6	79.2	79.0	78.0
85°	44.4	44.1	43.9	43.6	43.4	43.1	42.9	42.6	42.4	42.2	41.5
87.5°	15.7	15.8	15.8	15.9	15.9	16.1	16.6	17.0	17.4	17.8	17.2
90°	0.8	3.0	5.1	7.3	9.5	12.6	16.6	20.5	24.5	28.5	28.1
92.5°	14.5	16.1	17.7	19.2	20.9	22.1	23.1	24.0	24.9	25.8	25.9
95°	42.3	44.1	45.9	47.7	49.6	50.6	51.0	51.4	51.7	52.1	52.1
97.5°	77.3	78.9	80.5	82.1	83.6	84.8	85.5	86.2	86.8	87.6	87.6
100°	103.3	104.8	106.2	107.7	109.1	110.1	110.6	111.2	111.8	112.3	112.3
102.5°	130.7	131.8	133.0	134.1	135.3	136.2	136.9	137.6	138.3	139.0	139.1
105°	175.0	175.5	176.0	176.6	177.1	177.6	177.9	178.3	178.6	179.0	179.4
107.5°	219.5	220.3	221.1	221.9	222.7	223.1	223.1	223.1	223.1	223.1	223.2
110°	248.2	249.2	250.3	251.4	252.5	253.1	253.1	253.1	253.1	253.1	253.1



TEST NUMBER: P331409-930

CATALOG NUMBER: SA2XXDIP-C865D925U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	279.4	280.5	281.6	282.7	283.7	284.2	284.1	283.9	283.8	283.6	283.2
115°	325.5	326.5	327.6	328.7	329.8	330.1	329.8	329.5	329.1	328.7	328.6
117.5°	371.4	372.8	374.2	375.7	377.2	377.3	376.3	375.3	374.3	373.3	372.8
120°	401.9	403.4	404.8	406.3	407.7	407.7	406.3	404.8	403.4	401.9	401.9
122.5°	429.9	431.6	433.4	435.1	436.8	437.2	436.2	435.2	434.2	433.2	432.8
125°	473.5	475.2	476.8	478.4	480.0	480.6	480.0	479.5	479.0	478.4	477.8
127.5°	516.0	518.0	520.2	522.2	524.2	525.0	524.3	523.7	523.0	522.4	521.7
130°	542.7	545.0	547.4	549.8	552.1	553.1	552.7	552.4	552.0	551.6	551.3
132.5°	572.7	574.5	576.5	578.4	580.3	581.3	581.4	581.5	581.5	581.6	580.8
135°	612.7	614.7	616.6	618.6	620.6	621.8	622.2	622.5	622.9	623.2	623.1
137.5°	654.8	656.4	658.0	659.7	661.3	662.3	662.8	663.3	663.8	664.2	664.1
140°	680.2	681.8	683.5	685.1	686.7	687.9	688.8	689.7	690.7	691.6	691.6
142.5°	706.2	707.8	709.5	711.1	712.7	713.9	714.4	715.1	715.7	716.3	716.5
145°	743.6	744.9	746.2	747.5	748.7	749.9	751.0	752.0	753.2	754.2	754.4
147.5°	777.0	778.5	780.1	781.5	783.1	784.2	785.0	785.6	786.4	787.1	787.5
150°	799.8	800.9	801.9	803.1	804.1	805.0	805.8	806.5	807.2	808.0	808.5
152.5°	819.9	821.1	822.1	823.2	824.3	825.3	826.1	827.0	827.9	828.8	829.5
155°	850.3	850.8	851.3	851.9	852.4	853.0	853.5	854.0	854.6	855.1	856.1
157.5°	876.1	876.4	876.9	877.2	877.6	877.9	878.2	878.6	878.9	879.2	880.4
160°	891.8	892.1	892.4	892.8	893.2	893.5	893.6	893.8	894.0	894.1	895.3
162.5°	906.0	906.1	906.2	906.3	906.4	906.4	906.7	906.9	907.0	907.2	908.4
165°	925.1	925.0	924.7	924.5	924.4	924.3	924.3	924.3	924.3	924.3	925.5
167.5°	941.0	940.5	940.0	939.4	938.9	938.6	938.6	938.5	938.5	938.4	939.7
170°	949.5	948.9	948.4	947.9	947.3	947.0	946.8	946.6	946.4	946.2	947.5
172.5°	955.4	954.8	954.3	953.7	953.2	952.8	952.7	952.4	952.3	952.1	953.4
175°	962.5	962.0	961.4	960.9	960.3	959.9	959.5	959.2	958.8	958.5	959.7
177.5°	965.5	965.0	964.6	964.2	963.7	963.4	963.0	962.8	962.5	962.2	963.0
180°	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2



TEST NUMBER: P331409-930

CATALOG NUMBER: SA2XXDIP-C865D925U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1125.1	1125.1	1125.1	1125.1	1125.1	1125.1	1125.1	1125.1
2.5°	1120.3	1122.3	1124.1	1124.9	1124.5	1124.1	1123.8	1123.4
5°	1112.7	1114.7	1116.6	1117.3	1116.9	1116.4	1115.9	1115.4
7.5°	1100.2	1102.1	1104.1	1104.7	1104.2	1103.7	1103.2	1102.6
10°	1088.9	1090.9	1092.8	1093.4	1092.7	1091.9	1091.2	1090.5
12.5°	1075.7	1077.0	1078.4	1078.8	1078.2	1077.7	1077.2	1076.7
15°	1052.4	1053.4	1054.3	1054.2	1053.0	1051.8	1050.6	1049.4
17.5°	1024.7	1025.9	1027.0	1027.0	1025.8	1024.7	1023.5	1022.4
20°	1003.2	1004.0	1004.7	1004.5	1003.6	1002.7	1001.7	1000.7
22.5°	980.5	980.6	980.7	980.6	979.9	979.3	978.8	978.2
25°	943.3	943.7	944.2	944.2	943.7	943.3	942.8	942.3
27.5°	906.7	906.0	905.2	904.3	903.1	902.0	900.8	899.7
30°	878.1	877.4	876.7	875.8	874.9	873.9	872.9	872.0
32.5°	850.1	848.8	847.5	846.4	845.5	844.5	843.5	842.5
35°	805.3	803.8	802.4	801.0	799.9	798.7	797.4	796.2
37.5°	760.3	758.5	756.7	755.2	754.1	752.9	751.8	750.6
40°	729.2	727.0	724.9	723.3	722.4	721.4	720.4	719.4
42.5°	698.5	696.1	693.8	691.9	690.6	689.3	687.9	686.6
45°	651.4	648.7	646.1	644.3	643.4	642.4	641.4	640.5
47.5°	602.4	599.7	596.9	594.8	593.4	592.0	590.6	589.2
50°	571.0	567.6	564.3	562.0	560.8	559.5	558.4	557.2
52.5°	538.3	535.6	532.8	530.6	529.0	527.4	525.9	524.2
55°	489.8	486.8	484.0	481.9	480.7	479.5	478.3	477.1
57.5°	439.2	436.3	433.5	431.6	430.7	429.8	428.9	428.0
60°	405.9	403.2	400.6	398.8	398.1	397.4	396.6	396.0
62.5°	374.1	371.7	369.2	367.6	366.6	365.7	364.8	363.9
65°	325.6	323.5	321.3	319.6	318.5	317.2	316.0	314.8
67.5°	277.7	276.0	274.3	273.0	272.1	271.1	270.1	269.1
70°	246.5	244.8	243.2	241.8	240.9	239.9	239.0	238.0
72.5°	217.1	215.4	213.8	212.5	211.7	211.0	210.2	209.5
75°	171.3	169.8	168.4	168.0	168.4	168.9	169.3	169.8
77.5°	130.4	129.6	128.9	128.2	127.5	126.9	126.2	125.5
80°	103.5	102.8	102.1	101.4	100.9	100.5	100.0	99.5
82.5°	77.1	76.2	75.3	74.8	74.7	74.6	74.5	74.4
85°	40.8	40.0	39.3	38.8	38.6	38.3	38.1	37.8
87.5°	16.6	15.9	15.2	14.8	14.7	14.5	14.3	14.2
90°	27.7	27.4	27.1	26.9	27.1	27.3	27.5	27.6
92.5°	26.0	26.1	26.2	26.3	26.3	26.3	26.3	26.3
95°	52.1	52.1	52.1	51.9	51.5	51.2	50.8	50.5
97.5°	87.6	87.6	87.6	87.6	87.5	87.5	87.4	87.4
100°	112.3	112.3	112.3	112.2	112.0	111.9	111.6	111.5
102.5°	139.3	139.4	139.6	139.5	139.3	139.2	139.0	138.8
105°	179.7	180.1	180.4	180.6	180.6	180.6	180.6	180.6
107.5°	223.4	223.6	223.6	223.3	222.5	221.7	220.9	220.0
110°	253.1	253.1	253.1	252.7	252.3	251.7	251.1	250.6



TEST NUMBER: P331409-930

CATALOG NUMBER: SA2XXDIP-C865D925U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	282.7	282.3	281.9	281.4	281.1	280.7	280.3	279.9
115°	328.3	328.2	328.0	327.6	327.1	326.5	326.0	325.5
117.5°	372.4	372.0	371.5	371.0	370.6	370.0	369.4	368.9
120°	401.9	401.9	401.9	401.7	401.1	400.6	400.1	399.5
122.5°	432.3	431.9	431.5	431.0	430.6	430.2	429.8	429.4
125°	477.4	476.8	476.2	475.9	475.7	475.5	475.3	475.2
127.5°	521.1	520.4	519.8	519.1	518.5	518.0	517.4	516.8
130°	550.9	550.6	550.2	549.7	548.9	548.2	547.5	546.7
132.5°	580.0	579.2	578.4	577.7	577.2	576.6	576.0	575.4
135°	622.9	622.7	622.5	622.2	621.6	621.1	620.5	620.0
137.5°	664.0	663.8	663.7	663.2	662.5	661.8	661.0	660.3
140°	691.6	691.6	691.6	691.2	690.5	689.7	689.1	688.4
142.5°	716.6	716.7	716.9	716.6	715.9	715.2	714.4	713.7
145°	754.6	754.8	755.0	754.7	754.0	753.3	752.5	751.8
147.5°	787.9	788.3	788.7	788.6	787.9	787.2	786.5	785.8
150°	809.0	809.6	810.1	810.1	809.6	809.0	808.5	808.0
152.5°	830.1	830.8	831.5	831.5	830.8	830.1	829.5	828.8
155°	857.0	857.9	858.8	858.9	858.3	857.9	857.3	856.7
157.5°	881.7	882.9	884.1	884.3	883.5	882.6	881.7	880.8
160°	896.3	897.4	898.5	898.7	898.0	897.2	896.5	895.8
162.5°	909.6	910.9	912.1	912.3	911.4	910.5	909.7	908.8
165°	926.8	928.1	929.4	929.5	928.6	927.7	926.8	925.9
167.5°	940.9	942.2	943.5	943.6	942.7	941.8	940.9	939.9
170°	948.8	950.1	951.3	951.4	950.3	949.3	948.1	947.1
172.5°	954.6	955.9	957.2	957.2	956.2	955.1	954.0	952.9
175°	961.0	962.2	963.5	963.6	962.5	961.4	960.3	959.3
177.5°	963.9	964.8	965.6	965.6	964.8	963.9	963.0	962.2
180°	964.2	964.2	964.2	964.2	964.2	964.2	964.2	964.2

(END OF REPORT)