

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: P331409-927

Luminaire Tested: **SA2XXDIP-C865D925U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331409-927  
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-C865D925U927-4F0-1E-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: 5404.6 lumens  
Efficiency: N/A  
Efficacy: 89.3 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

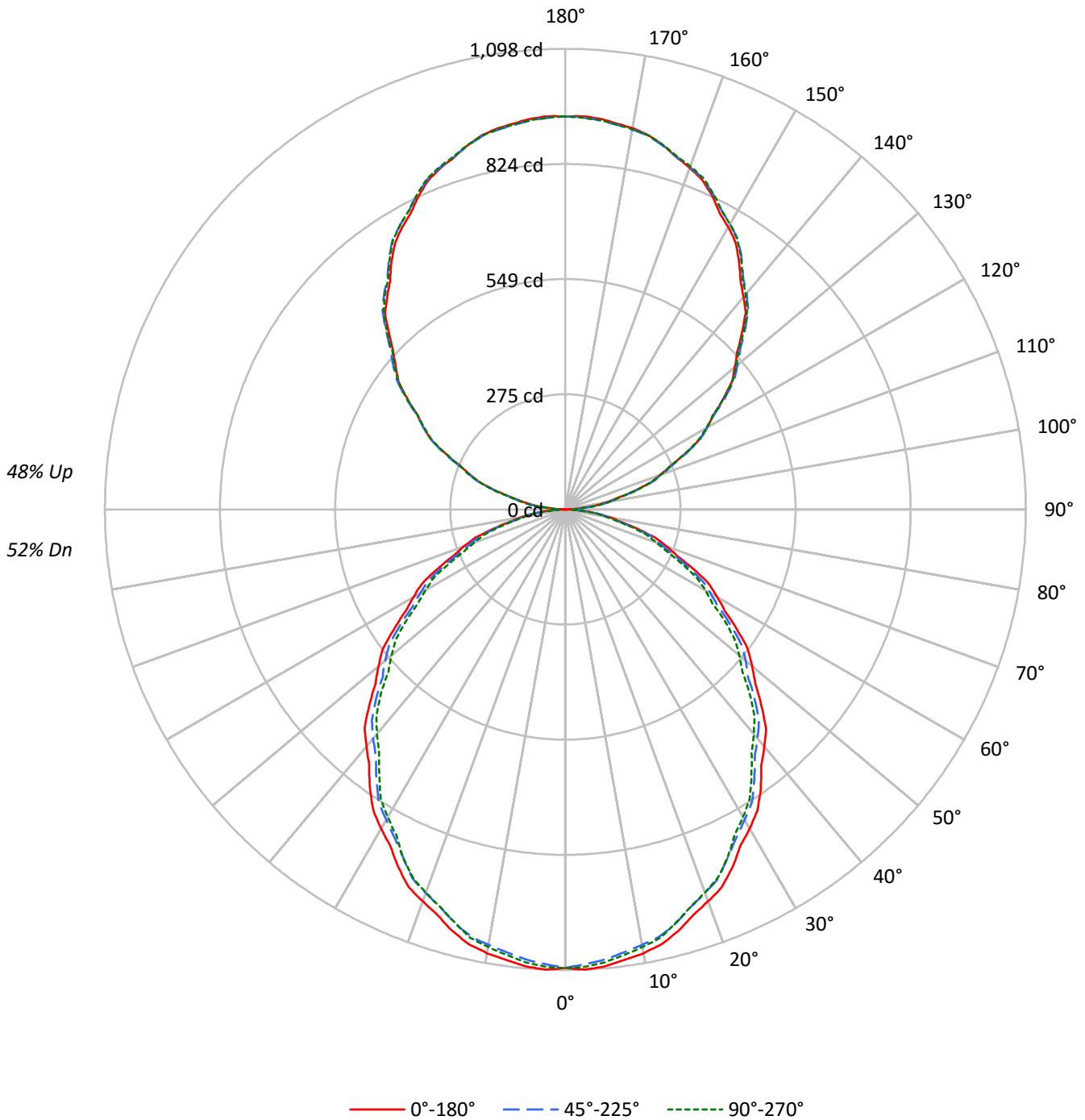
Input Watts (W): 60.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331409-927

CATALOG NUMBER: SA2XXDIP-C865D925U927-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P331409-927

CATALOG NUMBER: SA2XXDIP-C865D925U927-4F0-1E-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°	17651	17651	17651
5°	17718	17462	17566
10°	17613	17285	17372
15°	17396	17061	17043
20°	17086	16725	16706
25°	16778	16311	16311
30°	16384	15933	15795
35°	16015	15477	15248
40°	15553	15022	14733
45°	15098	14570	14209
50°	14601	14099	13599
55°	14083	13551	13050
60°	13511	12897	12426
65°	12894	12248	11687
70°	12109	11462	10914
75°	11017	10555	10293
80°	9772	9484	8991
85°	7984	7595	6817



TEST NUMBER: P331409-927

CATALOG NUMBER: SA2XXDIP-C865D925U927-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.8	1.9
10°-20°	289.3	5.4
20°-30°	425.2	7.9
30°-40°	493.9	9.1
40°-50°	493.3	9.1
50°-60°	430.2	8.0
60°-70°	318.1	5.9
70°-80°	180.2	3.3
80°-90°	52.2	1.0
90°-100°	59.4	1.1
100°-110°	184.4	3.4
110°-120°	315.1	5.8
120°-130°	414.4	7.7
130°-140°	465.2	8.6
140°-150°	456.1	8.4
150°-160°	382.5	7.1
160°-170°	253.7	4.7
170°-180°	88.7	1.6
0°-30°	817.2	15.1
0°-40°	1311.1	24.3
0°-60°	2234.6	41.3
0°-90°	2785.1	51.5
90°-120°	558.9	10.3
90°-150°	1894.5	35.1
90°-180°	2620.0	48.5
0°-180°	5404.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1093	1093	1093	1093	1093	
5°	1093	1089	1077	1085	1084	104
15°	1041	1034	1021	1024	1020	293
25°	942	933	916	917	916	433
35°	812	802	785	779	774	507
45°	661	653	638	627	622	510
55°	500	494	481	469	464	447
65°	338	331	321	311	306	334
75°	177	174	169	163	165	189
85°	43	42	41	38	37	49
90°	1	11	28	26	27	4
95°	41	49	51	50	49	47
105°	170	172	174	175	176	180
115°	316	321	319	318	316	313
125°	460	467	465	463	462	411
135°	595	604	606	605	602	460
145°	722	728	733	733	730	451
155°	826	828	831	834	832	380
165°	899	898	898	903	900	253
175°	935	933	931	936	932	89
180°	937	937	937	937	937	



TEST NUMBER: P331409-927

CATALOG NUMBER: SA2XXDIP-C865D925U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1098.3	1097.3	1096.4	1095.5	1094.6	1093.1	1091.0	1088.9	1086.9	1084.8	1086.7
5°	1093.2	1092.3	1091.4	1090.4	1089.5	1087.7	1085.2	1082.6	1080.1	1077.4	1079.3
7.5°	1083.5	1082.1	1080.7	1079.2	1077.8	1075.7	1073.1	1070.5	1067.9	1065.2	1067.1
10°	1074.3	1072.7	1071.0	1069.4	1067.8	1065.6	1062.7	1059.9	1057.2	1054.3	1056.2
12.5°	1061.7	1060.3	1058.8	1057.3	1055.9	1053.8	1051.0	1048.1	1045.4	1042.6	1043.9
15°	1040.7	1039.3	1037.8	1036.5	1035.1	1032.8	1029.8	1026.7	1023.7	1020.7	1021.6
17.5°	1013.8	1012.3	1011.0	1009.6	1008.1	1005.9	1002.8	999.7	996.6	993.6	994.7
20°	994.4	993.0	991.7	990.2	988.8	986.5	983.2	979.9	976.7	973.4	974.1
22.5°	975.1	973.1	971.1	969.2	967.3	964.7	961.6	958.5	955.5	952.4	952.5
25°	941.8	940.0	938.1	936.3	934.4	931.4	927.5	923.5	919.6	915.6	916.1
27.5°	904.0	902.4	900.6	899.0	897.3	894.8	891.8	888.6	885.5	882.3	881.7
30°	878.8	876.9	875.0	873.2	871.3	868.6	865.1	861.7	858.1	854.6	853.9
32.5°	851.9	850.4	848.9	847.4	845.9	843.3	839.6	835.9	832.3	828.5	827.3
35°	812.5	810.2	807.9	805.6	803.2	800.2	796.5	792.7	788.9	785.2	783.9
37.5°	768.2	766.1	764.1	762.0	760.0	757.1	753.4	749.6	745.8	742.1	740.4
40°	737.9	736.1	734.2	732.3	730.5	727.6	723.9	720.2	716.4	712.7	710.6
42.5°	708.5	706.6	704.7	702.9	701.0	698.2	694.5	690.8	687.0	683.3	681.0
45°	661.2	659.6	657.9	656.3	654.7	652.0	648.6	645.1	641.6	638.1	635.5
47.5°	614.1	612.6	611.0	609.5	607.9	605.3	601.7	598.0	594.4	590.7	588.0
50°	581.3	580.1	579.0	577.8	576.6	574.4	571.2	567.8	564.6	561.3	558.1
52.5°	549.4	547.8	546.3	544.7	543.2	540.9	537.8	534.7	531.6	528.5	525.9
55°	500.3	499.0	497.6	496.1	494.7	492.7	489.9	487.0	484.3	481.4	478.6
57.5°	451.1	450.0	448.9	447.8	446.7	444.6	441.5	438.4	435.3	432.2	429.5
60°	418.4	417.4	416.5	415.6	414.6	412.6	409.2	406.0	402.7	399.4	396.9
62.5°	386.4	384.9	383.4	381.9	380.4	378.4	375.9	373.4	370.8	368.4	366.0
65°	337.5	336.0	334.6	333.2	331.8	329.9	327.6	325.3	323.0	320.6	318.5
67.5°	287.6	286.5	285.3	284.2	283.1	281.5	279.4	277.3	275.2	273.1	271.5
70°	256.5	255.6	254.6	253.7	252.8	251.2	249.1	247.0	244.9	242.8	241.2
72.5°	224.5	223.6	222.7	221.7	220.8	219.7	218.3	217.0	215.6	214.2	212.6
75°	176.6	176.1	175.6	175.2	174.8	173.9	172.8	171.6	170.4	169.2	167.9
77.5°	133.7	132.9	132.1	131.3	130.6	129.9	129.4	129.0	128.5	128.0	127.3
80°	105.1	104.9	104.6	104.4	104.2	103.9	103.4	102.9	102.4	102.0	101.2
82.5°	78.2	78.2	78.1	78.0	78.0	77.9	77.6	77.3	77.0	76.8	75.8
85°	43.1	42.9	42.6	42.4	42.1	41.9	41.7	41.4	41.2	41.0	40.3
87.5°	15.3	15.4	15.4	15.4	15.4	15.7	16.1	16.5	16.9	17.3	16.7
90°	0.8	2.9	5.0	7.1	9.2	12.2	16.1	20.0	23.8	27.6	27.3
92.5°	14.1	15.6	17.2	18.7	20.3	21.5	22.4	23.3	24.2	25.1	25.2
95°	41.1	42.9	44.6	46.3	48.2	49.2	49.5	49.9	50.2	50.6	50.6
97.5°	75.1	76.7	78.2	79.8	81.3	82.4	83.1	83.7	84.4	85.1	85.1
100°	100.4	101.8	103.2	104.6	106.0	107.0	107.5	108.1	108.6	109.1	109.1
102.5°	127.0	128.1	129.2	130.3	131.4	132.4	133.0	133.7	134.4	135.1	135.1
105°	170.0	170.5	171.0	171.6	172.1	172.5	172.9	173.3	173.6	173.9	174.3
107.5°	213.3	214.0	214.8	215.6	216.4	216.7	216.7	216.7	216.7	216.7	216.9
110°	241.1	242.2	243.2	244.3	245.3	245.9	245.9	245.9	245.9	245.9	245.9



TEST NUMBER: P331409-927

CATALOG NUMBER: SA2XXDIP-C865D925U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	271.5	272.5	273.6	274.6	275.7	276.2	276.0	275.8	275.8	275.6	275.2
115°	316.2	317.3	318.3	319.4	320.4	320.8	320.4	320.1	319.7	319.4	319.2
117.5°	360.8	362.2	363.6	365.0	366.5	366.6	365.7	364.6	363.7	362.7	362.3
120°	390.5	392.0	393.3	394.7	396.2	396.2	394.7	393.3	392.0	390.5	390.5
122.5°	417.7	419.4	421.1	422.8	424.5	424.8	423.8	422.9	421.9	420.9	420.5
125°	460.1	461.7	463.3	464.9	466.4	467.0	466.4	465.9	465.4	464.9	464.3
127.5°	501.4	503.4	505.4	507.4	509.4	510.1	509.5	508.8	508.2	507.6	506.9
130°	527.3	529.6	531.9	534.2	536.5	537.4	537.0	536.7	536.4	536.0	535.7
132.5°	556.4	558.3	560.2	562.0	563.9	564.8	564.9	565.0	565.0	565.1	564.4
135°	595.3	597.2	599.1	601.1	603.0	604.2	604.5	604.8	605.2	605.5	605.4
137.5°	636.3	637.8	639.4	641.0	642.5	643.6	644.0	644.5	645.0	645.4	645.3
140°	660.9	662.5	664.1	665.7	667.3	668.4	669.3	670.2	671.1	672.0	672.0
142.5°	686.2	687.8	689.4	690.9	692.5	693.6	694.2	694.8	695.4	696.0	696.2
145°	722.5	723.8	725.0	726.3	727.5	728.6	729.7	730.7	731.8	732.8	733.0
147.5°	754.9	756.5	758.0	759.4	760.9	762.0	762.7	763.3	764.1	764.8	765.2
150°	777.1	778.2	779.2	780.3	781.3	782.2	782.9	783.6	784.3	785.1	785.5
152.5°	796.7	797.8	798.8	799.9	801.0	801.9	802.7	803.6	804.4	805.3	806.0
155°	826.2	826.6	827.2	827.8	828.2	828.8	829.3	829.8	830.4	830.8	831.8
157.5°	851.3	851.6	852.0	852.3	852.7	853.0	853.3	853.7	854.0	854.3	855.5
160°	866.5	866.8	867.1	867.5	867.8	868.2	868.3	868.5	868.6	868.8	869.9
162.5°	880.4	880.4	880.5	880.6	880.7	880.7	881.0	881.1	881.3	881.5	882.6
165°	898.9	898.7	898.5	898.3	898.2	898.1	898.1	898.1	898.1	898.1	899.3
167.5°	914.3	913.9	913.3	912.8	912.3	912.0	912.0	911.9	911.9	911.8	913.1
170°	922.6	922.0	921.5	921.0	920.4	920.1	920.0	919.8	919.6	919.4	920.7
172.5°	928.3	927.7	927.2	926.7	926.1	925.8	925.7	925.4	925.3	925.1	926.4
175°	935.3	934.7	934.1	933.7	933.1	932.7	932.3	932.0	931.6	931.3	932.5
177.5°	938.1	937.6	937.2	936.8	936.4	936.0	935.7	935.5	935.2	934.9	935.7
180°	936.8	936.8	936.8	936.8	936.8	936.8	936.8	936.8	936.8	936.8	936.8



TEST NUMBER: P331409-927

CATALOG NUMBER: SA2XXDIP-C865D925U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1088.5	1090.4	1092.3	1093.1	1092.7	1092.3	1091.9	1091.5
5°	1081.2	1083.1	1085.0	1085.6	1085.2	1084.7	1084.3	1083.8
7.5°	1069.0	1070.9	1072.8	1073.4	1072.9	1072.4	1071.9	1071.3
10°	1058.0	1059.9	1061.8	1062.4	1061.7	1061.0	1060.3	1059.6
12.5°	1045.2	1046.5	1047.8	1048.2	1047.7	1047.2	1046.6	1046.2
15°	1022.5	1023.5	1024.5	1024.3	1023.2	1022.0	1020.8	1019.6
17.5°	995.7	996.8	997.9	997.8	996.7	995.6	994.5	993.4
20°	974.8	975.5	976.2	976.0	975.2	974.2	973.3	972.3
22.5°	952.7	952.8	952.9	952.8	952.1	951.6	951.0	950.5
25°	916.6	917.0	917.4	917.4	917.0	916.6	916.1	915.6
27.5°	881.0	880.3	879.6	878.7	877.5	876.4	875.3	874.2
30°	853.2	852.5	851.8	851.0	850.1	849.1	848.2	847.2
32.5°	826.0	824.7	823.5	822.4	821.5	820.5	819.6	818.6
35°	782.4	781.0	779.7	778.3	777.2	776.0	774.8	773.6
37.5°	738.7	737.0	735.2	733.8	732.7	731.6	730.5	729.3
40°	708.5	706.4	704.3	702.7	701.9	700.9	700.0	699.0
42.5°	678.7	676.4	674.1	672.3	671.0	669.7	668.4	667.1
45°	633.0	630.3	627.8	626.1	625.1	624.2	623.2	622.3
47.5°	585.3	582.7	580.0	577.9	576.6	575.2	573.9	572.5
50°	554.8	551.5	548.3	546.1	544.9	543.7	542.6	541.4
52.5°	523.1	520.4	517.7	515.6	514.0	512.5	511.0	509.4
55°	475.9	473.0	470.2	468.3	467.1	465.9	464.8	463.6
57.5°	426.7	424.0	421.2	419.4	418.5	417.6	416.8	415.8
60°	394.3	391.7	389.2	387.5	386.8	386.1	385.4	384.8
62.5°	363.5	361.2	358.8	357.2	356.2	355.4	354.5	353.6
65°	316.4	314.3	312.2	310.5	309.4	308.2	307.0	305.9
67.5°	269.8	268.2	266.6	265.3	264.4	263.4	262.4	261.5
70°	239.6	237.9	236.3	235.0	234.1	233.1	232.2	231.2
72.5°	211.0	209.3	207.7	206.5	205.7	205.0	204.2	203.5
75°	166.4	165.0	163.7	163.2	163.7	164.1	164.5	165.0
77.5°	126.7	126.0	125.2	124.5	123.9	123.3	122.6	121.9
80°	100.5	99.9	99.2	98.5	98.1	97.7	97.2	96.7
82.5°	74.9	74.1	73.2	72.7	72.6	72.5	72.4	72.3
85°	39.6	38.9	38.2	37.7	37.5	37.2	37.0	36.8
87.5°	16.1	15.4	14.8	14.4	14.3	14.1	13.9	13.8
90°	26.9	26.6	26.3	26.1	26.4	26.5	26.7	26.9
92.5°	25.3	25.3	25.4	25.5	25.5	25.5	25.6	25.6
95°	50.6	50.6	50.6	50.4	50.1	49.7	49.4	49.0
97.5°	85.1	85.1	85.1	85.1	85.0	85.0	84.9	84.9
100°	109.1	109.1	109.1	109.0	108.8	108.7	108.4	108.3
102.5°	135.3	135.5	135.6	135.5	135.4	135.2	135.1	134.9
105°	174.6	175.0	175.3	175.5	175.5	175.5	175.5	175.5
107.5°	217.1	217.2	217.3	217.0	216.2	215.4	214.6	213.7
110°	245.9	245.9	245.9	245.6	245.1	244.5	244.0	243.5





TEST NUMBER: P331409-927

CATALOG NUMBER: SA2XXDIP-C865D925U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	274.7	274.3	273.9	273.5	273.1	272.7	272.4	272.0
115°	319.0	318.9	318.7	318.3	317.8	317.3	316.7	316.2
117.5°	361.9	361.5	361.0	360.5	360.0	359.5	358.9	358.5
120°	390.5	390.5	390.5	390.3	389.8	389.2	388.7	388.2
122.5°	420.0	419.6	419.2	418.8	418.4	418.0	417.6	417.2
125°	463.8	463.3	462.7	462.4	462.2	462.0	461.8	461.7
127.5°	506.3	505.6	505.0	504.4	503.8	503.3	502.7	502.2
130°	535.3	535.0	534.6	534.1	533.4	532.7	532.0	531.2
132.5°	563.6	562.8	562.0	561.3	560.8	560.2	559.7	559.1
135°	605.2	605.1	604.8	604.5	604.0	603.5	602.9	602.4
137.5°	645.2	645.0	644.8	644.4	643.7	643.0	642.3	641.6
140°	672.0	672.0	672.0	671.6	670.9	670.2	669.6	668.8
142.5°	696.3	696.4	696.6	696.3	695.6	694.9	694.2	693.5
145°	733.2	733.4	733.6	733.3	732.6	731.9	731.2	730.5
147.5°	765.6	766.0	766.4	766.2	765.6	764.9	764.2	763.5
150°	786.1	786.6	787.1	787.1	786.6	786.1	785.5	785.1
152.5°	806.6	807.2	807.9	807.9	807.2	806.6	806.0	805.3
155°	832.7	833.5	834.4	834.6	834.0	833.5	833.0	832.4
157.5°	856.7	857.9	859.0	859.2	858.4	857.5	856.7	855.9
160°	870.9	872.0	873.1	873.2	872.5	871.8	871.1	870.4
162.5°	883.8	885.0	886.2	886.5	885.6	884.7	883.9	883.0
165°	900.6	901.7	903.0	903.2	902.3	901.4	900.6	899.7
167.5°	914.3	915.5	916.7	916.9	916.0	915.0	914.2	913.2
170°	921.9	923.1	924.3	924.4	923.4	922.3	921.2	920.2
172.5°	927.6	928.8	930.0	930.1	929.1	928.0	926.9	925.9
175°	933.7	934.9	936.2	936.3	935.3	934.1	933.1	932.1
177.5°	936.6	937.5	938.3	938.3	937.5	936.6	935.7	934.9
180°	936.8	936.8	936.8	936.8	936.8	936.8	936.8	936.8

(END OF REPORT)