

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: P331400-830

Luminaire Tested: **SA2XXDIP-C865D725U830-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331400-830
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-C865D725U830-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

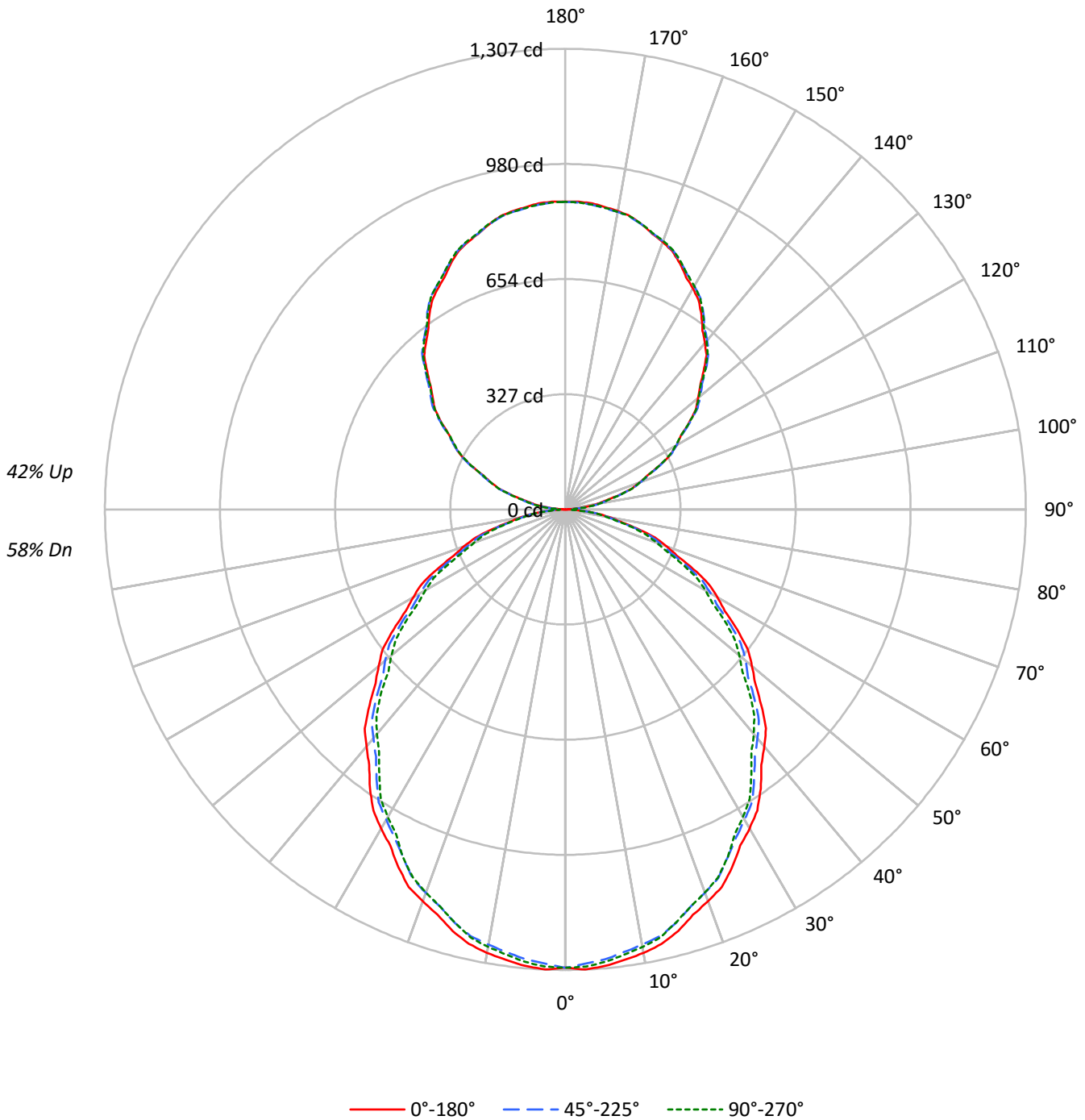
Lumens per Lamp: N/A
Luminaire Lumens: 5753.9 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 54.4
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



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Luminous Intensity Polar Plot





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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	109	109	109	109	101	101	101	101	88	88	88	75	75	75	63	63	63	58
1	99	95	91	88	92	89	85	82	77	74	72	66	64	62	56	54	53	48
2	91	83	77	72	84	78	72	67	67	63	60	58	55	52	49	47	45	41
3	83	73	66	60	77	68	62	56	59	54	50	51	47	44	43	41	38	34
4	76	65	57	51	70	61	53	48	53	47	43	46	41	38	39	36	33	30
5	69	58	49	43	64	54	47	41	47	41	37	41	36	33	35	32	29	26
6	64	52	44	38	59	49	41	36	43	37	32	37	32	29	32	28	25	23
7	59	47	39	33	55	44	37	32	39	33	28	34	29	25	29	25	23	20
8	55	43	35	29	51	40	33	28	35	30	25	31	26	23	27	23	20	18
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	25	21	18	16
10	48	36	28	24	45	34	27	23	30	24	21	26	22	19	23	19	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21001	21001	21001
5°	21081	20778	20900
10°	20956	20566	20669
15°	20697	20301	20277
20°	20330	19900	19878
25°	19963	19408	19408
30°	19494	18957	18793
35°	19056	18413	18143
40°	18506	17873	17530
45°	17961	17335	16908
50°	17372	16777	16179
55°	16757	16124	15527
60°	16075	15345	14783
65°	15339	14571	13903
70°	14408	13638	12987
75°	13107	12558	12246
80°	11632	11278	10702
85°	9503	9040	8096



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.3	2.1
10°-20°	344.2	6.0
20°-30°	505.9	8.8
30°-40°	587.6	10.2
40°-50°	587.0	10.2
50°-60°	511.9	8.9
60°-70°	378.5	6.6
70°-80°	214.4	3.7
80°-90°	61.1	1.1
90°-100°	55.3	1.0
100°-110°	171.8	3.0
110°-120°	293.7	5.1
120°-130°	386.2	6.7
130°-140°	433.5	7.5
140°-150°	425.0	7.4
150°-160°	356.5	6.2
160°-170°	236.5	4.1
170°-180°	82.6	1.4
0°-30°	972.3	16.9
0°-40°	1559.9	27.1
0°-60°	2658.7	46.2
0°-90°	3312.7	57.6
90°-120°	520.8	9.1
90°-150°	1765.5	30.7
90°-180°	2441.0	42.4
0°-180°	5753.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1301	1301	1301	1301	1301	
5°	1301	1295	1282	1291	1290	123
15°	1238	1230	1214	1219	1213	348
25°	1121	1110	1089	1092	1089	515
35°	967	954	934	927	920	603
45°	787	777	759	746	740	607
55°	595	587	573	558	552	532
65°	402	394	381	370	364	397
75°	210	207	201	194	196	224
85°	51	50	49	45	44	59
90°	1	10	26	24	25	5
95°	38	45	47	47	46	44
105°	158	161	162	163	164	167
115°	295	299	298	297	295	291
125°	429	435	433	431	430	383
135°	555	562	564	564	561	428
145°	673	678	683	683	681	421
155°	770	772	774	778	776	354
165°	838	837	837	842	838	236
175°	872	869	868	872	869	83
180°	873	873	873	873	873	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7
2.5°	1306.7	1305.6	1304.5	1303.4	1302.3	1300.5	1298.1	1295.6	1293.2	1290.7	1293.0
5°	1300.7	1299.6	1298.5	1297.4	1296.3	1294.2	1291.2	1288.1	1285.1	1282.0	1284.2
7.5°	1289.2	1287.5	1285.8	1284.0	1282.3	1279.9	1276.8	1273.7	1270.5	1267.4	1269.7
10°	1278.2	1276.3	1274.3	1272.3	1270.5	1267.8	1264.4	1261.1	1257.8	1254.4	1256.7
12.5°	1263.2	1261.5	1259.8	1258.0	1256.3	1253.8	1250.5	1247.1	1243.8	1240.5	1242.0
15°	1238.2	1236.5	1234.8	1233.2	1231.5	1228.9	1225.3	1221.6	1218.0	1214.5	1215.5
17.5°	1206.2	1204.5	1202.9	1201.2	1199.5	1196.8	1193.2	1189.5	1185.8	1182.1	1183.5
20°	1183.2	1181.5	1179.9	1178.2	1176.5	1173.7	1169.8	1165.9	1162.1	1158.2	1159.0
22.5°	1160.2	1157.8	1155.5	1153.1	1150.8	1147.8	1144.2	1140.5	1136.8	1133.1	1133.3
25°	1120.6	1118.4	1116.2	1114.0	1111.7	1108.2	1103.5	1098.8	1094.1	1089.4	1090.0
27.5°	1075.6	1073.7	1071.6	1069.6	1067.6	1064.7	1061.0	1057.2	1053.6	1049.8	1049.0
30°	1045.6	1043.4	1041.1	1039.0	1036.7	1033.5	1029.4	1025.2	1021.0	1016.8	1016.0
32.5°	1013.6	1011.8	1010.0	1008.2	1006.4	1003.3	999.0	994.6	990.2	985.8	984.3
35°	966.8	964.0	961.2	958.5	955.6	952.1	947.6	943.2	938.7	934.2	932.6
37.5°	914.0	911.5	909.1	906.6	904.3	900.8	896.4	891.9	887.4	883.0	880.9
40°	878.0	875.8	873.5	871.3	869.1	865.7	861.3	856.9	852.4	848.0	845.5
42.5°	843.0	840.7	838.5	836.3	834.1	830.8	826.3	821.9	817.4	812.9	810.2
45°	786.6	784.8	782.8	780.9	778.9	775.8	771.7	767.5	763.4	759.2	756.1
47.5°	730.7	728.9	727.0	725.2	723.3	720.2	715.9	711.5	707.2	702.9	699.6
50°	691.6	690.2	688.9	687.5	686.1	683.4	679.6	675.6	671.8	667.9	664.0
52.5°	653.7	651.8	650.0	648.1	646.3	643.6	639.9	636.2	632.5	628.9	625.7
55°	595.3	593.7	592.0	590.3	588.6	586.2	582.9	579.5	576.2	572.8	569.5
57.5°	536.8	535.5	534.1	532.8	531.5	529.0	525.3	521.6	517.9	514.3	511.0
60°	497.8	496.6	495.6	494.5	493.3	490.9	486.9	483.1	479.2	475.2	472.2
62.5°	459.8	458.0	456.2	454.4	452.6	450.3	447.2	444.2	441.2	438.3	435.5
65°	401.5	399.8	398.1	396.4	394.8	392.6	389.8	387.0	384.3	381.4	379.0
67.5°	342.2	340.8	339.5	338.2	336.9	335.0	332.4	329.9	327.4	324.9	323.0
70°	305.2	304.1	302.9	301.8	300.8	298.9	296.4	293.9	291.4	288.9	287.0
72.5°	267.1	266.1	264.9	263.8	262.7	261.4	259.8	258.2	256.5	254.9	253.0
75°	210.1	209.5	209.0	208.5	207.9	206.9	205.6	204.2	202.7	201.3	199.7
77.5°	159.1	158.2	157.2	156.3	155.3	154.6	154.0	153.4	152.9	152.3	151.5
80°	125.1	124.8	124.5	124.2	123.9	123.6	123.0	122.4	121.9	121.3	120.5
82.5°	93.0	93.0	92.9	92.8	92.8	92.7	92.3	92.0	91.6	91.3	90.2
85°	51.3	51.0	50.7	50.4	50.1	49.9	49.6	49.3	49.0	48.8	48.0
87.5°	18.2	18.1	18.1	18.0	17.9	18.1	18.4	18.6	18.9	19.1	18.5
90°	0.8	2.7	4.7	6.6	8.6	11.4	15.0	18.6	22.1	25.8	25.4
92.5°	13.1	14.5	16.0	17.4	18.9	20.0	20.8	21.7	22.6	23.5	23.5
95°	38.3	40.0	41.6	43.3	44.9	45.8	46.2	46.5	46.8	47.1	47.1
97.5°	70.0	71.4	72.9	74.3	75.8	76.8	77.4	78.0	78.6	79.3	79.3
100°	93.6	94.9	96.1	97.5	98.8	99.7	100.2	100.7	101.1	101.7	101.7
102.5°	118.3	119.3	120.5	121.5	122.5	123.4	123.9	124.6	125.2	125.8	125.9
105°	158.4	158.9	159.4	159.9	160.3	160.8	161.1	161.5	161.7	162.1	162.4
107.5°	198.8	199.5	200.2	201.0	201.6	202.0	202.0	202.0	202.0	202.0	202.2
110°	224.7	225.6	226.7	227.6	228.7	229.1	229.1	229.1	229.1	229.1	229.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	253.0	254.0	255.0	255.9	256.9	257.3	257.2	257.1	256.9	256.8	256.5
115°	294.7	295.7	296.6	297.7	298.6	299.0	298.6	298.3	297.9	297.7	297.5
117.5°	336.2	337.5	338.8	340.2	341.5	341.7	340.7	339.9	338.9	338.0	337.6
120°	363.9	365.2	366.6	367.9	369.2	369.2	367.9	366.6	365.2	363.9	363.9
122.5°	389.3	390.9	392.5	394.0	395.6	395.9	395.0	394.1	393.1	392.2	391.8
125°	428.8	430.3	431.7	433.2	434.7	435.2	434.7	434.1	433.7	433.2	432.7
127.5°	467.2	469.1	471.0	472.9	474.7	475.3	474.8	474.2	473.5	473.0	472.4
130°	491.4	493.5	495.7	497.8	499.9	500.8	500.5	500.1	499.8	499.5	499.2
132.5°	518.5	520.3	522.0	523.7	525.5	526.3	526.4	526.5	526.5	526.6	525.9
135°	554.8	556.6	558.4	560.2	561.9	563.0	563.4	563.6	564.0	564.3	564.2
137.5°	593.0	594.4	595.9	597.4	598.8	599.7	600.2	600.6	601.1	601.4	601.3
140°	616.0	617.4	618.9	620.3	621.8	622.9	623.8	624.6	625.4	626.2	626.2
142.5°	639.5	640.9	642.4	643.9	645.4	646.4	647.0	647.5	648.1	648.7	648.8
145°	673.4	674.5	675.7	676.8	678.0	679.0	680.0	681.0	681.9	683.0	683.2
147.5°	703.6	704.9	706.3	707.7	709.1	710.1	710.8	711.4	712.1	712.8	713.0
150°	724.2	725.2	726.1	727.2	728.1	729.0	729.6	730.3	730.9	731.6	732.1
152.5°	742.4	743.5	744.4	745.5	746.4	747.2	748.1	748.9	749.6	750.5	751.0
155°	769.9	770.3	770.9	771.4	771.8	772.3	772.8	773.4	773.8	774.3	775.1
157.5°	793.3	793.6	794.0	794.3	794.7	794.9	795.2	795.5	795.8	796.1	797.2
160°	807.5	807.8	808.1	808.4	808.8	809.0	809.2	809.4	809.5	809.6	810.7
162.5°	820.4	820.5	820.6	820.6	820.7	820.8	821.0	821.1	821.3	821.4	822.6
165°	837.6	837.5	837.4	837.2	837.0	836.9	836.9	836.9	836.9	836.9	838.1
167.5°	852.1	851.6	851.1	850.6	850.2	849.9	849.9	849.8	849.8	849.7	850.9
170°	859.8	859.3	858.8	858.3	857.8	857.4	857.3	857.1	857.0	856.8	858.0
172.5°	865.1	864.6	864.1	863.6	863.1	862.8	862.6	862.4	862.3	862.1	863.3
175°	871.6	871.1	870.5	870.1	869.6	869.2	868.8	868.6	868.2	867.9	869.0
177.5°	874.2	873.8	873.5	873.0	872.6	872.3	872.0	871.8	871.5	871.3	872.0
180°	873.0	873.0	873.0	873.0	873.0	873.0	873.0	873.0	873.0	873.0	873.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7
2.5°	1295.1	1297.4	1299.6	1300.5	1300.0	1299.6	1299.2	1298.7
5°	1286.4	1288.6	1290.9	1291.7	1291.2	1290.6	1290.1	1289.5
7.5°	1271.9	1274.1	1276.4	1277.1	1276.6	1275.9	1275.4	1274.7
10°	1258.9	1261.1	1263.4	1264.0	1263.2	1262.3	1261.5	1260.7
12.5°	1243.6	1245.1	1246.7	1247.2	1246.5	1245.9	1245.3	1244.7
15°	1216.6	1217.8	1218.9	1218.7	1217.4	1216.0	1214.6	1213.1
17.5°	1184.7	1186.0	1187.3	1187.2	1185.9	1184.6	1183.3	1181.9
20°	1159.8	1160.6	1161.5	1161.3	1160.3	1159.1	1158.0	1156.9
22.5°	1133.5	1133.6	1133.8	1133.6	1132.8	1132.2	1131.5	1130.9
25°	1090.5	1091.0	1091.6	1091.6	1091.0	1090.5	1090.0	1089.4
27.5°	1048.2	1047.4	1046.5	1045.5	1044.1	1042.7	1041.4	1040.1
30°	1015.1	1014.4	1013.5	1012.5	1011.4	1010.3	1009.2	1008.0
32.5°	982.8	981.3	979.8	978.5	977.4	976.3	975.2	974.0
35°	930.9	929.3	927.7	926.0	924.7	923.3	921.9	920.5
37.5°	878.9	876.8	874.8	873.1	871.8	870.4	869.1	867.7
40°	843.0	840.5	838.0	836.1	835.1	834.0	832.8	831.7
42.5°	807.5	804.7	802.1	799.9	798.3	796.8	795.2	793.7
45°	753.1	750.0	747.0	744.9	743.8	742.6	741.5	740.5
47.5°	696.4	693.2	690.0	687.6	686.0	684.4	682.8	681.2
50°	660.1	656.2	652.3	649.7	648.3	646.9	645.5	644.1
52.5°	622.4	619.2	616.0	613.4	611.6	609.7	607.9	606.1
55°	566.2	562.8	559.5	557.1	555.7	554.3	553.0	551.6
57.5°	507.7	504.4	501.1	499.0	497.9	496.9	495.9	494.7
60°	469.2	466.1	463.1	461.1	460.2	459.4	458.5	457.8
62.5°	432.5	429.7	426.9	425.0	423.9	422.8	421.8	420.8
65°	376.5	374.0	371.5	369.5	368.2	366.7	365.3	363.9
67.5°	321.0	319.1	317.2	315.7	314.5	313.4	312.3	311.1
70°	285.0	283.0	281.2	279.6	278.5	277.4	276.3	275.1
72.5°	251.0	249.0	247.1	245.7	244.8	243.9	243.0	242.1
75°	198.0	196.3	194.7	194.2	194.7	195.3	195.8	196.3
77.5°	150.7	149.9	149.0	148.2	147.4	146.7	145.9	145.1
80°	119.6	118.9	118.0	117.3	116.7	116.2	115.6	115.1
82.5°	89.2	88.1	87.1	86.5	86.3	86.2	86.1	86.1
85°	47.1	46.3	45.4	44.9	44.6	44.3	44.0	43.7
87.5°	17.7	17.0	16.2	15.7	15.6	15.4	15.2	15.0
90°	25.2	24.8	24.5	24.4	24.6	24.7	24.9	25.1
92.5°	23.6	23.7	23.7	23.8	23.8	23.8	23.8	23.8
95°	47.1	47.1	47.1	47.0	46.7	46.4	46.0	45.7
97.5°	79.3	79.3	79.3	79.3	79.3	79.2	79.2	79.1
100°	101.7	101.7	101.7	101.6	101.4	101.2	101.1	100.9
102.5°	126.1	126.2	126.4	126.3	126.2	126.0	125.8	125.6
105°	162.8	163.1	163.4	163.5	163.5	163.5	163.5	163.5
107.5°	202.3	202.4	202.6	202.3	201.5	200.8	200.0	199.3
110°	229.1	229.1	229.1	228.8	228.4	227.9	227.4	226.9



TEST NUMBER: P331400-830

CATALOG NUMBER: SA2XXDIP-C865D725U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	256.0	255.6	255.2	254.9	254.5	254.1	253.8	253.4
115°	297.3	297.2	297.0	296.6	296.1	295.7	295.2	294.7
117.5°	337.2	336.9	336.4	336.0	335.5	335.0	334.5	334.0
120°	363.9	363.9	363.9	363.7	363.2	362.7	362.2	361.7
122.5°	391.4	391.1	390.7	390.3	389.9	389.6	389.2	388.9
125°	432.3	431.7	431.2	430.9	430.7	430.6	430.5	430.3
127.5°	471.8	471.2	470.6	470.0	469.6	469.0	468.5	468.0
130°	498.9	498.5	498.2	497.7	497.0	496.4	495.8	495.1
132.5°	525.2	524.4	523.8	523.1	522.5	522.1	521.5	521.0
135°	564.0	563.8	563.6	563.4	562.9	562.4	561.8	561.4
137.5°	601.2	601.1	601.0	600.6	599.9	599.3	598.6	597.9
140°	626.2	626.2	626.2	625.8	625.3	624.6	624.0	623.3
142.5°	648.8	649.0	649.1	648.8	648.2	647.5	647.0	646.3
145°	683.2	683.4	683.6	683.3	682.7	682.0	681.4	680.7
147.5°	713.4	713.8	714.2	714.1	713.4	712.8	712.2	711.5
150°	732.5	733.0	733.6	733.6	733.0	732.5	732.1	731.6
152.5°	751.7	752.3	752.9	752.9	752.3	751.7	751.0	750.5
155°	775.9	776.7	777.6	777.8	777.2	776.7	776.3	775.8
157.5°	798.3	799.5	800.6	800.7	799.9	799.2	798.3	797.6
160°	811.6	812.7	813.6	813.8	813.1	812.5	811.8	811.2
162.5°	823.7	824.8	826.0	826.0	825.3	824.5	823.7	822.9
165°	839.2	840.4	841.5	841.7	840.8	840.0	839.2	838.4
167.5°	852.1	853.2	854.3	854.5	853.7	852.8	852.0	851.1
170°	859.1	860.3	861.4	861.5	860.5	859.5	858.6	857.5
172.5°	864.4	865.5	866.7	866.8	865.8	864.8	863.8	862.9
175°	870.2	871.3	872.4	872.5	871.6	870.5	869.6	868.6
177.5°	872.8	873.6	874.4	874.4	873.6	872.8	872.0	871.3
180°	873.0	873.0	873.0	873.0	873.0	873.0	873.0	873.0

(END OF REPORT)