

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: P331328

Luminaire Tested: **SA2XXDIP-C485D1080U835-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331328  
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-C485D1080U835-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1080 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

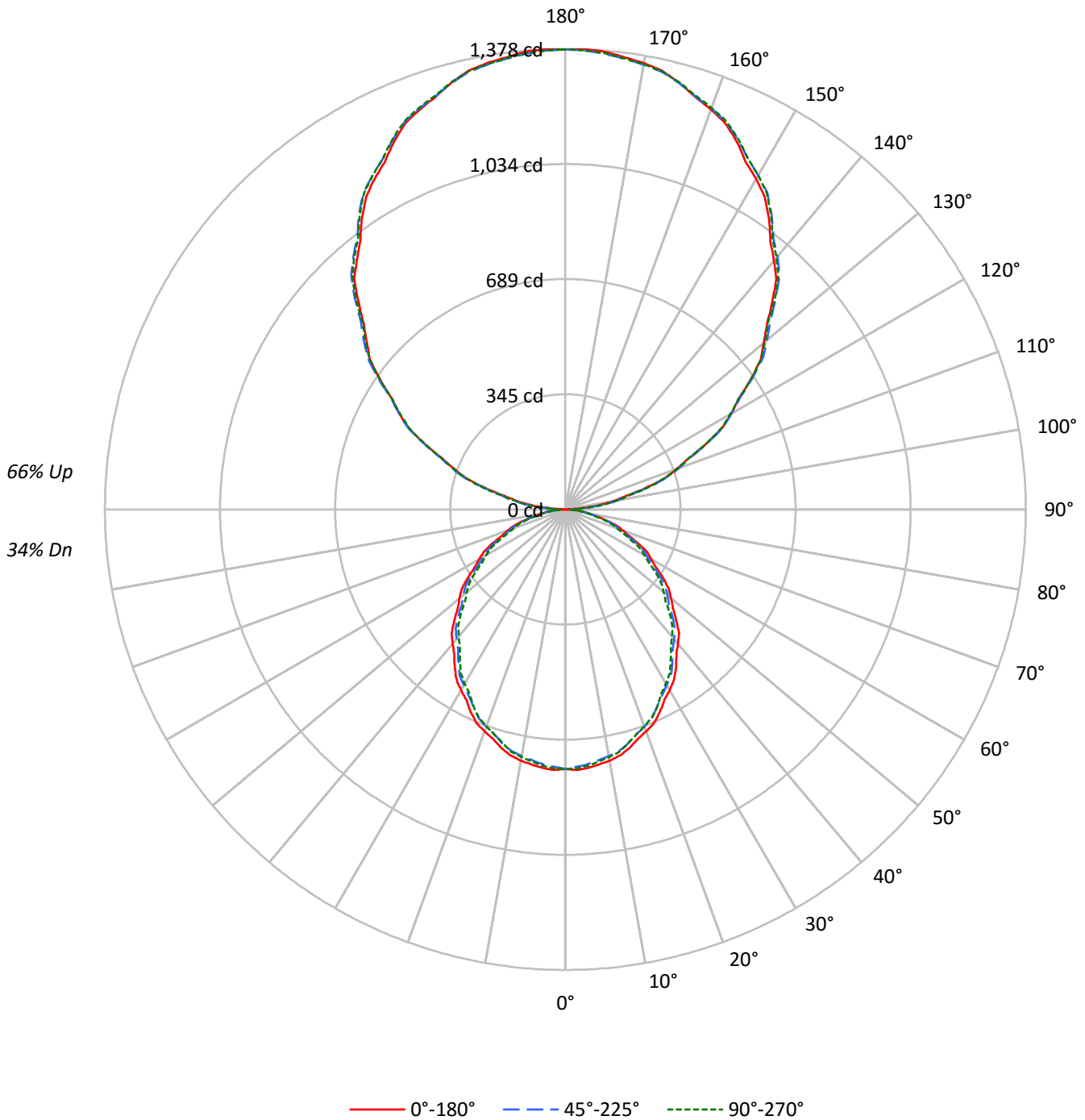
Lumens per Lamp: N/A  
Luminaire Lumens: 5830.4 lumens  
Efficiency: N/A  
Efficacy: 118.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 49.4  
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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	34
1	94	90	86	83	85	81	78	75	65	63	61	50	49	47	37	36	35	29
2	86	78	73	67	77	71	66	62	57	53	50	44	42	40	32	31	29	24
3	78	69	62	56	70	62	56	51	50	46	42	39	36	33	28	27	25	20
4	71	61	53	47	64	55	49	44	45	40	36	35	31	29	25	23	22	17
5	65	54	46	40	59	49	42	37	40	35	31	31	28	25	23	21	19	15
6	60	48	41	35	54	44	37	32	36	31	27	28	24	22	21	18	16	13
7	56	44	36	31	50	40	33	28	32	27	24	25	22	19	19	16	15	12
8	52	40	32	27	46	36	29	25	29	24	21	23	20	17	17	15	13	11
9	48	36	29	24	43	33	26	22	27	22	19	21	18	15	16	14	12	10
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	12	11	9

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	12540	12540	12540
5°	12588	12407	12480
10°	12514	12281	12342
15°	12359	12122	12109
20°	12139	11883	11869
25°	11922	11589	11589
30°	11641	11320	11222
35°	11379	10996	10835
40°	11051	10673	10467
45°	10727	10351	10095
50°	10374	10017	9661
55°	10007	9627	9272
60°	9597	9164	8825
65°	9158	8703	8302
70°	8601	8143	7756
75°	7829	7498	7317
80°	6946	6732	6388
85°	5669	5391	4835



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.0	1.3
10°-20°	205.5	3.5
20°-30°	302.1	5.2
30°-40°	350.9	6.0
40°-50°	350.5	6.0
50°-60°	305.6	5.2
60°-70°	226.0	3.9
70°-80°	128.0	2.2
80°-90°	39.9	0.7
90°-100°	87.2	1.5
100°-110°	270.9	4.6
110°-120°	463.1	7.9
120°-130°	608.9	10.4
130°-140°	683.5	11.7
140°-150°	670.1	11.5
150°-160°	562.1	9.6
160°-170°	372.8	6.4
170°-180°	130.3	2.2
0°-30°	580.6	10.0
0°-40°	931.5	16.0
0°-60°	1587.6	27.2
0°-90°	1981.5	34.0
90°-120°	821.2	14.1
90°-150°	2783.7	47.7
90°-180°	3849.0	66.0
0°-180°	5830.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	777	777	777	777	777	
5°	777	773	766	771	770	74
15°	739	735	725	728	724	208
25°	669	663	650	652	650	308
35°	577	570	558	553	550	360
45°	470	464	453	445	442	362
55°	356	351	342	333	329	318
65°	240	235	228	221	217	237
75°	126	124	120	116	117	134
85°	31	30	29	27	26	35
90°	1	16	41	39	40	5
95°	60	72	74	74	72	69
105°	250	253	256	258	258	264
115°	465	471	469	468	465	459
125°	676	686	683	680	678	604
135°	875	887	890	888	885	675
145°	1062	1070	1077	1078	1073	663
155°	1214	1217	1221	1226	1223	558
165°	1321	1320	1320	1327	1322	372
175°	1374	1371	1368	1376	1370	130
180°	1376	1376	1376	1376	1376	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7
2.5°	780.3	779.6	779.0	778.3	777.6	776.6	775.1	773.7	772.2	770.7	772.1
5°	776.7	776.0	775.4	774.7	774.1	772.8	771.0	769.2	767.3	765.5	766.8
7.5°	769.8	768.8	767.8	766.7	765.7	764.3	762.4	760.6	758.7	756.8	758.2
10°	763.3	762.1	760.9	759.8	758.6	757.0	755.0	753.1	751.1	749.1	750.4
12.5°	754.3	753.3	752.2	751.2	750.2	748.7	746.7	744.7	742.7	740.7	741.6
15°	739.4	738.4	737.4	736.4	735.4	733.8	731.6	729.5	727.3	725.2	725.8
17.5°	720.2	719.3	718.3	717.3	716.3	714.7	712.5	710.3	708.1	705.9	706.7
20°	706.5	705.5	704.5	703.5	702.5	700.9	698.5	696.2	693.9	691.6	692.1
22.5°	692.8	691.4	690.0	688.6	687.2	685.4	683.2	681.0	678.8	676.6	676.7
25°	669.2	667.8	666.5	665.2	663.9	661.8	659.0	656.1	653.3	650.5	650.8
27.5°	642.3	641.1	639.9	638.7	637.5	635.8	633.6	631.3	629.1	626.9	626.4
30°	624.4	623.0	621.7	620.4	619.0	617.1	614.6	612.2	609.7	607.2	606.7
32.5°	605.2	604.2	603.1	602.0	601.0	599.1	596.5	593.9	591.3	588.7	587.8
35°	577.3	575.6	574.0	572.3	570.7	568.5	565.9	563.2	560.5	557.9	556.9
37.5°	545.8	544.3	542.9	541.4	539.9	537.9	535.2	532.6	529.9	527.3	526.0
40°	524.3	522.9	521.6	520.3	519.0	517.0	514.3	511.7	509.0	506.4	504.9
42.5°	503.4	502.0	500.7	499.4	498.1	496.1	493.4	490.8	488.1	485.4	483.8
45°	469.8	468.6	467.4	466.3	465.1	463.3	460.8	458.3	455.8	453.3	451.5
47.5°	436.3	435.2	434.1	433.0	431.9	430.1	427.5	424.9	422.3	419.7	417.8
50°	413.0	412.2	411.3	410.5	409.7	408.1	405.8	403.5	401.1	398.8	396.5
52.5°	390.3	389.2	388.1	387.0	385.9	384.3	382.1	379.9	377.7	375.5	373.6
55°	355.5	354.5	353.5	352.5	351.5	350.0	348.0	346.0	344.0	342.0	340.1
57.5°	320.5	319.7	318.9	318.2	317.4	315.9	313.7	311.5	309.3	307.1	305.1
60°	297.2	296.6	295.9	295.2	294.6	293.1	290.8	288.4	286.1	283.8	282.0
62.5°	274.5	273.5	272.4	271.3	270.3	268.9	267.1	265.3	263.5	261.7	260.0
65°	239.7	238.7	237.7	236.7	235.8	234.4	232.8	231.1	229.4	227.8	226.3
67.5°	204.3	203.5	202.7	201.9	201.1	200.0	198.5	197.0	195.5	194.0	192.9
70°	182.2	181.6	180.9	180.2	179.6	178.5	177.0	175.5	174.0	172.5	171.4
72.5°	159.5	158.9	158.2	157.5	156.9	156.1	155.1	154.1	153.2	152.2	151.0
75°	125.5	125.1	124.8	124.5	124.1	123.6	122.7	121.9	121.1	120.2	119.2
77.5°	95.0	94.4	93.9	93.3	92.7	92.3	92.0	91.6	91.3	91.0	90.5
80°	74.7	74.5	74.4	74.2	74.0	73.8	73.4	73.1	72.8	72.4	71.9
82.5°	55.6	55.5	55.5	55.5	55.4	55.3	55.1	54.9	54.7	54.5	53.9
85°	30.6	30.5	30.3	30.1	30.0	29.8	29.6	29.5	29.3	29.1	28.6
87.5°	11.0	11.3	11.7	12.0	12.4	13.0	13.9	14.8	15.6	16.5	16.0
90°	1.2	4.3	7.4	10.5	13.6	17.9	23.6	29.3	35.0	40.7	40.1
92.5°	20.7	22.9	25.2	27.5	29.8	31.6	32.9	34.3	35.6	36.9	37.0
95°	60.4	63.0	65.6	68.1	70.7	72.3	72.8	73.3	73.8	74.3	74.3
97.5°	110.4	112.6	114.9	117.2	119.4	121.1	122.0	123.0	124.0	125.0	125.0
100°	147.5	149.6	151.7	153.7	155.8	157.2	158.0	158.7	159.5	160.3	160.3
102.5°	186.6	188.2	189.9	191.5	193.2	194.5	195.5	196.4	197.4	198.4	198.6
105°	249.7	250.5	251.3	252.1	252.8	253.5	254.0	254.5	255.0	255.5	256.1
107.5°	313.4	314.5	315.7	316.8	317.9	318.5	318.5	318.5	318.5	318.5	318.7
110°	354.3	355.8	357.4	358.9	360.5	361.3	361.3	361.3	361.3	361.3	361.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	398.9	400.4	402.0	403.5	405.1	405.8	405.5	405.3	405.1	404.9	404.3
115°	464.6	466.2	467.7	469.3	470.8	471.3	470.8	470.3	469.8	469.3	469.0
117.5°	530.1	532.2	534.3	536.3	538.4	538.7	537.3	535.8	534.4	532.9	532.3
120°	573.8	575.9	578.0	580.0	582.1	582.1	580.0	578.0	575.9	573.8	573.8
122.5°	613.8	616.3	618.7	621.2	623.7	624.2	622.8	621.3	619.9	618.4	617.8
125°	676.0	678.4	680.7	683.0	685.3	686.1	685.3	684.6	683.8	683.0	682.2
127.5°	736.7	739.6	742.6	745.5	748.4	749.5	748.5	747.6	746.7	745.7	744.8
130°	774.8	778.1	781.5	784.8	788.2	789.6	789.1	788.6	788.1	787.6	787.0
132.5°	817.5	820.3	823.0	825.7	828.5	829.9	830.0	830.1	830.2	830.3	829.2
135°	874.7	877.5	880.4	883.2	886.0	887.7	888.2	888.7	889.3	889.8	889.5
137.5°	934.8	937.2	939.5	941.8	944.1	945.6	946.3	947.0	947.6	948.3	948.1
140°	971.1	973.4	975.7	978.1	980.4	982.2	983.5	984.8	986.1	987.3	987.3
142.5°	1008.3	1010.6	1012.9	1015.2	1017.5	1019.1	1020.0	1020.9	1021.8	1022.7	1022.9
145°	1061.7	1063.5	1065.3	1067.1	1068.9	1070.6	1072.1	1073.7	1075.2	1076.8	1077.0
147.5°	1109.3	1111.5	1113.6	1115.8	1118.0	1119.6	1120.6	1121.7	1122.7	1123.7	1124.3
150°	1141.8	1143.4	1144.9	1146.5	1148.0	1149.3	1150.4	1151.4	1152.4	1153.5	1154.2
152.5°	1170.6	1172.2	1173.7	1175.3	1176.8	1178.2	1179.5	1180.7	1182.0	1183.2	1184.2
155°	1213.9	1214.6	1215.4	1216.2	1217.0	1217.7	1218.5	1219.3	1220.1	1220.8	1222.1
157.5°	1250.8	1251.3	1251.8	1252.3	1252.9	1253.3	1253.8	1254.3	1254.7	1255.2	1257.0
160°	1273.1	1273.6	1274.1	1274.6	1275.2	1275.5	1275.8	1276.1	1276.3	1276.6	1278.1
162.5°	1293.5	1293.6	1293.7	1293.8	1294.0	1294.1	1294.4	1294.6	1294.9	1295.2	1296.9
165°	1320.7	1320.5	1320.2	1319.9	1319.7	1319.6	1319.6	1319.6	1319.6	1319.6	1321.4
167.5°	1343.5	1342.7	1341.9	1341.2	1340.4	1340.0	1339.9	1339.9	1339.8	1339.8	1341.6
170°	1355.6	1354.8	1354.0	1353.2	1352.5	1352.0	1351.7	1351.4	1351.2	1350.9	1352.7
172.5°	1363.9	1363.2	1362.4	1361.6	1360.8	1360.3	1360.1	1359.8	1359.5	1359.3	1361.1
175°	1374.2	1373.4	1372.6	1371.8	1371.1	1370.4	1369.9	1369.4	1368.9	1368.3	1370.2
177.5°	1378.3	1377.7	1377.1	1376.5	1375.9	1375.3	1374.9	1374.5	1374.1	1373.7	1374.9
180°	1376.5	1376.5	1376.5	1376.5	1376.5	1376.5	1376.5	1376.5	1376.5	1376.5	1376.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7
2.5°	773.4	774.7	776.0	776.6	776.3	776.0	775.8	775.5
5°	768.2	769.5	770.8	771.3	771.0	770.6	770.3	770.0
7.5°	759.5	760.8	762.2	762.6	762.3	761.9	761.5	761.2
10°	751.7	753.1	754.4	754.8	754.3	753.8	753.3	752.8
12.5°	742.6	743.5	744.4	744.7	744.3	744.0	743.6	743.2
15°	726.5	727.2	727.8	727.7	726.9	726.1	725.3	724.4
17.5°	707.4	708.2	709.0	708.9	708.1	707.4	706.6	705.8
20°	692.6	693.1	693.6	693.5	692.8	692.1	691.5	690.8
22.5°	676.8	676.9	677.0	676.9	676.5	676.1	675.7	675.3
25°	651.2	651.5	651.8	651.8	651.5	651.2	650.8	650.5
27.5°	625.9	625.4	624.9	624.3	623.5	622.7	621.9	621.1
30°	606.2	605.7	605.2	604.6	603.9	603.3	602.6	601.9
32.5°	586.9	586.0	585.1	584.3	583.6	583.0	582.3	581.6
35°	555.9	554.9	553.9	553.0	552.2	551.3	550.5	549.7
37.5°	524.8	523.6	522.4	521.3	520.5	519.7	518.9	518.2
40°	503.4	501.9	500.4	499.3	498.6	498.0	497.3	496.6
42.5°	482.2	480.6	478.9	477.7	476.7	475.8	474.9	473.9
45°	449.7	447.9	446.0	444.8	444.1	443.5	442.8	442.1
47.5°	415.9	413.9	412.0	410.6	409.6	408.7	407.7	406.7
50°	394.2	391.8	389.5	387.9	387.1	386.3	385.4	384.6
52.5°	371.7	369.7	367.8	366.3	365.2	364.1	363.0	361.9
55°	338.1	336.1	334.1	332.7	331.8	331.0	330.2	329.4
57.5°	303.2	301.2	299.3	298.0	297.3	296.7	296.1	295.4
60°	280.1	278.3	276.5	275.3	274.8	274.3	273.8	273.3
62.5°	258.3	256.6	254.9	253.8	253.1	252.5	251.9	251.2
65°	224.8	223.3	221.8	220.6	219.8	219.0	218.2	217.3
67.5°	191.7	190.5	189.4	188.5	187.8	187.1	186.5	185.8
70°	170.2	169.0	167.9	167.0	166.3	165.6	165.0	164.3
72.5°	149.9	148.7	147.6	146.7	146.2	145.6	145.1	144.6
75°	118.2	117.3	116.3	115.9	116.3	116.6	116.9	117.3
77.5°	90.0	89.5	89.0	88.5	88.0	87.6	87.1	86.6
80°	71.4	70.9	70.5	70.0	69.7	69.4	69.0	68.7
82.5°	53.3	52.6	52.0	51.6	51.6	51.5	51.4	51.4
85°	28.1	27.6	27.1	26.8	26.6	26.5	26.3	26.1
87.5°	15.5	15.0	14.5	14.2	14.1	14.0	14.0	13.9
90°	39.6	39.1	38.6	38.5	38.7	39.0	39.2	39.5
92.5°	37.1	37.2	37.4	37.4	37.5	37.5	37.6	37.6
95°	74.3	74.3	74.3	74.1	73.6	73.1	72.5	72.0
97.5°	125.0	125.0	125.0	125.0	124.9	124.9	124.8	124.8
100°	160.3	160.3	160.3	160.2	159.9	159.7	159.4	159.1
102.5°	198.8	199.0	199.2	199.2	198.9	198.7	198.4	198.2
105°	256.6	257.1	257.6	257.9	257.9	257.9	257.9	257.9
107.5°	318.9	319.1	319.3	318.8	317.7	316.5	315.3	314.1
110°	361.3	361.3	361.3	360.9	360.1	359.3	358.5	357.8





TEST NUMBER: P331328

CATALOG NUMBER: SA2XXDIP-C485D1080U835-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	403.7	403.1	402.5	401.9	401.3	400.7	400.2	399.6
115°	468.8	468.5	468.2	467.7	467.0	466.2	465.4	464.6
117.5°	531.7	531.1	530.5	529.8	529.0	528.2	527.4	526.7
120°	573.8	573.8	573.8	573.4	572.7	571.9	571.1	570.3
122.5°	617.2	616.6	615.9	615.4	614.8	614.2	613.7	613.1
125°	681.5	680.7	679.9	679.4	679.1	678.9	678.6	678.4
127.5°	743.9	742.9	742.0	741.1	740.3	739.5	738.7	737.8
130°	786.5	786.0	785.5	784.7	783.7	782.6	781.6	780.6
132.5°	828.0	826.9	825.8	824.8	824.0	823.1	822.3	821.5
135°	889.3	889.0	888.7	888.2	887.4	886.7	885.9	885.1
137.5°	947.9	947.7	947.5	946.9	945.8	944.8	943.8	942.7
140°	987.3	987.3	987.3	986.8	985.8	984.8	983.7	982.7
142.5°	1023.1	1023.3	1023.5	1023.1	1022.0	1021.0	1020.0	1018.9
145°	1077.3	1077.6	1077.8	1077.4	1076.4	1075.4	1074.3	1073.3
147.5°	1124.9	1125.4	1126.0	1125.8	1124.8	1123.8	1122.8	1121.9
150°	1155.0	1155.8	1156.6	1156.6	1155.8	1155.0	1154.2	1153.5
152.5°	1185.2	1186.1	1187.1	1187.1	1186.1	1185.2	1184.2	1183.2
155°	1223.4	1224.7	1226.0	1226.2	1225.5	1224.7	1223.9	1223.1
157.5°	1258.7	1260.5	1262.2	1262.5	1261.2	1260.0	1258.8	1257.5
160°	1279.7	1281.2	1282.8	1283.0	1282.0	1281.0	1279.9	1278.9
162.5°	1298.7	1300.4	1302.2	1302.4	1301.2	1300.0	1298.7	1297.5
165°	1323.2	1325.0	1326.8	1327.0	1325.8	1324.5	1323.2	1321.9
167.5°	1343.4	1345.2	1347.0	1347.2	1345.9	1344.5	1343.2	1341.9
170°	1354.5	1356.3	1358.1	1358.3	1356.7	1355.2	1353.6	1352.1
172.5°	1362.9	1364.7	1366.5	1366.6	1365.1	1363.5	1362.0	1360.4
175°	1372.0	1373.8	1375.6	1375.7	1374.2	1372.6	1371.1	1369.5
177.5°	1376.2	1377.4	1378.6	1378.6	1377.4	1376.2	1374.9	1373.7
180°	1376.5	1376.5	1376.5	1376.5	1376.5	1376.5	1376.5	1376.5

(END OF REPORT)