

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: P331452-830

Luminaire Tested: **SA2XXDIP-C1005D925U830-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331452-830  
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-C1005D925U830-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

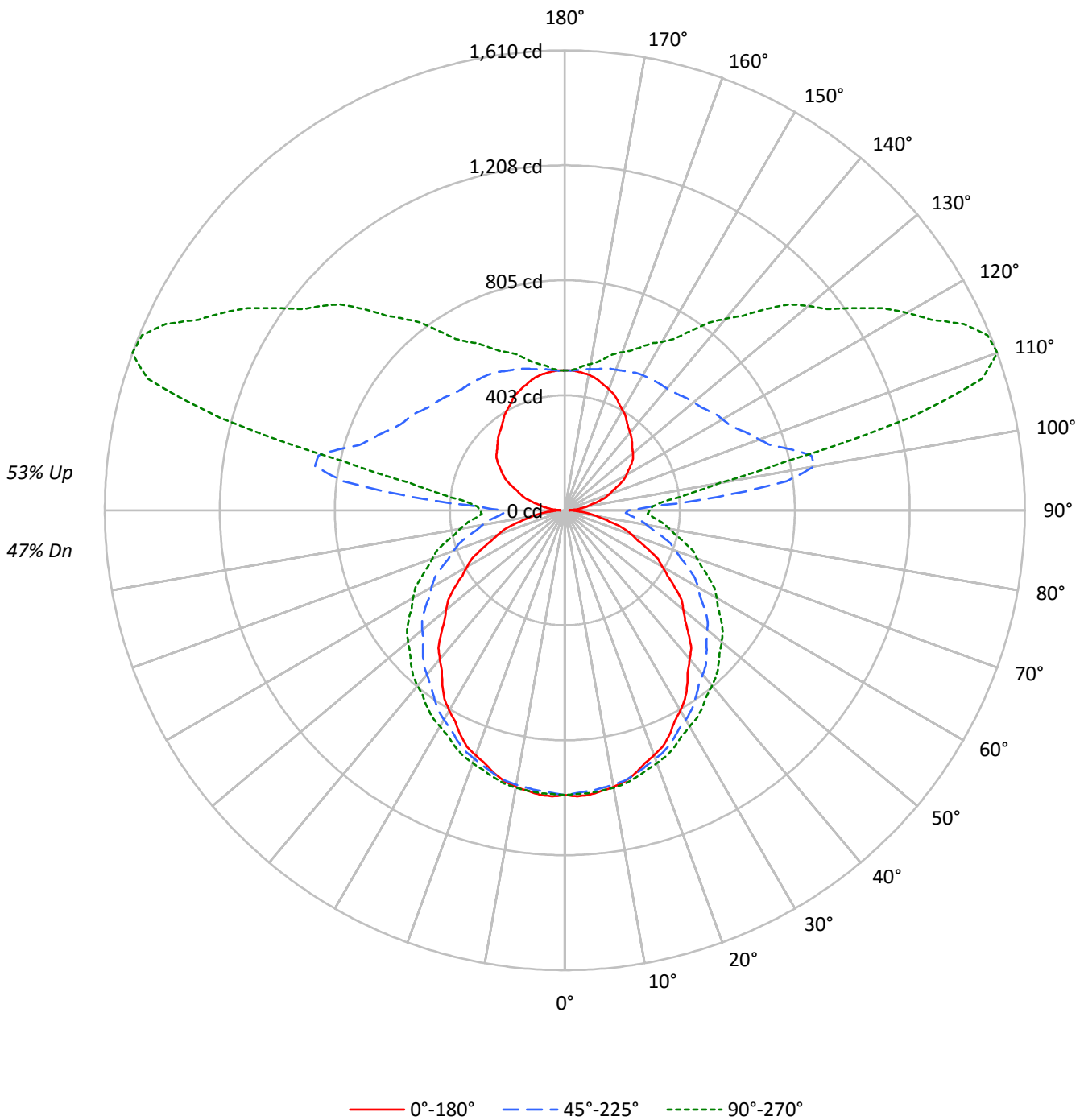
Lumens per Lamp: N/A  
Luminaire Lumens: 7210.7 lumens  
Efficiency: N/A  
Efficacy: 107.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 66.8  
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: P331452-830  
CATALOG NUMBER: SA2XXDIP-C1005D925U830-4F0-1E-UDD-D4

### Luminous Intensity Polar Plot





TEST NUMBER: P331452-830

CATALOG NUMBER: SA2XXDIP-C1005D925U830-4F0-1E-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	98	98	98	98	82	82	82	67	67	67	53	53	53	47
1	96	91	86	82	88	83	80	76	69	67	64	57	55	53	45	43	42	37
2	87	78	72	66	79	72	66	61	60	56	52	49	46	43	39	36	34	30
3	79	68	61	54	72	63	56	51	52	47	43	43	39	36	34	31	29	24
4	72	60	52	46	65	55	48	42	46	41	36	38	34	30	30	27	24	21
5	66	53	45	39	60	49	42	36	41	35	31	34	29	26	27	24	21	18
6	60	48	39	33	55	44	37	31	37	31	27	30	26	22	24	21	18	15
7	56	43	35	29	51	40	32	27	33	28	23	28	23	20	22	19	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	17	20	17	14	12
9	48	35	28	23	44	33	26	21	28	22	18	23	19	16	19	15	13	11
10	45	32	25	20	41	30	23	19	26	20	16	21	17	14	17	14	12	10

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

	0°	45°	90°
0°	16091	16091	16091
5°	16172	15491	15432
10°	16069	15033	14865
15°	15848	14548	14266
20°	15567	14030	13691
25°	15292	13528	13167
30°	14902	13015	12643
35°	14508	12517	12274
40°	14092	12094	11903
45°	13700	11715	11587
50°	13277	11373	11276
55°	12834	11004	10959
60°	12292	10623	10624
65°	11728	10173	10227
70°	11096	9693	9797
75°	10286	9222	9401
80°	9006	8739	9001
85°	7780	8321	8687



TEST NUMBER: P331452-830

CATALOG NUMBER: SA2XXDIP-C1005D925U830-4F0-1E-UDD-D4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.4	1.3
10°-20°	270.8	3.8
20°-30°	410.4	5.7
30°-40°	499.9	6.9
40°-50°	537.8	7.5
50°-60°	522.2	7.2
60°-70°	456.0	6.3
70°-80°	351.0	4.9
80°-90°	240.0	3.3
90°-100°	357.9	5.0
100°-110°	782.2	10.8
110°-120°	783.4	10.9
120°-130°	624.1	8.7
130°-140°	484.4	6.7
140°-150°	355.4	4.9
150°-160°	247.5	3.4
160°-170°	145.7	2.0
170°-180°	47.4	0.7
0°-30°	775.7	10.8
0°-40°	1275.5	17.7
0°-60°	2335.5	32.4
0°-90°	3382.5	46.9
90°-120°	1923.5	26.7
90°-150°	3387.5	47.0
90°-180°	3828.0	53.1
0°-180°	7210.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	997	997	997	997	997	
5°	1000	995	987	995	994	95
15°	953	956	956	968	968	268
25°	867	877	890	906	911	398
35°	747	772	799	829	841	467
45°	612	652	702	745	761	473
55°	470	523	596	647	667	420
65°	321	392	477	534	555	318
75°	178	259	351	411	432	188
85°	52	142	234	292	315	56
90°	15	111	223	277	297	12
95°	44	161	535	358	346	44
105°	122	224	821	1419	1251	130
115°	208	280	670	1332	1541	206
125°	285	339	610	1062	1233	254
135°	332	397	570	864	996	257
145°	378	435	551	693	765	238
155°	430	464	535	605	629	198
165°	468	483	513	544	552	132
175°	488	489	493	499	498	46
180°	489	489	489	489	489	



TEST NUMBER: P331452-830

CATALOG NUMBER: SA2XXDIP-C1005D925U830-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6
2.5°	1002.5	1001.7	1000.9	1000.1	999.4	998.1	996.3	994.5	992.7	990.9	992.2
5°	999.6	998.6	997.7	996.6	995.7	994.3	992.4	990.4	988.5	986.6	988.5
7.5°	990.6	990.0	989.3	988.7	988.1	987.0	985.5	984.0	982.6	981.1	983.4
10°	983.7	983.1	982.4	981.8	981.1	980.3	979.4	978.4	977.4	976.5	979.0
12.5°	972.1	972.2	972.4	972.5	972.6	972.3	971.7	970.9	970.3	969.5	972.1
15°	953.4	954.0	954.6	955.3	955.9	956.2	956.2	956.2	956.2	956.2	959.1
17.5°	929.1	930.5	931.8	933.1	934.4	935.7	936.7	937.7	938.8	939.8	942.8
20°	912.9	914.5	916.2	917.8	919.4	920.8	922.1	923.3	924.6	926.0	929.4
22.5°	895.6	897.4	899.3	901.2	903.1	904.8	906.6	908.4	910.2	912.0	915.6
25°	866.7	868.9	871.2	873.5	875.7	878.3	881.1	884.0	886.9	889.8	893.6
27.5°	832.0	835.7	839.3	843.0	846.7	850.2	853.6	857.0	860.4	863.8	868.6
30°	808.9	813.0	817.3	821.4	825.6	829.8	834.0	838.1	842.3	846.5	851.6
32.5°	783.4	788.2	792.9	797.6	802.2	807.0	812.0	816.9	821.9	826.8	832.7
35°	746.8	752.2	757.7	763.2	768.6	774.4	780.5	786.6	792.7	798.8	805.9
37.5°	706.9	713.2	719.5	725.8	732.1	739.1	747.1	755.0	762.9	770.8	778.6
40°	680.3	687.4	694.5	701.5	708.6	716.4	725.1	733.8	742.4	751.1	759.5
42.5°	655.0	661.9	669.0	676.1	683.2	691.6	701.6	711.6	721.5	731.5	740.6
45°	612.5	621.1	629.8	638.5	647.1	657.0	668.4	679.6	690.8	702.0	712.0
47.5°	570.6	580.0	589.5	598.9	608.3	619.6	632.8	645.9	659.1	672.2	682.7
50°	541.7	551.7	561.6	571.6	581.5	593.7	608.1	622.5	637.0	651.5	662.4
52.5°	514.0	524.4	534.9	545.4	555.8	568.6	583.8	599.1	614.3	629.5	640.6
55°	469.5	481.0	492.6	504.2	515.7	529.8	546.5	563.2	579.9	596.5	608.1
57.5°	425.6	438.6	451.6	464.7	477.7	492.7	509.7	526.7	543.8	560.7	573.2
60°	394.4	408.1	422.0	435.7	449.6	465.6	483.9	502.2	520.5	538.8	551.0
62.5°	366.6	380.9	395.2	409.5	423.9	440.2	458.5	476.7	495.1	513.4	526.3
65°	320.7	336.4	352.1	367.9	383.6	401.0	419.9	438.8	457.7	476.6	489.8
67.5°	278.5	294.9	311.3	327.8	344.2	362.1	381.5	401.0	420.3	439.7	453.0
70°	248.5	265.1	281.8	298.5	315.2	333.5	353.5	373.3	393.2	413.1	426.9
72.5°	220.7	237.9	255.1	272.3	289.5	308.2	328.4	348.6	368.7	388.9	402.4
75°	177.7	195.7	213.6	231.6	249.6	268.8	289.4	309.9	330.5	351.0	364.8
77.5°	136.1	154.9	173.7	192.5	211.3	231.1	252.0	272.9	293.7	314.6	328.4
80°	108.3	127.9	147.5	167.1	186.6	206.9	227.7	248.6	269.5	290.3	303.8
82.5°	85.2	104.5	123.9	143.2	162.5	182.8	203.9	225.0	246.1	267.2	280.7
85°	52.0	71.9	91.8	111.7	131.6	151.8	172.4	192.9	213.5	234.0	247.5
87.5°	28.5	48.2	68.1	87.6	107.1	127.5	149.0	170.9	192.5	213.2	226.1
90°	15.4	36.9	59.2	79.7	100.2	122.6	147.9	174.9	201.1	222.6	234.6
92.5°	24.8	47.2	71.3	92.7	116.5	143.9	184.9	234.6	281.1	302.6	296.1
95°	44.5	63.3	87.8	111.4	141.5	181.3	243.8	344.9	473.3	534.9	501.0
97.5°	63.7	82.2	105.7	131.9	162.6	204.1	276.9	409.4	609.4	783.2	826.0
100°	82.6	97.3	117.6	144.5	175.2	216.5	284.3	417.1	638.2	887.6	1034.9
102.5°	98.7	111.6	130.9	156.8	187.3	227.7	291.3	410.8	616.3	883.3	1107.9
105°	122.0	135.1	151.0	174.4	204.3	243.7	304.6	405.0	576.9	821.2	1082.7
107.5°	148.8	159.3	173.1	193.5	221.5	259.7	318.6	407.6	551.9	756.0	987.9
110°	165.7	175.9	187.9	206.6	232.8	271.1	328.2	411.7	542.2	723.5	928.5



TEST NUMBER: P331452-830

CATALOG NUMBER: SA2XXDIP-C1005D925U830-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	182.3	191.4	203.2	220.1	244.5	282.7	337.5	416.4	535.6	698.8	884.3
115°	208.0	216.2	225.5	240.3	262.6	297.0	351.9	423.7	529.4	669.9	828.1
117.5°	233.3	239.4	247.3	259.6	279.9	314.1	365.0	432.1	525.4	649.2	788.0
120°	249.9	254.9	261.8	271.5	291.7	325.1	374.6	438.3	523.5	637.0	765.4
122.5°	265.6	269.2	275.3	285.0	304.4	337.8	384.3	443.4	522.6	627.1	745.5
125°	285.1	287.9	293.6	304.8	323.7	355.2	399.3	451.9	520.5	609.7	715.3
127.5°	301.6	305.1	312.6	324.8	342.5	373.6	414.8	461.1	520.2	596.2	687.3
130°	311.4	314.9	324.0	336.8	355.3	384.8	424.5	467.0	520.8	587.8	668.8
132.5°	320.5	324.6	334.5	348.1	367.3	396.2	432.7	473.0	521.4	580.0	652.6
135°	332.5	336.3	347.6	361.7	383.3	411.3	444.6	480.8	521.6	570.0	630.3
137.5°	345.3	349.8	361.0	376.0	397.4	422.5	453.6	485.8	521.4	561.4	612.3
140°	355.2	358.5	369.6	384.3	404.6	429.2	458.2	488.0	520.6	556.0	601.6
142.5°	365.0	367.6	377.9	392.6	412.2	435.1	462.6	491.2	521.0	553.7	593.0
145°	378.1	381.9	391.3	405.5	424.2	445.0	470.3	496.7	523.0	551.2	583.2
147.5°	394.0	396.8	405.8	418.8	434.4	452.9	476.7	499.9	523.8	547.9	574.5
150°	404.5	407.3	414.8	427.1	441.2	458.1	479.8	501.3	523.0	545.6	568.2
152.5°	415.0	416.3	423.9	434.6	448.0	463.4	482.8	502.1	521.5	541.9	562.9
155°	429.9	430.8	436.5	446.9	457.1	471.3	487.3	503.2	519.2	535.3	553.1
157.5°	442.3	443.3	447.8	456.8	465.1	476.9	490.5	503.2	514.9	528.5	543.9
160°	450.6	451.6	455.2	462.8	470.3	480.7	492.0	503.2	512.6	524.0	537.2
162.5°	458.8	458.3	462.0	468.1	474.9	483.0	492.8	502.5	510.4	520.2	531.1
165°	468.4	467.5	469.4	475.0	479.8	485.4	493.9	500.5	506.1	512.6	521.1
167.5°	476.4	475.2	476.9	480.5	483.9	487.5	493.7	499.2	501.7	506.1	511.3
170°	481.6	479.8	480.7	483.5	485.4	488.2	492.9	497.7	499.5	502.3	506.1
172.5°	484.7	483.5	483.0	485.8	486.9	489.0	492.2	495.4	496.5	497.9	500.9
175°	488.2	487.3	486.4	488.2	488.2	489.2	491.1	492.9	492.0	492.9	493.9
177.5°	489.9	488.4	487.7	489.2	489.2	489.2	489.9	491.4	489.9	489.2	489.9
180°	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2



TEST NUMBER: P331452-830  
 CATALOG NUMBER: SA2XXDIP-C1005D925U830-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6
2.5°	993.4	994.8	996.1	996.5	995.9	995.4	994.9	994.4
5°	990.4	992.4	994.3	995.0	994.8	994.5	994.1	993.8
7.5°	985.7	988.1	990.3	991.4	991.0	990.7	990.3	990.0
10°	981.6	984.2	986.7	987.9	987.5	987.2	986.9	986.6
12.5°	974.7	977.2	979.8	980.9	980.6	980.2	980.0	979.7
15°	962.1	964.9	967.8	969.1	968.7	968.5	968.1	967.8
17.5°	945.8	948.9	951.9	953.4	953.4	953.4	953.4	953.4
20°	932.9	936.5	940.0	941.8	941.8	941.8	941.8	941.8
22.5°	919.1	922.7	926.1	928.2	928.7	929.3	929.7	930.3
25°	897.5	901.4	905.2	907.6	908.6	909.6	910.5	911.4
27.5°	873.5	878.4	883.4	886.1	886.8	887.5	888.3	888.9
30°	856.8	861.9	867.0	870.1	871.0	871.9	873.0	873.9
32.5°	838.7	844.5	850.5	854.2	856.0	857.7	859.5	861.2
35°	812.9	820.0	827.1	831.7	834.0	836.2	838.5	840.7
37.5°	786.5	794.3	802.1	807.2	809.5	812.0	814.4	816.7
40°	767.8	776.2	784.5	790.1	793.1	795.9	798.8	801.7
42.5°	749.7	758.8	768.0	773.9	776.8	779.8	782.6	785.5
45°	721.9	731.9	741.8	748.4	751.6	754.8	758.0	761.2
47.5°	693.1	703.4	713.9	720.9	724.3	727.9	731.4	735.0
50°	673.3	684.2	695.1	702.4	705.9	709.4	712.9	716.4
52.5°	651.9	663.0	674.2	681.6	685.4	689.3	693.1	696.8
55°	619.7	631.2	642.8	650.6	654.8	659.0	663.2	667.3
57.5°	585.7	598.1	610.6	618.9	623.1	627.4	631.6	635.8
60°	563.2	575.4	587.6	596.0	600.4	604.9	609.4	613.9
62.5°	539.3	552.2	565.2	573.8	578.1	582.3	586.5	590.8
65°	503.0	516.1	529.3	538.0	542.2	546.3	550.5	554.7
67.5°	466.3	479.6	492.9	501.7	506.1	510.4	514.8	519.2
70°	440.7	454.5	468.3	477.1	481.0	484.8	488.7	492.6
72.5°	415.9	429.5	443.0	452.1	456.8	461.4	466.0	470.6
75°	378.6	392.4	406.2	415.2	419.3	423.6	427.7	431.9
77.5°	342.0	355.8	369.6	378.7	383.1	387.7	392.2	396.6
80°	317.3	330.8	344.3	353.3	357.8	362.2	366.7	371.3
82.5°	294.2	307.6	321.1	330.0	334.2	338.5	342.7	346.9
85°	261.0	274.5	287.9	296.9	301.4	305.9	310.4	314.9
87.5°	239.0	251.8	265.2	274.1	278.1	282.3	286.3	290.5
90°	246.5	257.4	272.1	281.4	285.3	289.1	292.9	296.8
92.5°	287.5	288.4	293.0	295.5	298.5	299.4	304.0	306.3
95°	437.0	391.8	364.5	351.9	343.5	339.8	340.8	345.5
97.5°	752.6	659.9	570.0	509.8	468.7	449.3	439.4	435.3
100°	1027.1	922.3	805.3	699.2	624.6	587.7	563.9	550.5
102.5°	1204.3	1189.6	1106.9	993.9	912.7	847.2	816.6	797.2
105°	1289.6	1407.1	1430.6	1406.9	1352.2	1297.4	1260.5	1250.8
107.5°	1206.2	1377.1	1485.6	1538.3	1549.2	1549.5	1545.0	1531.0
110°	1137.3	1315.9	1446.5	1530.6	1574.6	1596.0	1608.0	1610.5





TEST NUMBER: P331452-830  
 CATALOG NUMBER: SA2XXDIP-C1005D925U830-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1073.5	1245.3	1384.3	1479.6	1539.4	1572.8	1592.3	1601.0
115°	993.0	1147.5	1280.3	1383.8	1454.2	1500.9	1528.9	1541.0
117.5°	929.3	1066.0	1187.3	1284.5	1355.9	1405.0	1434.0	1444.4
120°	895.8	1021.4	1130.1	1222.0	1291.4	1339.1	1369.9	1382.9
122.5°	868.0	983.6	1086.8	1170.0	1232.1	1278.6	1305.9	1316.7
125°	826.5	932.1	1023.5	1099.9	1157.3	1195.9	1222.4	1232.8
127.5°	785.5	881.2	967.2	1037.7	1088.2	1124.5	1147.5	1156.4
130°	759.3	847.9	929.9	997.1	1045.8	1080.3	1101.7	1111.8
132.5°	733.8	816.1	891.8	955.2	1003.1	1037.6	1057.5	1066.9
135°	698.2	767.0	835.8	893.2	936.2	969.8	989.3	995.6
137.5°	668.0	725.9	781.1	831.0	870.1	899.0	916.0	923.8
140°	649.0	699.4	747.7	792.7	824.7	851.1	867.1	874.7
142.5°	634.1	676.7	718.0	755.5	785.8	809.6	824.0	826.7
145°	614.3	647.3	678.4	707.5	731.6	749.2	760.3	764.7
147.5°	599.6	624.2	647.2	667.7	687.1	700.7	707.8	710.3
150°	590.8	611.4	631.2	648.1	662.2	673.5	679.2	680.1
152.5°	582.5	601.6	618.4	633.1	644.1	653.9	658.1	658.3
155°	571.0	586.1	600.1	610.5	620.9	627.5	631.2	629.3
157.5°	557.6	570.2	582.1	590.2	597.5	602.9	604.6	604.6
160°	549.3	559.7	570.0	576.6	583.2	588.0	588.9	588.9
162.5°	541.1	549.9	558.7	563.8	570.4	573.6	574.6	573.8
165°	528.7	535.3	541.9	545.6	549.3	553.1	553.1	552.1
167.5°	516.8	521.9	526.4	529.8	531.5	533.6	533.4	532.3
170°	510.8	513.6	517.4	519.2	520.2	523.0	522.1	520.2
172.5°	504.0	506.1	509.1	510.2	511.1	512.5	511.5	510.4
175°	496.7	497.7	498.6	499.5	499.5	500.5	499.5	497.7
177.5°	491.4	491.4	492.2	492.2	492.2	492.2	491.4	489.9
180°	489.2	489.2	489.2	489.2	489.2	489.2	489.2	489.2

(END OF REPORT)