

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: P332067-935

Luminaire Tested: **S123DIP-S1165D805U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332067-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1165D805U935-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

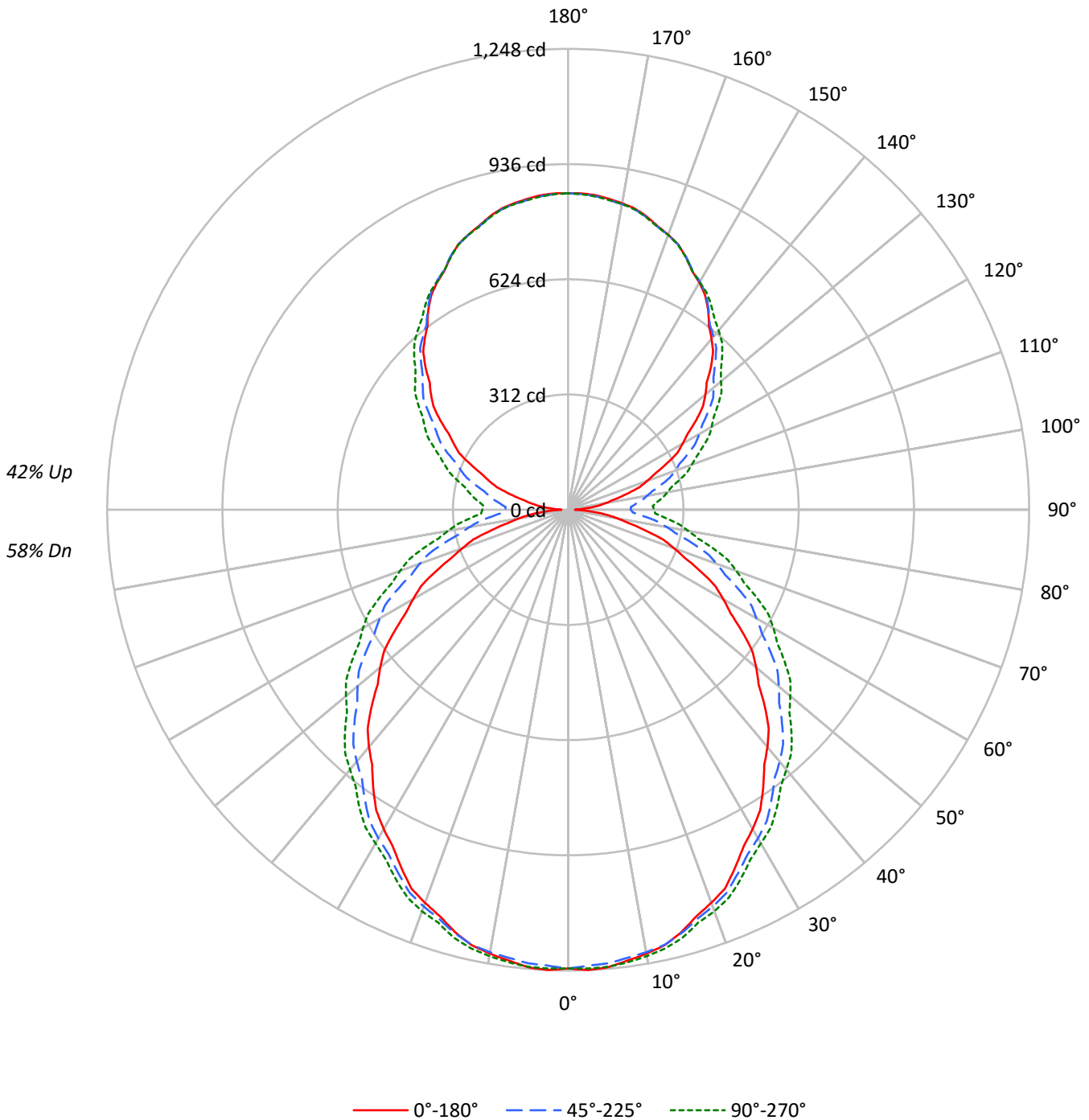
Lumens per Lamp: N/A  
Luminaire Lumens: 6552.0 lumens  
Efficiency: N/A  
Efficacy: 107.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 60.7  
Input Voltage (V): 120  
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: P332067-935

CATALOG NUMBER: S123DIP-S1165D805U935-4F0-1E-UDD-D1

### Luminous Intensity Polar Plot





TEST NUMBER: P332067-935

CATALOG NUMBER: S123DIP-S1165D805U935-4F0-1E-UDD-D1

**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	102	102	102	102	88	88	88	75	75	75	64	64	64	58
1	98	94	89	85	91	87	83	80	75	72	70	65	62	60	54	53	51	47
2	89	81	74	69	83	76	70	65	65	61	57	56	52	49	47	45	42	38
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	41	38	36	32
4	74	62	54	48	69	58	51	45	51	45	40	44	39	35	37	33	30	27
5	68	56	47	41	63	52	44	38	45	39	34	39	34	30	33	29	26	23
6	62	50	41	35	58	47	39	33	41	34	30	35	30	26	30	26	23	20
7	58	45	37	31	54	42	35	29	37	31	26	32	27	23	27	23	20	18
8	54	41	33	27	50	38	31	26	34	28	23	29	24	21	25	21	18	16
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	16	14
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	21	18	15	13

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

	0°	45°	90°
0°	13373	13373	13373
5°	13415	13037	13044
10°	13294	12736	12672
15°	13123	12396	12267
20°	12878	12006	11821
25°	12576	11558	11352
30°	12267	11155	10876
35°	11919	10728	10496
40°	11588	10340	10090
45°	11221	9968	9765
50°	10858	9599	9408
55°	10459	9224	9085
60°	10067	8841	8755
65°	9669	8433	8362
70°	9064	7974	7959
75°	8304	7449	7549
80°	7429	6933	7081
85°	6613	6577	6812



TEST NUMBER: P332067-935

CATALOG NUMBER: S123DIP-S1165D805U935-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.8	1.8
10°-20°	335.7	5.1
20°-30°	502.2	7.7
30°-40°	599.7	9.2
40°-50°	627.4	9.6
50°-60°	588.8	9.0
60°-70°	491.8	7.5
70°-80°	351.8	5.4
80°-90°	212.4	3.2
90°-100°	187.5	2.9
100°-110°	263.8	4.0
110°-120°	348.8	5.3
120°-130°	410.7	6.3
130°-140°	436.7	6.7
140°-150°	416.6	6.4
150°-160°	347.7	5.3
160°-170°	231.4	3.5
170°-180°	81.0	1.2
0°-30°	955.7	14.6
0°-40°	1555.4	23.7
0°-60°	2771.6	42.3
0°-90°	3827.6	58.4
90°-120°	800.1	12.2
90°-150°	2064.1	31.5
90°-180°	2724.0	41.6
0°-180°	6552.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1244	1241	1233	1243	1242	118
15°	1184	1188	1187	1200	1199	333
25°	1069	1082	1087	1103	1104	492
35°	920	942	960	979	985	575
45°	752	785	819	844	855	580
55°	574	619	667	702	715	514
65°	397	450	509	548	563	392
75°	215	279	346	390	407	230
85°	66	134	206	250	265	70
90°	18	92	169	216	233	14
95°	55	113	184	227	242	56
105°	162	198	260	297	312	173
115°	293	313	358	390	402	290
125°	423	427	463	487	495	377
135°	546	549	563	584	590	421
145°	660	660	662	672	675	412
155°	755	755	755	758	753	347
165°	822	820	820	824	819	232
175°	855	852	852	856	852	81
180°	857	857	857	857	857	



TEST NUMBER: P332067-935

CATALOG NUMBER: S123DIP-S1165D805U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4
2.5°	1247.8	1247.2	1246.4	1245.7	1244.9	1243.6	1241.7	1239.8	1237.9	1236.0	1237.9
5°	1243.8	1243.2	1242.6	1242.0	1241.4	1240.2	1238.4	1236.6	1234.8	1233.0	1235.4
7.5°	1231.6	1231.7	1231.8	1232.0	1232.1	1231.3	1229.5	1227.8	1226.1	1224.3	1227.3
10°	1220.8	1221.4	1222.0	1222.6	1223.2	1222.7	1221.2	1219.7	1218.2	1216.7	1219.7
12.5°	1207.8	1208.6	1209.4	1210.3	1211.2	1211.1	1210.0	1209.0	1208.0	1206.9	1209.7
15°	1184.2	1185.2	1186.0	1187.0	1187.8	1188.2	1187.8	1187.6	1187.2	1187.0	1190.0
17.5°	1154.4	1156.2	1158.0	1159.9	1161.7	1162.5	1162.4	1162.3	1162.2	1162.0	1164.8
20°	1132.8	1134.6	1136.4	1138.2	1140.1	1141.3	1141.9	1142.5	1143.1	1143.7	1146.3
22.5°	1110.1	1111.9	1113.7	1115.5	1117.3	1118.6	1119.5	1120.3	1121.1	1122.0	1125.4
25°	1069.2	1072.2	1075.2	1078.2	1081.2	1083.1	1084.1	1084.9	1085.9	1086.8	1090.7
27.5°	1028.0	1031.5	1034.9	1038.4	1041.7	1044.5	1046.4	1048.3	1050.2	1052.1	1055.5
30°	998.8	1002.7	1006.6	1010.6	1014.4	1017.6	1020.0	1022.4	1024.8	1027.3	1030.9
32.5°	966.3	970.7	975.1	979.5	983.9	987.7	990.8	993.9	997.0	1000.1	1004.0
35°	920.3	925.1	930.0	934.8	939.6	943.9	947.9	951.7	955.6	959.6	964.1
37.5°	871.6	877.0	882.4	887.9	893.3	898.4	903.2	908.0	912.8	917.7	922.7
40°	839.1	844.6	850.0	855.3	860.7	866.5	872.5	878.5	884.5	890.5	895.7
42.5°	803.4	810.0	816.7	823.2	829.8	836.3	842.6	848.8	855.1	861.3	866.9
45°	752.5	759.7	766.9	774.1	781.4	788.8	796.3	803.7	811.3	818.8	824.5
47.5°	699.1	707.3	715.5	723.8	731.9	740.3	748.9	757.5	766.1	774.7	781.1
50°	664.5	673.0	681.4	689.7	698.2	707.1	716.4	725.7	735.0	744.3	751.3
52.5°	627.8	636.6	645.5	654.4	663.3	673.0	683.2	693.4	703.8	714.0	721.3
55°	573.9	583.8	593.7	603.6	613.5	623.9	634.7	645.6	656.4	667.3	675.4
57.5°	521.3	531.7	542.0	552.3	562.7	573.9	585.7	597.5	609.3	621.2	629.4
60°	484.5	495.3	506.2	517.0	527.8	539.4	551.7	564.0	576.4	588.8	597.2
62.5°	449.9	461.0	472.0	483.1	494.1	506.2	519.3	532.3	545.4	558.4	566.8
65°	396.6	408.3	420.0	431.7	443.5	456.0	469.2	482.4	495.7	508.9	517.9
67.5°	342.4	354.9	367.3	379.8	392.2	405.2	418.6	432.1	445.6	459.1	468.9
70°	304.5	317.5	330.4	343.3	356.3	370.0	384.4	398.8	413.3	427.7	437.3
72.5°	269.8	282.8	295.8	308.7	321.6	335.5	350.4	365.3	380.3	395.2	405.1
75°	215.2	229.4	243.5	257.6	271.7	286.3	301.4	316.4	331.4	346.5	356.4
77.5°	167.6	181.8	196.0	210.3	224.5	239.3	254.4	269.6	284.7	299.9	310.4
80°	134.0	148.7	163.5	178.2	193.0	208.1	223.8	239.4	255.0	270.7	280.9
82.5°	104.8	119.8	134.7	149.7	164.6	180.1	196.0	211.9	227.7	243.6	253.8
85°	66.3	81.4	96.4	111.4	126.5	142.0	157.9	173.8	189.8	205.7	215.9
87.5°	36.2	51.4	66.7	82.0	97.2	112.7	128.5	144.2	159.9	175.6	186.0
90°	18.3	34.5	50.7	67.0	83.2	100.0	117.3	134.5	151.8	169.1	179.9
92.5°	32.8	47.1	61.4	75.8	90.1	105.3	121.5	137.7	153.9	170.1	180.6
95°	54.6	67.4	80.2	92.9	105.7	120.1	136.0	152.0	167.9	183.8	193.7
97.5°	83.8	95.1	106.5	117.9	129.2	142.4	157.4	172.3	187.3	202.2	211.8
100°	103.8	114.3	124.8	135.3	145.9	158.3	173.0	187.5	202.1	216.7	225.8
102.5°	126.9	136.1	145.3	154.5	163.7	175.6	190.2	204.7	219.3	233.9	242.8
105°	162.3	169.8	177.4	184.9	192.3	203.3	217.6	231.8	246.1	260.4	268.8
107.5°	202.2	208.4	214.7	221.1	227.4	236.9	249.8	262.6	275.3	288.2	296.7
110°	226.9	232.6	238.3	244.0	249.8	258.7	271.1	283.4	295.8	308.1	316.5



TEST NUMBER: P332067-935

CATALOG NUMBER: S123DIP-S1165D805U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	253.8	258.5	263.1	267.7	272.3	280.4	292.1	303.7	315.3	326.9	335.2
115°	292.8	297.0	301.0	305.1	309.1	316.4	326.9	337.4	347.9	358.5	365.8
117.5°	333.3	335.8	338.3	340.8	343.4	349.5	359.3	369.0	378.8	388.6	395.7
120°	357.5	359.9	362.3	364.7	367.0	372.9	382.0	391.2	400.4	409.6	416.4
122.5°	383.8	385.3	386.8	388.2	389.6	394.9	403.9	413.0	422.1	431.1	437.4
125°	422.8	423.2	423.7	424.1	424.6	429.0	437.4	445.8	454.3	462.7	468.4
127.5°	459.9	460.5	461.2	461.9	462.5	466.3	473.2	480.1	487.0	493.9	499.0
130°	484.7	485.6	486.5	487.4	488.3	491.5	497.1	502.7	508.2	513.8	518.9
132.5°	508.4	509.5	510.7	511.8	512.9	515.7	520.2	524.7	529.2	533.6	538.5
135°	546.0	546.6	547.2	547.8	548.4	550.2	553.4	556.6	559.7	562.8	567.7
137.5°	580.7	581.2	581.7	582.2	582.7	584.1	586.3	588.6	590.8	593.1	597.3
140°	603.8	604.6	605.4	606.1	606.8	607.7	608.8	609.8	610.9	611.9	616.3
142.5°	625.9	626.5	626.9	627.4	627.9	628.4	628.9	629.3	629.7	630.3	634.1
145°	660.4	660.4	660.4	660.4	660.4	660.6	661.1	661.5	661.9	662.4	664.7
147.5°	689.2	689.7	690.3	690.8	691.4	691.8	692.2	692.7	693.1	693.5	694.2
150°	710.2	710.5	710.8	711.1	711.4	711.7	712.0	712.3	712.6	712.9	712.9
152.5°	727.5	727.8	728.2	728.7	729.1	729.4	729.6	729.8	730.0	730.1	730.4
155°	754.6	754.6	754.6	754.6	754.6	754.7	754.8	755.0	755.2	755.3	755.9
157.5°	777.7	777.6	777.4	777.2	777.1	777.1	777.1	777.3	777.4	777.5	778.2
160°	792.3	792.0	791.7	791.4	791.1	791.0	791.0	791.0	791.0	791.0	791.7
162.5°	805.2	804.9	804.4	804.0	803.6	803.4	803.6	803.7	803.7	803.9	804.6
165°	821.9	821.5	821.0	820.6	820.1	819.9	819.9	819.9	819.9	819.9	820.8
167.5°	835.3	834.7	834.1	833.4	832.8	832.7	832.8	832.8	833.0	833.1	834.1
170°	842.8	842.2	841.6	841.0	840.4	840.1	840.1	840.1	840.1	840.1	841.2
172.5°	848.7	848.2	847.6	847.0	846.4	846.0	846.0	846.0	846.0	846.0	847.0
175°	854.9	854.3	853.8	853.2	852.6	852.2	852.2	852.2	852.2	852.2	853.2
177.5°	857.5	857.0	856.5	856.0	855.6	855.3	855.3	855.3	855.3	855.3	856.0
180°	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0



TEST NUMBER: P332067-935

CATALOG NUMBER: S123DIP-S1165D805U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4	1242.4
2.5°	1239.8	1241.7	1243.6	1244.5	1244.2	1244.0	1243.7	1243.5
5°	1237.8	1240.2	1242.6	1243.6	1243.4	1243.0	1242.8	1242.4
7.5°	1230.3	1233.3	1236.3	1237.7	1237.3	1236.9	1236.6	1236.2
10°	1222.7	1225.7	1228.7	1229.9	1229.3	1228.7	1228.1	1227.5
12.5°	1212.5	1215.3	1218.1	1219.1	1218.5	1217.9	1217.3	1216.7
15°	1192.9	1195.9	1198.9	1200.3	1200.1	1199.7	1199.5	1199.1
17.5°	1167.4	1170.2	1172.9	1174.0	1173.6	1173.2	1172.8	1172.3
20°	1149.0	1151.8	1154.4	1156.0	1156.2	1156.6	1156.8	1157.2
22.5°	1128.9	1132.3	1135.7	1137.3	1137.1	1137.0	1136.8	1136.6
25°	1094.6	1098.5	1102.4	1104.4	1104.4	1104.4	1104.4	1104.4
27.5°	1058.9	1062.2	1065.6	1067.4	1067.6	1067.9	1068.2	1068.4
30°	1034.5	1038.1	1041.6	1043.4	1043.4	1043.4	1043.4	1043.4
32.5°	1007.9	1011.8	1015.5	1017.9	1018.6	1019.3	1020.0	1020.7
35°	968.6	973.1	977.6	980.5	981.7	982.9	984.1	985.2
37.5°	927.8	933.0	938.1	941.1	942.1	943.1	944.0	944.9
40°	900.8	905.9	911.0	914.1	915.3	916.5	917.7	918.9
42.5°	872.5	878.1	883.7	887.3	889.0	890.7	892.3	894.1
45°	830.3	835.9	841.7	845.8	848.2	850.6	853.0	855.3
47.5°	787.6	794.0	800.5	804.6	806.4	808.3	810.2	812.0
50°	758.2	765.2	772.1	776.5	778.7	780.8	782.9	785.0
52.5°	728.4	735.6	742.7	747.6	750.2	752.8	755.4	757.9
55°	683.5	691.6	699.7	705.0	707.4	709.8	712.2	714.6
57.5°	637.6	645.8	653.9	659.4	662.3	665.1	668.0	670.7
60°	605.5	614.0	622.4	628.3	631.6	634.9	638.2	641.5
62.5°	575.2	583.7	592.1	597.9	600.9	604.0	607.1	610.1
65°	526.9	536.0	545.0	551.0	554.0	557.0	560.0	563.0
67.5°	478.8	488.7	498.5	504.7	507.3	509.8	512.3	514.9
70°	446.9	456.6	466.1	472.5	475.5	478.5	481.5	484.5
72.5°	414.9	424.8	434.6	441.1	444.1	447.1	450.1	453.1
75°	366.4	376.3	386.2	393.0	396.6	400.2	403.8	407.3
77.5°	320.8	331.3	341.8	348.4	351.2	354.0	356.7	359.5
80°	291.1	301.4	311.6	318.2	321.2	324.3	327.3	330.2
82.5°	264.1	274.3	284.5	291.1	294.1	297.1	300.1	303.2
85°	226.2	236.4	246.6	253.2	256.2	259.2	262.3	265.3
87.5°	196.3	206.7	217.1	223.8	226.8	229.9	233.0	236.0
90°	190.7	201.6	212.4	219.5	222.7	226.1	229.4	232.6
92.5°	191.1	201.5	212.0	218.5	221.1	223.7	226.3	228.9
95°	203.6	213.5	223.5	230.0	233.0	236.0	239.0	242.0
97.5°	221.5	231.2	240.8	247.1	250.0	253.0	256.0	258.9
100°	235.1	244.2	253.4	259.6	262.9	266.2	269.6	272.9
102.5°	251.8	260.7	269.6	275.5	278.5	281.5	284.4	287.3
105°	277.2	285.7	294.0	299.8	302.8	305.7	308.8	311.8
107.5°	305.3	313.8	322.4	327.9	330.3	332.8	335.3	337.7
110°	324.9	333.4	341.7	347.0	349.1	351.2	353.4	355.4





TEST NUMBER: P332067-935

CATALOG NUMBER: S123DIP-S1165D805U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	343.5	351.8	360.1	365.5	368.2	370.7	373.3	375.9
115°	373.2	380.6	388.0	392.8	395.0	397.3	399.6	401.8
117.5°	402.9	410.0	417.2	421.6	423.6	425.5	427.4	429.4
120°	423.1	429.9	436.6	440.9	442.7	444.5	446.3	448.2
122.5°	443.7	450.0	456.2	460.2	461.9	463.6	465.3	467.0
125°	474.2	479.8	485.6	489.1	490.7	492.1	493.7	495.2
127.5°	504.1	509.2	514.4	517.6	518.9	520.3	521.7	523.1
130°	524.0	529.2	534.3	537.2	538.0	538.7	539.4	540.2
132.5°	543.2	547.9	552.7	555.7	556.9	558.2	559.4	560.7
135°	572.5	577.3	582.1	585.1	586.3	587.5	588.8	590.0
137.5°	601.3	605.5	609.6	612.2	613.0	614.0	614.9	615.9
140°	620.7	625.0	629.4	631.8	632.2	632.7	633.2	633.6
142.5°	638.0	641.9	645.8	648.1	648.8	649.5	650.1	650.8
145°	666.9	669.2	671.4	672.9	673.5	674.1	674.7	675.3
147.5°	694.9	695.7	696.4	696.8	697.0	697.2	697.4	697.6
150°	712.9	712.9	712.9	712.7	712.5	712.1	711.9	711.5
152.5°	730.6	730.8	731.1	730.9	730.2	729.5	728.9	728.2
155°	756.5	757.1	757.7	757.4	756.4	755.4	754.3	753.3
157.5°	778.8	779.4	780.0	779.9	779.1	778.3	777.4	776.5
160°	792.5	793.2	793.9	794.0	793.4	792.8	792.2	791.6
162.5°	805.4	806.2	806.9	806.8	805.8	804.9	803.9	803.0
165°	821.7	822.6	823.5	823.5	822.4	821.3	820.3	819.2
167.5°	835.0	835.9	836.8	836.8	835.9	835.0	834.1	833.1
170°	842.2	843.3	844.3	844.3	843.3	842.2	841.2	840.1
172.5°	847.9	848.9	849.7	849.7	848.6	847.6	846.5	845.5
175°	854.0	854.9	855.8	855.7	854.7	853.7	852.6	851.5
177.5°	856.8	857.5	858.2	858.2	857.3	856.4	855.7	854.8
180°	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0

(END OF REPORT)