

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: P332057-940

Luminaire Tested: **S123DIP-S1165D585U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332057-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D585U940-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6413.6 lumens
Efficiency: N/A
Efficacy: 116.4 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: Semi-Direct

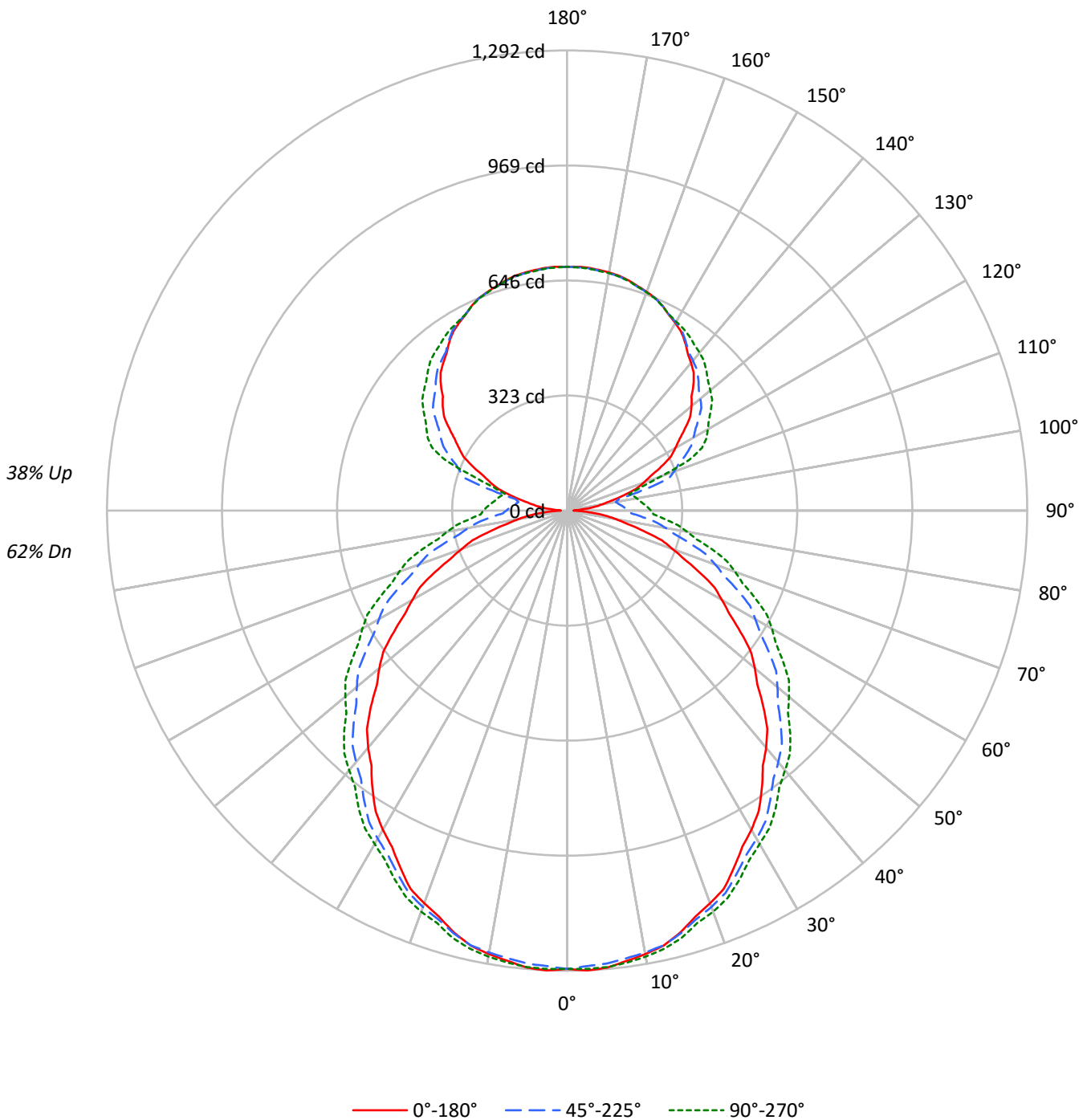
Input Watts (W): 55.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332057-940

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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	99	94	90	86	92	88	84	81	77	74	71	67	64	62	57	55	54	49
2	90	82	75	69	84	76	70	65	67	62	58	58	54	51	50	47	44	40
3	82	71	63	57	76	67	60	54	58	53	48	51	46	43	43	40	37	34
4	74	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	28
5	68	56	47	41	64	53	45	39	46	40	35	40	35	31	35	31	28	24
6	63	50	41	35	59	47	39	34	42	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	43	35	30	38	31	27	33	28	24	29	24	21	19
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17	15
10	47	34	27	22	44	33	26	21	29	23	19	26	21	17	22	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13850	13850	13850
5°	13894	13501	13509
10°	13769	13190	13124
15°	13592	12837	12705
20°	13338	12435	12243
25°	13025	11969	11757
30°	12705	11553	11264
35°	12344	11111	10871
40°	12002	10709	10450
45°	11622	10323	10113
50°	11245	9942	9744
55°	10831	9553	9410
60°	10426	9156	9068
65°	10013	8733	8661
70°	9389	8257	8243
75°	8597	7713	7819
80°	7695	7181	7334
85°	6853	6811	7053



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.0	1.9
10°-20°	347.7	5.4
20°-30°	520.1	8.1
30°-40°	621.1	9.7
40°-50°	649.8	10.1
50°-60°	609.8	9.5
60°-70°	509.3	7.9
70°-80°	364.4	5.7
80°-90°	219.2	3.4
90°-100°	161.2	2.5
100°-110°	218.8	3.4
110°-120°	351.8	5.5
120°-130°	401.1	6.3
130°-140°	404.8	6.3
140°-150°	366.2	5.7
150°-160°	292.4	4.6
160°-170°	188.7	2.9
170°-180°	65.0	1.0
0°-30°	989.8	15.4
0°-40°	1610.9	25.1
0°-60°	2870.5	44.8
0°-90°	3963.4	61.8
90°-120°	731.9	11.4
90°-150°	1903.9	29.7
90°-180°	2450.0	38.2
0°-180°	6413.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1287	1287	1287	1287	1287	
5°	1288	1285	1277	1287	1287	122
15°	1226	1230	1229	1242	1242	345
25°	1107	1121	1126	1143	1144	510
35°	953	975	994	1014	1020	596
45°	779	813	848	874	886	601
55°	594	641	691	727	740	532
65°	411	466	527	568	583	406
75°	223	289	359	403	422	238
85°	69	139	213	259	275	72
90°	19	93	171	218	235	14
95°	46	82	154	200	216	50
105°	163	201	216	169	179	172
115°	291	313	366	404	418	288
125°	405	411	452	481	493	362
135°	502	504	521	546	553	386
145°	577	579	580	592	598	361
155°	634	633	634	636	633	292
165°	669	667	667	670	667	189
175°	685	682	682	686	682	65
180°	685	685	685	685	685	



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CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7
2.5°	1292.4	1291.6	1290.8	1290.1	1289.3	1288.0	1286.0	1284.0	1282.0	1280.1	1282.0
5°	1288.2	1287.5	1286.9	1286.3	1285.7	1284.4	1282.5	1280.7	1278.8	1276.9	1279.4
7.5°	1275.5	1275.7	1275.8	1275.9	1276.0	1275.2	1273.4	1271.6	1269.8	1267.9	1271.0
10°	1264.4	1265.0	1265.6	1266.2	1266.9	1266.3	1264.8	1263.2	1261.7	1260.1	1263.2
12.5°	1250.9	1251.7	1252.6	1253.5	1254.4	1254.3	1253.2	1252.1	1251.1	1250.0	1252.9
15°	1226.5	1227.4	1228.3	1229.3	1230.2	1230.6	1230.2	1229.9	1229.6	1229.3	1232.4
17.5°	1195.6	1197.5	1199.4	1201.2	1203.1	1204.0	1203.9	1203.7	1203.6	1203.5	1206.3
20°	1173.2	1175.1	1177.0	1178.8	1180.7	1182.0	1182.6	1183.2	1183.8	1184.5	1187.2
22.5°	1149.7	1151.6	1153.4	1155.3	1157.2	1158.5	1159.4	1160.3	1161.1	1162.0	1165.6
25°	1107.3	1110.4	1113.6	1116.7	1119.8	1121.8	1122.8	1123.6	1124.6	1125.5	1129.6
27.5°	1064.7	1068.3	1071.8	1075.4	1078.9	1081.7	1083.7	1085.7	1087.7	1089.7	1093.1
30°	1034.5	1038.5	1042.5	1046.6	1050.6	1053.9	1056.4	1058.9	1061.4	1063.9	1067.6
32.5°	1000.8	1005.3	1009.9	1014.4	1019.0	1022.9	1026.1	1029.4	1032.6	1035.8	1039.8
35°	953.1	958.1	963.1	968.1	973.1	977.6	981.7	985.7	989.7	993.8	998.4
37.5°	902.7	908.3	913.9	919.5	925.1	930.4	935.4	940.4	945.4	950.4	955.6
40°	869.1	874.7	880.3	885.8	891.4	897.4	903.7	909.8	916.1	922.3	927.6
42.5°	832.1	838.9	845.8	852.6	859.4	866.1	872.6	879.0	885.6	892.1	897.9
45°	779.4	786.8	794.2	801.7	809.2	816.9	824.7	832.4	840.3	848.0	853.9
47.5°	724.1	732.5	741.0	749.6	758.0	766.7	775.6	784.5	793.4	802.4	809.0
50°	688.2	697.0	705.7	714.3	723.1	732.3	742.0	751.6	761.3	770.9	778.1
52.5°	650.1	659.3	668.5	677.8	687.0	697.0	707.6	718.2	728.9	739.5	747.0
55°	594.3	604.6	614.8	625.2	635.4	646.1	657.4	668.6	679.8	691.1	699.5
57.5°	539.9	550.6	561.3	572.0	582.8	594.3	606.5	618.8	631.1	643.4	651.8
60°	501.8	513.0	524.2	535.5	546.6	558.7	571.4	584.2	597.0	609.8	618.5
62.5°	465.9	477.4	488.8	500.3	511.8	524.2	537.8	551.3	564.8	578.4	587.0
65°	410.7	422.8	435.0	447.1	459.3	472.3	485.9	499.6	513.4	527.0	536.4
67.5°	354.6	367.6	380.4	393.3	406.2	419.6	433.5	447.5	461.5	475.5	485.6
70°	315.4	328.8	342.1	355.5	369.0	383.2	398.1	413.0	428.0	442.9	452.9
72.5°	279.5	292.9	306.3	319.7	333.1	347.5	362.9	378.4	393.9	409.3	419.5
75°	222.8	237.6	252.2	266.8	281.4	296.5	312.1	327.7	343.2	358.8	369.1
77.5°	173.5	188.3	203.0	217.8	232.6	247.8	263.5	279.2	294.9	310.6	321.5
80°	138.8	154.0	169.3	184.6	199.8	215.5	231.8	248.0	264.1	280.4	291.0
82.5°	108.5	124.0	139.6	155.1	170.5	186.5	203.0	219.5	235.9	252.3	262.9
85°	68.7	84.3	99.9	115.4	131.0	147.0	163.5	180.0	196.5	213.0	223.6
87.5°	37.4	53.1	68.8	84.6	100.3	116.3	132.5	148.6	164.9	181.0	191.7
90°	18.7	35.1	51.5	67.9	84.3	101.2	118.5	135.9	153.3	170.6	181.6
92.5°	26.6	40.0	53.5	66.9	80.3	95.5	112.2	128.9	145.7	162.5	173.5
95°	46.5	53.9	61.4	69.0	76.5	88.5	105.0	121.5	138.0	154.5	165.0
97.5°	76.1	85.0	93.9	102.7	111.6	119.3	125.7	132.2	138.6	145.1	155.2
100°	98.5	110.8	123.1	135.3	147.5	151.9	148.6	145.3	142.0	138.8	148.6
102.5°	124.3	134.9	145.5	156.1	166.7	169.4	164.3	159.1	153.8	148.6	154.6
105°	162.7	171.5	180.2	189.0	197.7	203.6	206.9	210.1	213.3	216.5	205.2
107.5°	202.0	209.4	216.7	224.0	231.4	242.2	256.5	270.8	285.2	299.4	293.1
110°	228.1	234.6	241.1	247.6	254.1	264.3	277.9	291.7	305.4	319.1	323.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	254.1	259.6	265.0	270.5	275.9	285.2	298.4	311.6	324.8	338.0	345.9
115°	291.3	295.7	300.1	304.5	309.0	317.3	329.5	341.8	354.0	366.2	374.8
117.5°	328.3	331.5	334.7	337.8	340.9	348.0	359.1	370.1	381.2	392.2	400.6
120°	350.4	353.0	355.6	358.2	360.7	367.3	377.9	388.6	399.2	409.8	417.9
122.5°	374.1	375.7	377.3	379.0	380.6	386.6	396.7	407.0	417.1	427.4	435.0
125°	405.0	405.9	406.8	407.7	408.6	413.8	423.3	432.7	442.2	451.7	458.5
127.5°	436.3	436.9	437.5	438.1	438.6	443.0	451.0	459.1	467.1	475.0	481.6
130°	455.8	456.5	457.0	457.6	458.3	461.8	468.5	475.2	481.9	488.6	494.9
132.5°	473.4	474.3	475.1	476.0	476.8	479.9	485.3	490.6	496.0	501.2	507.4
135°	501.8	502.1	502.5	502.8	503.2	505.3	509.2	513.1	516.9	520.8	526.8
137.5°	525.8	526.5	527.1	527.7	528.3	529.7	531.9	534.0	536.3	538.4	543.9
140°	541.0	541.7	542.3	543.1	543.8	544.7	546.0	547.2	548.5	549.8	554.9
142.5°	556.1	556.5	557.0	557.3	557.8	558.3	558.8	559.3	559.8	560.4	564.9
145°	577.1	577.7	578.1	578.5	579.1	579.4	579.6	579.9	580.1	580.3	583.0
147.5°	595.6	596.1	596.6	597.1	597.6	598.0	598.2	598.4	598.7	599.0	599.9
150°	607.8	608.1	608.4	608.8	609.1	609.4	609.7	609.8	610.1	610.3	610.6
152.5°	618.8	618.9	619.0	619.2	619.4	619.6	619.6	619.8	619.9	620.1	620.5
155°	634.2	634.0	633.7	633.6	633.3	633.3	633.4	633.5	633.6	633.7	634.3
157.5°	646.2	646.2	646.1	646.1	646.1	646.0	646.0	645.9	645.7	645.6	646.3
160°	653.5	653.4	653.4	653.2	653.1	653.0	652.8	652.7	652.6	652.6	653.2
162.5°	660.5	660.1	659.9	659.6	659.2	659.1	659.0	658.9	658.7	658.6	659.4
165°	668.8	668.4	668.2	667.8	667.4	667.2	667.1	667.0	666.9	666.7	667.7
167.5°	675.3	674.8	674.4	674.0	673.5	673.2	673.2	673.2	673.2	673.2	674.2
170°	678.9	678.5	678.1	677.6	677.2	676.9	676.9	676.9	676.9	676.9	677.9
172.5°	681.4	680.9	680.3	679.8	679.2	679.0	679.1	679.2	679.3	679.4	680.3
175°	684.6	684.0	683.4	682.9	682.3	682.1	682.2	682.3	682.4	682.5	683.3
177.5°	685.4	684.9	684.5	684.0	683.6	683.4	683.5	683.6	683.7	683.8	684.5
180°	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7
2.5°	1284.0	1286.0	1288.0	1288.9	1288.6	1288.3	1288.1	1287.9
5°	1281.9	1284.4	1286.9	1288.0	1287.7	1287.4	1287.1	1286.7
7.5°	1274.2	1277.3	1280.4	1281.8	1281.4	1281.0	1280.7	1280.3
10°	1266.3	1269.4	1272.6	1273.8	1273.2	1272.6	1271.9	1271.3
12.5°	1255.8	1258.6	1261.5	1262.6	1261.9	1261.3	1260.7	1260.1
15°	1235.5	1238.6	1241.7	1243.1	1242.9	1242.5	1242.2	1241.9
17.5°	1209.1	1211.9	1214.7	1215.8	1215.5	1215.0	1214.6	1214.2
20°	1190.0	1192.8	1195.6	1197.2	1197.5	1197.8	1198.1	1198.5
22.5°	1169.1	1172.7	1176.2	1177.9	1177.7	1177.5	1177.3	1177.1
25°	1133.6	1137.7	1141.7	1143.8	1143.8	1143.8	1143.8	1143.8
27.5°	1096.6	1100.1	1103.6	1105.5	1105.7	1106.0	1106.3	1106.5
30°	1071.4	1075.1	1078.8	1080.7	1080.7	1080.7	1080.7	1080.7
32.5°	1043.8	1047.8	1051.8	1054.2	1054.9	1055.7	1056.4	1057.1
35°	1003.2	1007.8	1012.4	1015.5	1016.7	1018.0	1019.2	1020.4
37.5°	960.9	966.3	971.5	974.6	975.7	976.7	977.7	978.7
40°	932.9	938.2	943.5	946.7	948.0	949.2	950.5	951.7
42.5°	903.7	909.5	915.3	919.0	920.7	922.5	924.2	926.0
45°	859.9	865.8	871.7	875.9	878.4	880.9	883.4	885.8
47.5°	815.6	822.3	829.0	833.3	835.2	837.1	839.1	841.0
50°	785.2	792.5	799.6	804.2	806.5	808.6	810.8	813.0
52.5°	754.4	761.8	769.2	774.3	776.9	779.6	782.3	785.0
55°	707.8	716.2	724.7	730.1	732.6	735.1	737.6	740.1
57.5°	660.3	668.8	677.3	683.0	685.9	688.8	691.8	694.6
60°	627.1	635.9	644.6	650.7	654.2	657.5	660.9	664.4
62.5°	595.8	604.5	613.2	619.2	622.3	625.5	628.7	631.9
65°	545.7	555.1	564.5	570.6	573.7	576.8	580.0	583.1
67.5°	495.9	506.1	516.3	522.7	525.4	528.0	530.6	533.2
70°	462.9	472.9	482.8	489.4	492.5	495.6	498.6	501.8
72.5°	429.7	440.0	450.1	456.8	459.9	463.1	466.2	469.3
75°	379.4	389.7	399.9	407.0	410.7	414.5	418.2	421.9
77.5°	332.3	343.1	354.0	360.8	363.7	366.6	369.4	372.3
80°	301.5	312.1	322.7	329.6	332.7	335.8	338.9	342.0
82.5°	273.5	284.1	294.6	301.5	304.6	307.7	310.9	314.0
85°	234.3	244.9	255.4	262.3	265.4	268.5	271.6	274.7
87.5°	202.4	213.0	223.7	230.7	233.8	237.0	240.1	243.3
90°	192.7	203.8	214.7	221.9	225.3	228.6	232.0	235.3
92.5°	184.6	195.6	206.7	213.7	216.8	219.7	222.7	225.7
95°	175.4	185.8	196.4	203.1	206.3	209.4	212.4	215.5
97.5°	165.4	175.6	185.8	192.5	195.7	198.9	202.2	205.5
100°	158.6	168.5	178.5	185.0	188.3	191.5	194.7	198.0
102.5°	160.7	166.7	172.6	177.3	180.6	183.9	187.2	190.6
105°	193.9	182.6	171.4	167.3	170.3	173.3	176.4	179.3
107.5°	286.9	280.5	274.2	264.8	252.5	240.1	227.8	215.5
110°	327.8	332.2	336.5	331.9	318.3	304.6	290.9	277.2



TEST NUMBER: P332057-940

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	353.8	361.8	369.6	373.3	372.6	371.9	371.2	370.6
115°	383.4	392.0	400.6	406.4	409.4	412.3	415.3	418.2
117.5°	408.8	417.1	425.5	430.9	433.5	436.0	438.5	441.0
120°	426.0	434.0	442.1	447.2	449.3	451.6	453.7	455.9
122.5°	442.5	450.0	457.5	462.4	464.8	467.0	469.3	471.5
125°	465.3	472.1	478.8	483.4	485.8	488.2	490.6	493.0
127.5°	488.1	494.6	501.1	505.4	507.3	509.2	511.0	512.9
130°	501.3	507.7	514.1	518.1	519.7	521.4	523.0	524.6
132.5°	513.5	519.6	525.8	529.7	531.5	533.3	535.1	536.9
135°	532.7	538.7	544.7	548.2	549.4	550.6	551.9	553.0
137.5°	549.4	554.8	560.3	563.7	565.0	566.3	567.7	569.0
140°	560.1	565.2	570.3	573.5	574.9	576.2	577.6	578.8
142.5°	569.4	574.0	578.5	581.4	582.6	583.9	585.1	586.4
145°	585.8	588.4	591.2	593.2	594.4	595.7	596.9	598.2
147.5°	600.8	601.8	602.8	603.6	604.2	604.8	605.4	606.0
150°	610.7	611.0	611.2	611.4	611.7	612.1	612.3	612.6
152.5°	620.9	621.3	621.7	621.7	621.3	620.9	620.5	620.1
155°	634.8	635.4	636.0	635.9	635.3	634.5	633.9	633.2
157.5°	646.9	647.6	648.4	648.2	647.3	646.5	645.6	644.7
160°	653.9	654.5	655.2	655.1	654.4	653.6	652.8	652.0
162.5°	660.1	660.9	661.7	661.7	661.0	660.3	659.6	659.0
165°	668.6	669.5	670.4	670.5	669.7	668.9	668.1	667.3
167.5°	675.1	676.0	676.9	676.9	676.0	675.1	674.2	673.2
170°	678.8	679.7	680.6	680.6	679.7	678.8	677.9	676.9
172.5°	681.2	682.1	683.0	683.0	682.0	681.0	679.9	678.9
175°	684.1	684.9	685.7	685.6	684.7	683.9	683.0	682.0
177.5°	685.2	685.9	686.6	686.5	685.6	684.7	683.9	683.0
180°	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6

(END OF REPORT)