

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: P332067-940

Luminaire Tested: **S123DIP-S1165D805U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332067-940
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-S1165D805U940-4F0-1E-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: 6785.6 lumens
Efficiency: N/A
Efficacy: 111.8 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

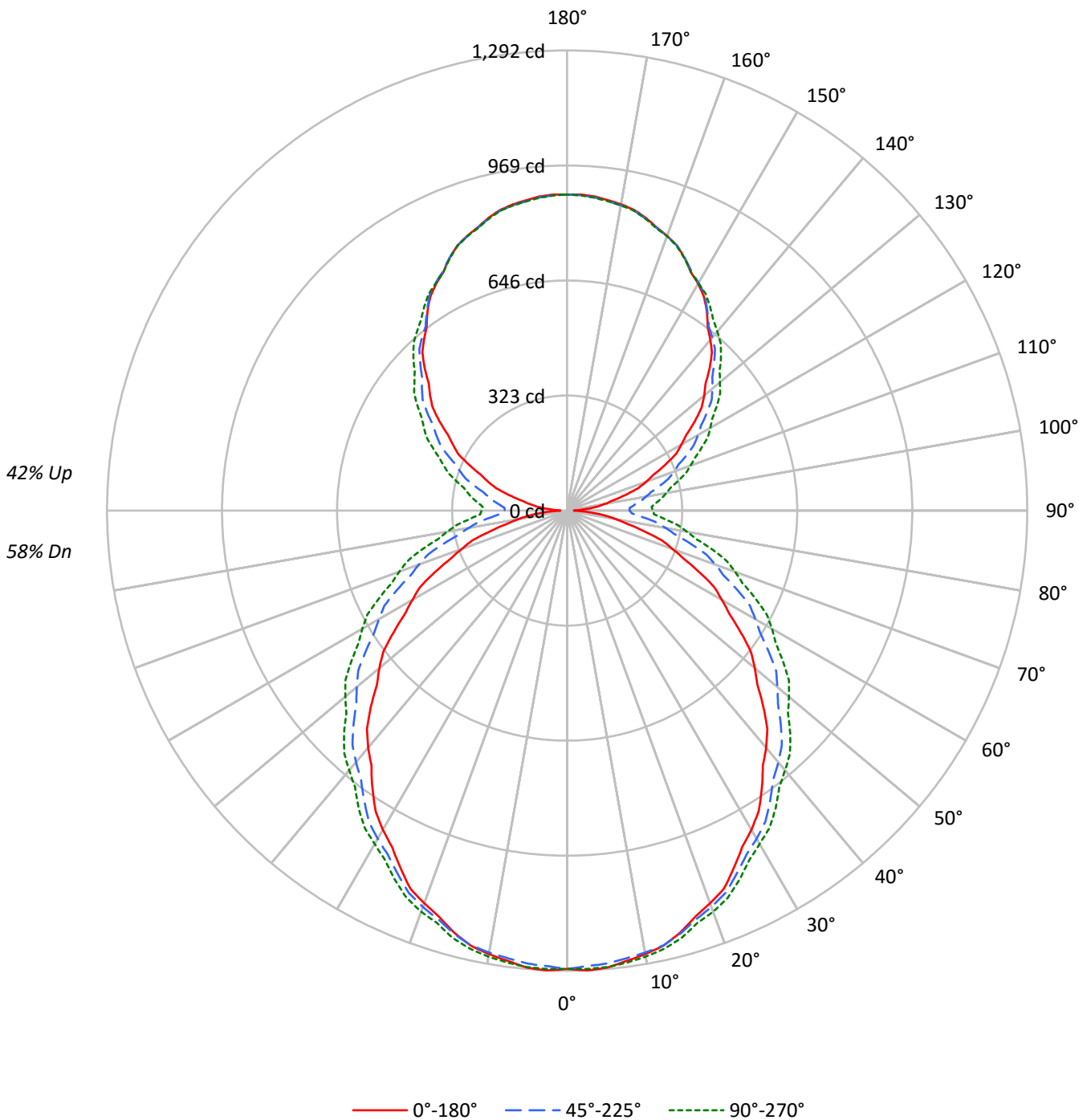
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	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°	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	1.8
10°-20°	347.7	5.1
20°-30°	520.1	7.7
30°-40°	621.1	9.2
40°-50°	649.8	9.6
50°-60°	609.8	9.0
60°-70°	509.3	7.5
70°-80°	364.4	5.4
80°-90°	219.9	3.2
90°-100°	194.2	2.9
100°-110°	273.2	4.0
110°-120°	361.2	5.3
120°-130°	425.4	6.3
130°-140°	452.3	6.7
140°-150°	431.4	6.4
150°-160°	360.1	5.3
160°-170°	239.7	3.5
170°-180°	83.9	1.2
0°-30°	989.8	14.6
0°-40°	1610.9	23.7
0°-60°	2870.5	42.3
0°-90°	3964.1	58.4
90°-120°	828.7	12.2
90°-150°	2137.8	31.5
90°-180°	2822.0	41.6
0°-180°	6785.6	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	95	175	224	241	15
95°	56	117	190	235	251	58
105°	168	205	270	308	323	179
115°	303	324	371	404	416	300
125°	438	442	479	505	513	391
135°	565	569	583	604	611	436
145°	684	684	686	696	699	427
155°	782	782	782	785	780	360
165°	851	849	849	853	848	240
175°	885	883	883	886	882	84
180°	888	888	888	888	888	



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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°	37.5	53.2	69.1	84.9	100.7	116.7	133.0	149.4	165.6	181.9	192.6
90°	18.9	35.8	52.5	69.4	86.1	103.5	121.5	139.3	157.2	175.1	186.4
92.5°	34.0	48.8	63.6	78.5	93.3	109.1	125.8	142.6	159.4	176.2	187.0
95°	56.5	69.8	83.0	96.2	109.5	124.4	140.9	157.4	173.9	190.4	200.6
97.5°	86.8	98.5	110.3	122.1	133.8	147.5	163.0	178.4	193.9	209.4	219.4
100°	107.5	118.3	129.2	140.1	151.1	164.0	179.1	194.2	209.3	224.4	233.9
102.5°	131.4	141.0	150.4	160.0	169.5	181.8	197.0	212.0	227.1	242.3	251.5
105°	168.1	175.8	183.7	191.5	199.2	210.5	225.3	240.0	254.9	269.7	278.4
107.5°	209.4	215.9	222.4	229.0	235.5	245.4	258.7	272.0	285.2	298.5	307.3
110°	235.0	240.9	246.8	252.7	258.7	268.0	280.8	293.6	306.3	319.1	327.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	262.9	267.7	272.5	277.2	282.0	290.4	302.5	314.5	326.5	338.6	347.1
115°	303.3	307.6	311.7	315.9	320.1	327.7	338.6	349.5	360.3	371.3	378.9
117.5°	345.2	347.8	350.4	352.9	355.6	361.9	372.1	382.2	392.4	402.4	409.8
120°	370.2	372.7	375.2	377.7	380.1	386.2	395.7	405.2	414.6	424.2	431.2
122.5°	397.5	399.0	400.6	402.1	403.5	408.9	418.3	427.8	437.1	446.5	453.0
125°	437.8	438.3	438.8	439.3	439.7	444.3	453.0	461.7	470.5	479.2	485.1
127.5°	476.4	477.0	477.7	478.4	479.0	483.0	490.1	497.2	504.4	511.5	516.8
130°	502.0	502.9	503.8	504.8	505.7	509.1	514.8	520.6	526.4	532.1	537.4
132.5°	526.6	527.7	528.9	530.0	531.2	534.1	538.8	543.4	548.0	552.7	557.7
135°	565.4	566.1	566.7	567.3	567.9	569.8	573.1	576.4	579.7	582.9	587.9
137.5°	601.4	601.9	602.4	603.0	603.5	604.9	607.3	609.6	611.9	614.3	618.6
140°	625.4	626.2	627.0	627.7	628.5	629.4	630.5	631.6	632.7	633.7	638.3
142.5°	648.3	648.8	649.3	649.8	650.3	650.9	651.3	651.8	652.2	652.7	656.7
145°	683.9	683.9	683.9	683.9	683.9	684.1	684.7	685.1	685.5	686.0	688.4
147.5°	713.8	714.3	714.9	715.4	716.0	716.5	716.9	717.4	717.8	718.3	719.0
150°	735.5	735.8	736.1	736.5	736.7	737.1	737.4	737.7	738.0	738.3	738.3
152.5°	753.4	753.8	754.2	754.7	755.1	755.5	755.6	755.8	756.0	756.2	756.4
155°	781.5	781.5	781.5	781.5	781.5	781.6	781.8	781.9	782.1	782.2	782.8
157.5°	805.5	805.3	805.1	804.9	804.8	804.8	804.9	805.0	805.1	805.2	805.9
160°	820.6	820.3	819.9	819.7	819.3	819.2	819.2	819.2	819.2	819.2	819.9
162.5°	833.9	833.6	833.1	832.7	832.2	832.1	832.2	832.3	832.4	832.6	833.3
165°	851.2	850.8	850.3	849.9	849.4	849.2	849.2	849.2	849.2	849.2	850.1
167.5°	865.0	864.4	863.8	863.2	862.6	862.4	862.5	862.6	862.7	862.8	863.8
170°	872.9	872.3	871.6	871.0	870.4	870.0	870.0	870.0	870.0	870.0	871.2
172.5°	879.0	878.4	877.8	877.2	876.6	876.2	876.2	876.2	876.2	876.2	877.2
175°	885.4	884.8	884.2	883.6	883.0	882.6	882.6	882.6	882.6	882.6	883.6
177.5°	888.1	887.6	887.1	886.5	886.1	885.8	885.8	885.8	885.8	885.8	886.5
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5



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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°	203.3	214.1	224.8	231.8	234.9	238.1	241.3	244.4
90°	197.5	208.7	220.0	227.3	230.7	234.2	237.6	240.9
92.5°	197.9	208.7	219.5	226.3	229.0	231.7	234.3	237.0
95°	210.9	221.1	231.5	238.2	241.3	244.4	247.5	250.7
97.5°	229.4	239.4	249.4	255.9	259.0	262.0	265.1	268.1
100°	243.4	252.9	262.4	268.9	272.3	275.7	279.2	282.6
102.5°	260.7	270.0	279.2	285.3	288.5	291.5	294.5	297.6
105°	287.1	295.9	304.5	310.5	313.6	316.6	319.8	322.9
107.5°	316.2	325.0	333.9	339.6	342.1	344.6	347.2	349.7
110°	336.5	345.3	353.9	359.4	361.6	363.7	366.0	368.1



TEST NUMBER: P332067-940

CATALOG NUMBER: S123DIP-S1165D805U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	355.8	364.4	372.9	378.5	381.3	384.0	386.6	389.3
115°	386.6	394.1	401.8	406.8	409.1	411.4	413.8	416.2
117.5°	417.2	424.6	432.0	436.7	438.7	440.7	442.6	444.7
120°	438.2	445.2	452.2	456.6	458.5	460.4	462.3	464.1
122.5°	459.5	466.0	472.5	476.6	478.4	480.2	481.9	483.7
125°	491.1	497.0	502.9	506.6	508.2	509.7	511.3	512.8
127.5°	522.1	527.4	532.7	536.1	537.4	538.9	540.3	541.7
130°	542.7	548.0	553.3	556.3	557.1	557.9	558.7	559.5
132.5°	562.6	567.5	572.4	575.5	576.8	578.1	579.3	580.7
135°	592.9	597.9	602.9	606.0	607.3	608.5	609.8	611.0
137.5°	622.8	627.1	631.3	634.0	634.9	635.9	636.9	637.8
140°	642.8	647.3	651.8	654.3	654.8	655.3	655.8	656.2
142.5°	660.8	664.8	668.8	671.2	671.9	672.6	673.3	674.0
145°	690.7	693.0	695.4	696.9	697.5	698.1	698.7	699.4
147.5°	719.7	720.5	721.2	721.7	721.8	722.1	722.3	722.5
150°	738.3	738.3	738.3	738.2	737.9	737.5	737.3	736.9
152.5°	756.6	756.9	757.2	757.0	756.3	755.5	754.9	754.2
155°	783.5	784.1	784.7	784.4	783.4	782.3	781.2	780.2
157.5°	806.6	807.2	807.8	807.7	806.9	806.0	805.1	804.2
160°	820.7	821.5	822.2	822.3	821.7	821.1	820.5	819.8
162.5°	834.1	834.9	835.7	835.5	834.6	833.6	832.6	831.6
165°	851.0	851.9	852.9	852.8	851.8	850.6	849.5	848.5
167.5°	864.8	865.7	866.7	866.7	865.7	864.8	863.8	862.8
170°	872.3	873.3	874.4	874.4	873.3	872.3	871.2	870.0
172.5°	878.2	879.1	880.0	880.0	878.9	877.8	876.7	875.7
175°	884.5	885.4	886.4	886.3	885.2	884.1	883.0	881.9
177.5°	887.3	888.1	888.8	888.8	887.9	887.0	886.2	885.3
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5

(END OF REPORT)