

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: P332077-930

Luminaire Tested: **S123DIP-S1165D1025U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332077-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D1025U930-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

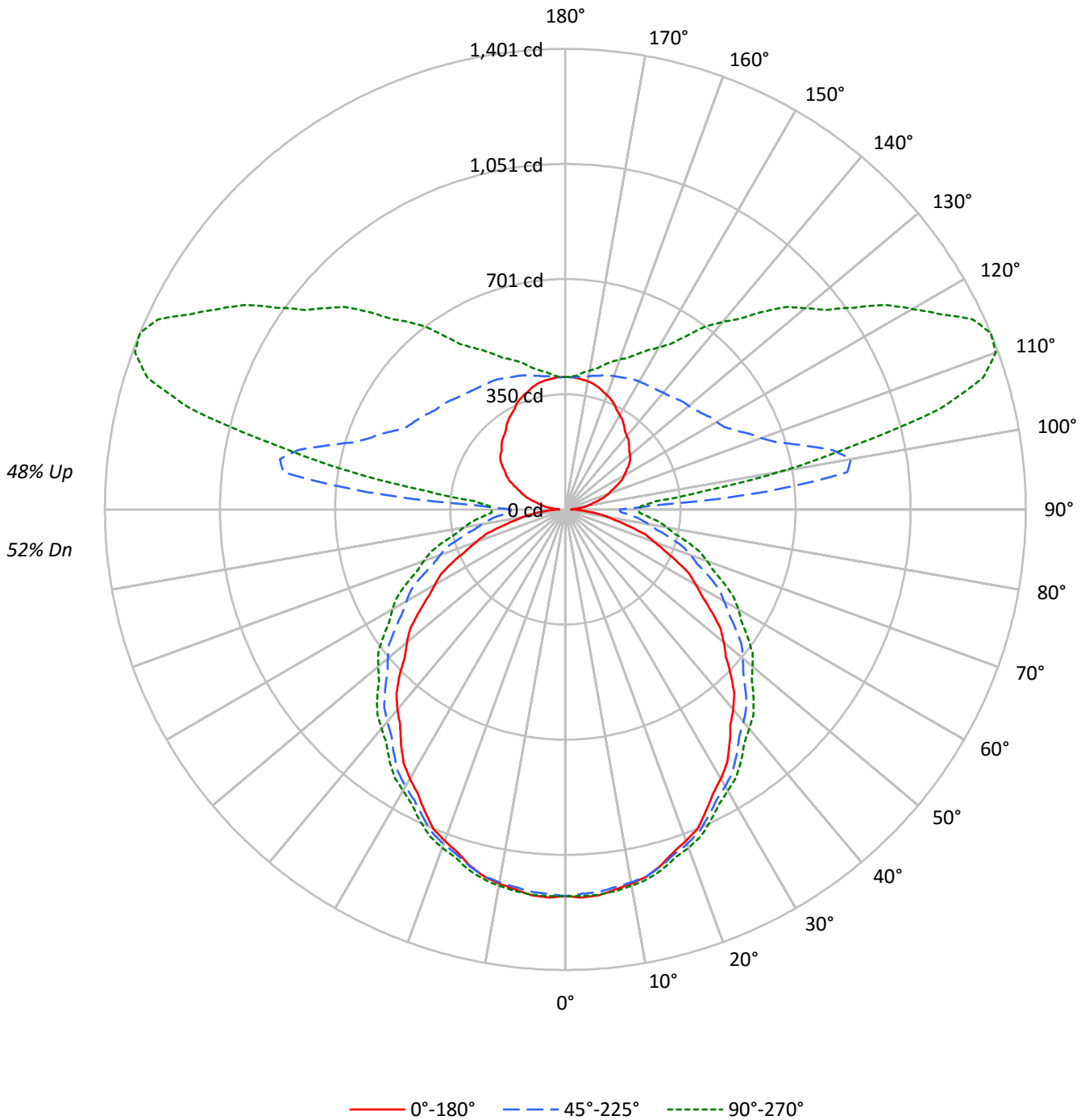
Lumens per Lamp: N/A
Luminaire Lumens: 6981.3 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 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: P332077-930
CATALOG NUMBER: S123DIP-S1165D1025U930-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P332077-930

CATALOG NUMBER: S123DIP-S1165D1025U930-4F0-1E-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	108	108	108	108	100	100	100	100	84	84	84	71	71	71	58	58	58	52
1	97	92	88	84	90	85	82	78	72	70	67	60	58	57	49	48	47	41
2	88	80	73	68	81	74	68	63	63	58	55	52	49	46	43	41	38	34
3	80	70	62	56	74	65	58	52	55	50	45	46	42	39	38	35	32	28
4	73	62	53	47	67	57	50	44	49	43	38	41	36	33	33	30	28	24
5	67	55	46	40	61	51	43	38	43	38	33	36	32	28	30	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	27	24	21	18
7	57	44	36	30	52	41	34	29	35	29	25	30	25	22	25	21	18	16
8	53	40	32	27	49	37	30	25	32	26	22	27	23	19	23	19	16	14
9	49	37	29	24	45	34	27	22	29	24	20	25	21	17	21	17	15	13
10	46	34	26	21	42	31	25	20	27	22	18	23	19	16	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12664	12664	12664
5°	12703	12344	12352
10°	12589	12060	12000
15°	12427	11738	11616
20°	12195	11369	11194
25°	11908	10944	10750
30°	11616	10563	10299
35°	11287	10159	9939
40°	10973	9792	9555
45°	10626	9438	9247
50°	10281	9090	8908
55°	9903	8734	8603
60°	9533	8371	8291
65°	9155	7984	7918
70°	8585	7551	7537
75°	7860	7053	7148
80°	7035	6564	6706
85°	6264	6229	6450



TEST NUMBER: P332077-930

CATALOG NUMBER: S123DIP-S1165D1025U930-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.5	1.6
10°-20°	317.9	4.6
20°-30°	475.5	6.8
30°-40°	567.9	8.1
40°-50°	594.1	8.5
50°-60°	557.5	8.0
60°-70°	465.7	6.7
70°-80°	333.2	4.8
80°-90°	201.8	2.9
90°-100°	348.4	5.0
100°-110°	725.1	10.4
110°-120°	684.4	9.8
120°-130°	532.0	7.6
130°-140°	407.6	5.8
140°-150°	295.9	4.2
150°-160°	203.9	2.9
160°-170°	119.8	1.7
170°-180°	39.0	0.6
0°-30°	905.0	13.0
0°-40°	1472.8	21.1
0°-60°	2624.5	37.6
0°-90°	3625.1	51.9
90°-120°	1757.9	25.2
90°-150°	2993.4	42.9
90°-180°	3356.0	48.1
0°-180°	6981.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1176	1176	1176	1176	1176	
5°	1178	1175	1168	1177	1176	112
15°	1121	1125	1124	1136	1136	316
25°	1012	1025	1029	1045	1046	466
35°	872	892	909	927	933	545
45°	713	743	775	799	810	549
55°	543	586	632	665	677	486
65°	376	426	482	519	533	371
75°	204	264	328	369	386	218
85°	63	127	195	237	251	66
90°	18	89	165	209	225	13
95°	42	155	609	306	274	41
105°	105	182	750	1275	1179	111
115°	173	231	568	1195	1368	172
125°	236	280	508	913	1070	210
135°	274	326	476	735	850	212
145°	311	355	455	582	644	195
155°	352	380	440	500	522	162
165°	385	396	422	447	455	108
175°	401	402	404	410	409	38
180°	402	402	402	402	402	



TEST NUMBER: P332077-930

CATALOG NUMBER: S123DIP-S1165D1025U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5
2.5°	1181.6	1181.0	1180.2	1179.6	1178.8	1177.6	1175.8	1173.9	1172.2	1170.4	1172.2
5°	1177.8	1177.2	1176.6	1176.1	1175.5	1174.4	1172.6	1170.9	1169.2	1167.5	1169.8
7.5°	1166.2	1166.4	1166.4	1166.6	1166.7	1166.0	1164.2	1162.6	1161.0	1159.3	1162.1
10°	1156.0	1156.6	1157.2	1157.7	1158.3	1157.8	1156.4	1155.0	1153.6	1152.1	1155.0
12.5°	1143.7	1144.4	1145.3	1146.1	1146.9	1146.8	1145.8	1144.8	1143.9	1142.9	1145.5
15°	1121.4	1122.3	1123.1	1124.0	1124.8	1125.1	1124.8	1124.5	1124.2	1124.0	1126.8
17.5°	1093.2	1094.9	1096.6	1098.3	1100.0	1100.8	1100.7	1100.6	1100.5	1100.3	1102.9
20°	1072.7	1074.4	1076.1	1077.8	1079.5	1080.7	1081.2	1081.8	1082.4	1083.0	1085.5
22.5°	1051.2	1052.9	1054.6	1056.3	1058.0	1059.2	1060.1	1060.9	1061.6	1062.4	1065.7
25°	1012.4	1015.3	1018.1	1021.0	1023.9	1025.6	1026.5	1027.4	1028.3	1029.1	1032.8
27.5°	973.5	976.7	980.0	983.3	986.4	989.0	990.8	992.6	994.5	996.3	999.5
30°	945.8	949.5	953.2	956.9	960.6	963.6	965.9	968.2	970.5	972.7	976.2
32.5°	915.0	919.2	923.3	927.5	931.6	935.2	938.2	941.2	944.1	947.1	950.7
35°	871.5	876.0	880.6	885.2	889.7	893.8	897.6	901.2	904.9	908.7	912.9
37.5°	825.3	830.5	835.6	840.7	845.9	850.7	855.2	859.8	864.4	868.9	873.8
40°	794.6	799.7	804.9	809.9	815.1	820.5	826.2	831.8	837.6	843.3	848.2
42.5°	760.8	767.0	773.3	779.5	785.8	791.9	797.9	803.7	809.7	815.6	820.9
45°	712.6	719.4	726.2	733.0	739.9	746.9	754.0	761.1	768.3	775.3	780.7
47.5°	662.0	669.8	677.5	685.3	693.1	701.0	709.1	717.3	725.5	733.6	739.6
50°	629.2	637.2	645.2	653.1	661.1	669.5	678.4	687.2	696.0	704.8	711.4
52.5°	594.4	602.8	611.2	619.7	628.1	637.2	646.9	656.6	666.4	676.1	683.0
55°	543.4	552.8	562.1	571.6	581.0	590.8	601.0	611.3	621.6	631.9	639.5
57.5°	493.7	503.4	513.2	523.0	532.9	543.4	554.6	565.8	577.0	588.2	596.0
60°	458.8	469.0	479.3	489.6	499.8	510.8	522.4	534.1	545.8	557.5	565.5
62.5°	426.0	436.5	446.9	457.5	467.9	479.3	491.7	504.0	516.4	528.8	536.7
65°	375.5	386.6	397.7	408.8	420.0	431.8	444.3	456.8	469.4	481.8	490.4
67.5°	324.2	336.1	347.8	359.6	371.4	383.7	396.4	409.2	421.9	434.7	444.0
70°	288.4	300.6	312.8	325.1	337.4	350.3	363.9	377.6	391.3	405.0	414.1
72.5°	255.5	267.8	280.1	292.3	304.5	317.7	331.8	345.9	360.1	374.2	383.6
75°	203.7	217.2	230.6	243.9	257.3	271.1	285.4	299.6	313.8	328.1	337.5
77.5°	158.7	172.2	185.6	199.2	212.6	226.6	240.9	255.3	269.6	284.0	293.9
80°	126.9	140.8	154.8	168.8	182.7	197.1	211.9	226.7	241.5	256.3	266.0
82.5°	99.2	113.4	127.6	141.8	155.9	170.6	185.6	200.6	215.6	230.6	240.4
85°	62.8	77.0	91.3	105.5	119.8	134.4	149.5	164.6	179.7	194.8	204.5
87.5°	34.4	48.9	63.4	78.1	92.6	107.3	122.3	137.3	152.3	167.4	176.8
90°	18.3	33.8	49.5	65.9	81.4	97.3	114.3	131.3	148.2	165.2	174.1
92.5°	25.8	43.2	62.6	81.5	101.0	126.5	162.1	211.4	260.0	261.8	240.5
95°	41.7	55.3	75.3	100.3	132.6	176.8	260.0	395.2	542.6	609.4	527.2
97.5°	59.8	70.6	87.6	109.7	140.6	186.5	266.0	416.0	651.8	865.5	926.3
100°	71.7	81.7	96.5	117.0	145.6	188.5	258.5	392.1	619.2	882.2	1050.8
102.5°	84.4	94.1	107.3	126.3	152.1	191.7	255.7	370.8	574.2	833.7	1050.9
105°	104.7	113.9	125.6	142.3	164.5	199.3	255.5	351.6	517.6	750.4	992.0
107.5°	124.9	133.1	143.7	159.1	179.4	211.6	261.8	343.1	478.7	676.0	895.8
110°	139.5	147.1	156.3	170.4	189.3	220.4	268.4	341.6	462.1	633.8	835.7



TEST NUMBER: P332077-930

CATALOG NUMBER: S123DIP-S1165D1025U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	153.8	160.5	168.8	182.0	200.0	229.8	274.7	342.9	449.9	602.9	781.8
115°	173.3	179.9	188.3	199.7	217.0	245.8	287.0	346.9	440.2	568.4	716.1
117.5°	193.6	199.5	205.7	215.2	232.8	259.0	299.3	353.2	433.3	543.8	672.4
120°	206.9	210.8	216.3	225.8	242.8	268.5	307.2	358.9	431.0	531.6	648.7
122.5°	219.3	222.5	227.3	236.8	252.4	278.9	316.5	364.4	430.9	521.9	628.4
125°	235.8	237.4	242.3	251.3	266.7	292.8	329.5	373.7	430.7	508.2	601.2
127.5°	249.3	251.4	257.1	266.0	282.8	308.1	342.4	381.5	432.3	497.5	576.3
130°	257.7	259.9	266.9	276.5	293.3	317.9	350.5	387.1	433.5	490.4	561.7
132.5°	263.3	266.3	274.2	285.8	302.9	326.4	357.2	392.1	433.4	484.7	548.0
135°	274.3	277.4	286.0	297.9	314.7	338.1	366.5	397.3	433.0	476.0	529.1
137.5°	284.9	288.0	296.6	309.4	326.1	347.2	373.2	401.4	432.1	468.1	512.7
140°	291.0	295.1	303.2	316.3	332.5	353.3	377.7	403.0	431.5	463.3	502.6
142.5°	298.8	302.0	310.5	322.0	338.1	357.1	380.3	404.1	430.1	457.9	492.8
145°	311.4	313.5	320.6	332.5	346.0	364.6	385.7	407.7	430.5	454.9	483.2
147.5°	322.8	324.2	331.4	341.9	355.3	371.3	390.6	410.3	430.5	451.8	474.8
150°	331.3	332.1	338.5	349.1	360.5	375.2	393.9	411.0	430.5	449.2	469.5
152.5°	339.7	339.8	346.3	355.6	365.7	379.8	395.8	412.3	428.5	446.0	464.4
155°	352.4	352.4	357.3	365.4	374.4	385.7	399.6	412.6	426.4	440.3	456.6
157.5°	362.5	363.1	367.0	374.2	381.8	390.6	401.7	413.4	423.7	435.2	447.8
160°	370.3	370.3	373.6	380.0	385.7	393.9	403.7	413.4	422.4	431.3	441.9
162.5°	376.2	376.2	378.8	383.9	389.0	395.8	404.3	412.8	419.8	427.4	436.0
165°	384.9	384.1	385.7	389.8	393.1	398.8	405.3	411.0	415.9	421.6	428.0
167.5°	391.6	390.6	391.4	394.5	396.8	400.4	405.1	409.7	412.0	415.7	420.4
170°	395.5	393.9	394.7	397.1	398.8	400.4	404.5	407.7	409.4	411.8	415.9
172.5°	398.1	397.1	397.3	399.1	400.1	401.0	404.5	407.1	407.4	408.5	411.3
175°	401.2	400.4	399.6	401.2	401.2	402.0	403.7	405.3	404.5	404.5	406.1
177.5°	402.7	402.0	401.4	402.0	402.0	402.0	402.7	404.0	402.7	402.0	402.7
180°	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0



TEST NUMBER: P332077-930

CATALOG NUMBER: S123DIP-S1165D1025U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5
2.5°	1173.9	1175.8	1177.6	1178.4	1178.2	1177.9	1177.7	1177.5
5°	1172.1	1174.4	1176.6	1177.6	1177.4	1177.0	1176.8	1176.5
7.5°	1165.0	1167.8	1170.7	1172.0	1171.6	1171.3	1170.9	1170.6
10°	1157.8	1160.7	1163.5	1164.7	1164.1	1163.5	1162.9	1162.4
12.5°	1148.2	1150.8	1153.4	1154.4	1153.8	1153.2	1152.7	1152.1
15°	1129.6	1132.5	1135.3	1136.6	1136.4	1136.0	1135.8	1135.5
17.5°	1105.5	1108.1	1110.6	1111.7	1111.3	1110.9	1110.5	1110.1
20°	1088.0	1090.6	1093.2	1094.6	1094.9	1095.2	1095.4	1095.8
22.5°	1068.9	1072.2	1075.4	1076.9	1076.8	1076.6	1076.4	1076.3
25°	1036.5	1040.2	1043.9	1045.8	1045.8	1045.8	1045.8	1045.8
27.5°	1002.7	1005.8	1009.0	1010.7	1011.0	1011.2	1011.5	1011.7
30°	979.6	983.0	986.3	988.1	988.1	988.1	988.1	988.1
32.5°	954.4	958.1	961.6	963.8	964.5	965.2	965.9	966.5
35°	917.2	921.5	925.7	928.5	929.6	930.7	931.9	932.9
37.5°	878.6	883.5	888.3	891.1	892.1	893.0	893.9	894.8
40°	853.0	857.8	862.7	865.6	866.7	867.9	869.0	870.2
42.5°	826.2	831.5	836.8	840.2	841.8	843.4	845.0	846.6
45°	786.2	791.6	797.0	800.9	803.2	805.4	807.7	809.9
47.5°	745.8	751.9	758.0	761.9	763.6	765.4	767.2	768.9
50°	718.0	724.6	731.1	735.3	737.4	739.3	741.4	743.3
52.5°	689.7	696.5	703.3	707.9	710.4	712.8	715.3	717.7
55°	647.2	654.8	662.6	667.6	669.8	672.1	674.4	676.7
57.5°	603.7	611.5	619.2	624.4	627.1	629.8	632.5	635.1
60°	573.4	581.4	589.4	594.9	598.1	601.2	604.3	607.5
62.5°	544.7	552.7	560.7	566.1	569.0	571.9	574.9	577.7
65°	499.0	507.5	516.1	521.7	524.6	527.4	530.3	533.1
67.5°	453.4	462.8	472.1	477.9	480.4	482.7	485.1	487.5
70°	423.2	432.4	441.4	447.4	450.3	453.1	455.9	458.8
72.5°	392.9	402.3	411.6	417.7	420.5	423.4	426.2	429.1
75°	346.9	356.3	365.7	372.1	375.5	379.0	382.4	385.7
77.5°	303.8	313.7	323.7	329.9	332.6	335.2	337.8	340.4
80°	275.7	285.4	295.1	301.3	304.2	307.0	309.9	312.7
82.5°	250.1	259.8	269.4	275.7	278.5	281.4	284.2	287.1
85°	214.2	223.9	233.5	239.8	242.6	245.5	248.3	251.2
87.5°	186.7	196.6	206.4	213.0	215.6	218.7	221.7	224.4
90°	184.5	195.0	205.5	213.4	215.5	219.2	222.7	224.8
92.5°	224.0	219.3	222.4	224.3	225.4	225.6	229.0	230.2
95°	437.5	352.0	317.6	294.2	281.5	277.0	274.3	273.9
97.5°	865.0	728.1	631.6	539.9	482.7	448.9	429.8	425.7
100°	1087.5	1029.8	942.9	832.9	753.5	697.0	668.1	671.7
102.5°	1157.1	1163.0	1115.5	1047.7	986.6	942.4	918.7	902.9
105°	1170.0	1259.4	1282.8	1266.9	1232.1	1203.7	1180.2	1178.7
107.5°	1096.3	1236.1	1315.0	1349.0	1352.2	1344.3	1338.0	1333.0
110°	1029.5	1186.6	1296.6	1358.4	1383.4	1392.2	1392.9	1393.5



TEST NUMBER: P332077-930

CATALOG NUMBER: S123DIP-S1165D1025U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	962.3	1122.5	1244.6	1322.7	1366.8	1389.5	1398.2	1401.0
115°	873.4	1021.9	1148.3	1241.6	1304.9	1343.0	1361.5	1367.9
117.5°	806.2	935.2	1049.5	1143.9	1209.8	1253.0	1278.7	1286.5
120°	770.1	886.5	990.7	1077.2	1143.5	1191.0	1212.5	1219.4
122.5°	740.4	846.2	943.0	1023.4	1082.6	1125.6	1149.1	1157.2
125°	699.9	794.7	878.7	947.9	1001.9	1039.8	1062.1	1069.8
127.5°	663.6	748.4	824.4	887.5	935.8	968.3	988.6	995.8
130°	640.4	719.1	790.4	849.3	894.1	925.1	944.0	952.2
132.5°	618.6	691.1	757.7	814.0	856.5	887.7	904.7	911.3
135°	588.8	651.7	709.7	759.4	800.7	826.6	842.6	849.7
137.5°	561.3	613.3	663.3	706.5	741.4	767.6	781.4	786.5
140°	545.1	590.8	634.2	672.1	704.4	728.6	743.1	743.6
142.5°	529.0	568.5	606.2	639.2	667.0	688.6	701.7	702.4
145°	511.6	540.7	569.0	594.4	615.8	634.1	641.7	644.5
147.5°	497.5	519.5	541.1	558.8	575.3	587.8	595.1	596.7
150°	488.3	507.0	524.1	539.8	552.6	562.1	567.6	568.2
152.5°	481.1	497.3	512.4	525.3	535.0	543.4	546.5	546.6
155°	470.3	483.4	495.6	505.4	512.7	519.2	520.8	521.6
157.5°	459.0	469.9	479.3	487.0	493.3	498.2	499.5	499.4
160°	452.5	461.5	469.5	475.2	480.9	485.8	485.8	485.0
162.5°	444.7	452.3	459.8	464.9	468.6	472.8	472.8	472.0
165°	434.6	439.4	445.2	449.2	452.5	455.8	454.9	454.9
167.5°	425.7	429.5	432.8	435.7	437.2	439.4	438.6	438.6
170°	420.0	422.4	425.6	427.2	428.0	429.7	428.8	428.8
172.5°	414.7	416.5	419.1	420.1	420.3	421.9	420.4	419.8
175°	407.7	408.5	410.2	410.2	410.2	411.0	410.2	409.4
177.5°	403.3	404.0	404.6	404.6	404.0	404.6	403.3	403.3
180°	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0

(END OF REPORT)