

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: P332058-930

Luminaire Tested: **S123DIP-S1165D585U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332058-930
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-S1165D585U930-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

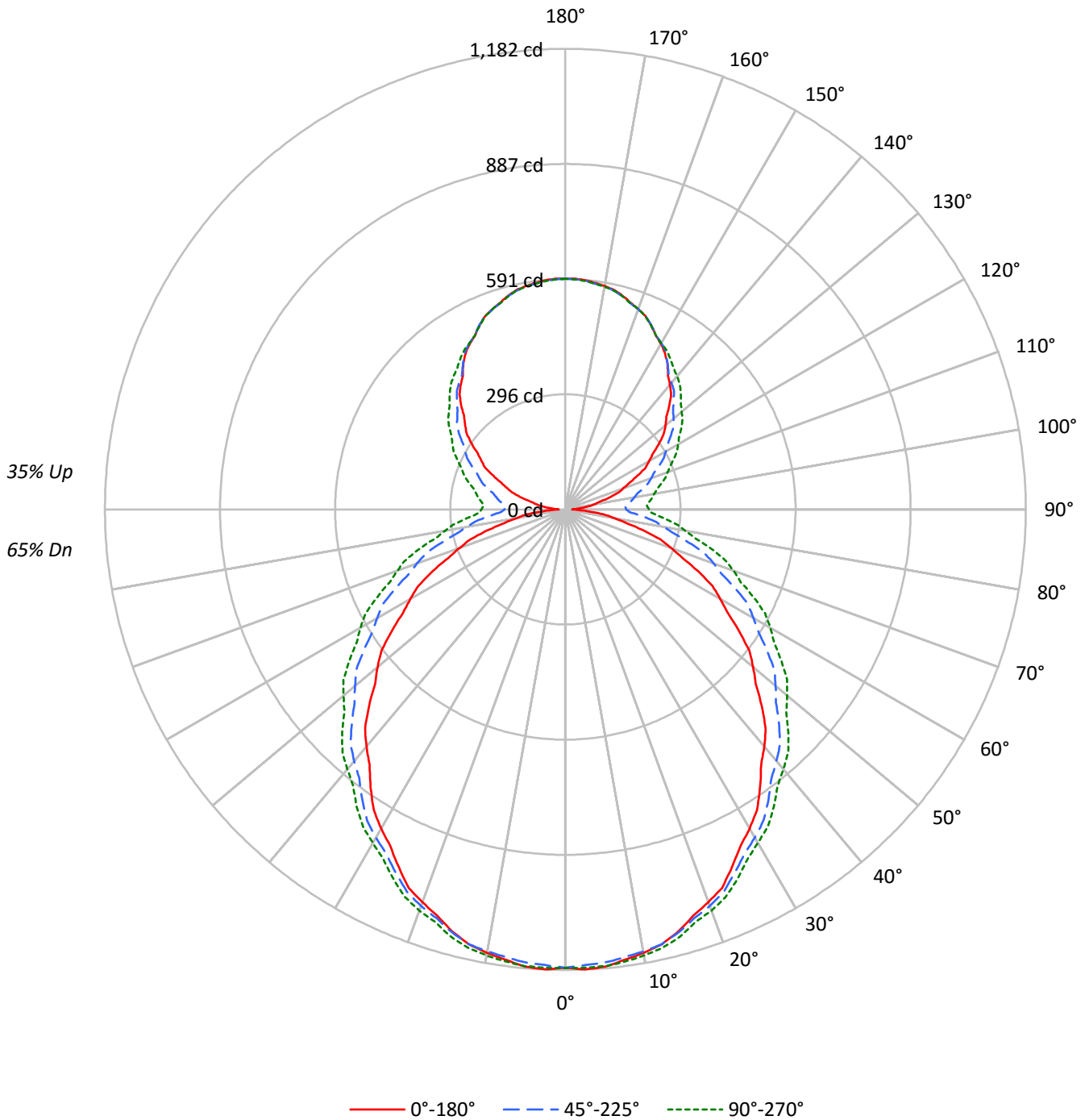
Lumens per Lamp: N/A
Luminaire Lumens: 5595.5 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

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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CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





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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	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65
1	100	95	90	86	93	89	85	81	78	75	72	68	66	64	59	58	56	52
2	90	82	75	69	84	77	71	66	68	63	59	59	56	52	52	49	46	42
3	82	72	64	57	77	67	60	54	59	54	49	52	48	44	45	42	39	35
4	75	63	55	48	70	60	52	46	53	46	41	46	41	37	40	36	33	30
5	69	56	47	41	64	53	45	39	47	41	36	41	36	32	36	32	29	26
6	63	50	42	36	59	48	40	34	42	36	31	37	32	28	33	28	25	22
7	59	45	37	31	55	43	35	30	38	32	27	34	29	25	30	25	22	20
8	54	41	33	28	51	39	32	26	35	29	24	31	26	22	27	23	20	18
9	51	38	30	25	47	36	29	24	32	26	22	29	23	20	25	21	18	16
10	47	35	27	22	44	33	26	21	30	24	20	26	21	18	23	19	16	14

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: P332058-930

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.5	2.0
10°-20°	317.9	5.7
20°-30°	475.5	8.5
30°-40°	567.9	10.1
40°-50°	594.1	10.6
50°-60°	557.5	10.0
60°-70°	465.7	8.3
70°-80°	333.2	6.0
80°-90°	200.4	3.6
90°-100°	163.2	2.9
100°-110°	207.0	3.7
110°-120°	257.5	4.6
120°-130°	293.2	5.2
130°-140°	305.9	5.5
140°-150°	288.7	5.2
150°-160°	240.2	4.3
160°-170°	159.9	2.9
170°-180°	56.0	1.0
0°-30°	905.0	16.2
0°-40°	1472.8	26.3
0°-60°	2624.5	46.9
0°-90°	3623.8	64.8
90°-120°	627.8	11.2
90°-150°	1515.6	27.1
90°-180°	1972.0	35.2
0°-180°	5595.5	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°	17	85	156	200	215	13
95°	42	96	161	201	216	42
105°	115	148	206	240	254	122
115°	204	222	266	296	307	202
125°	293	296	331	355	363	262
135°	378	380	393	413	420	291
145°	457	456	458	467	471	285
155°	521	521	522	523	520	240
165°	568	566	566	569	566	160
175°	591	589	589	591	588	56
180°	592	592	592	592	592	



TEST NUMBER: P332058-930

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-D1

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°	34.2	48.6	62.9	77.4	91.7	106.3	121.2	135.9	150.7	165.5	175.3
90°	17.1	32.1	47.1	62.1	77.0	92.5	108.4	124.3	140.1	156.0	166.1
92.5°	26.9	40.2	53.5	66.8	80.1	94.2	109.3	124.3	139.4	154.5	164.3
95°	41.5	53.4	65.2	77.0	88.9	102.2	116.9	131.8	146.5	161.3	170.6
97.5°	61.3	71.8	82.4	92.9	103.5	115.8	129.7	143.7	157.6	171.5	180.4
100°	74.8	84.5	94.2	104.0	113.7	125.4	139.0	152.6	166.2	179.9	188.4
102.5°	90.5	99.1	107.6	116.2	124.8	135.8	149.4	163.0	176.5	190.0	198.4
105°	114.9	122.0	129.0	136.0	143.1	153.2	166.3	179.5	192.7	205.9	213.9
107.5°	142.0	147.9	153.8	159.8	165.8	174.7	186.7	198.7	210.7	222.7	230.6
110°	158.8	164.1	169.5	174.8	180.2	188.7	200.2	211.8	223.4	235.1	242.8



TEST NUMBER: P332058-930

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	177.4	181.7	186.1	190.5	194.8	202.4	213.4	224.4	235.4	246.4	254.0
115°	204.1	207.7	211.5	215.2	219.0	225.8	235.9	246.0	256.0	266.0	273.0
117.5°	231.9	234.2	236.5	238.8	241.2	247.0	256.3	265.7	275.1	284.4	291.1
120°	248.3	250.4	252.4	254.5	256.5	262.0	270.8	279.7	288.6	297.5	303.9
122.5°	266.6	267.7	269.0	270.2	271.3	276.3	284.9	293.7	302.3	311.0	317.1
125°	293.1	293.4	293.8	294.0	294.3	298.5	306.6	314.6	322.7	330.8	336.3
127.5°	318.8	319.1	319.5	319.9	320.2	323.8	330.4	337.0	343.6	350.2	355.2
130°	335.9	336.4	337.0	337.5	338.0	341.0	346.4	351.8	357.2	362.6	367.5
132.5°	352.0	352.8	353.5	354.2	355.1	357.6	361.9	366.2	370.6	375.0	379.6
135°	377.8	378.2	378.5	378.9	379.2	380.9	383.9	386.9	390.0	393.0	397.7
137.5°	401.8	402.0	402.4	402.7	402.9	404.1	406.1	408.1	410.2	412.2	416.3
140°	417.5	418.0	418.5	419.1	419.6	420.3	421.3	422.2	423.1	424.1	428.3
142.5°	432.8	433.0	433.3	433.6	433.9	434.2	434.6	435.0	435.3	435.6	439.4
145°	456.6	456.5	456.4	456.3	456.2	456.3	456.6	457.0	457.3	457.6	459.7
147.5°	476.1	476.5	476.9	477.2	477.6	477.9	478.3	478.5	478.8	479.1	479.8
150°	490.6	490.8	491.1	491.2	491.5	491.6	491.9	492.0	492.3	492.4	492.4
152.5°	502.6	502.8	503.1	503.4	503.7	503.9	504.0	504.1	504.3	504.3	504.5
155°	521.3	521.3	521.3	521.3	521.3	521.4	521.5	521.5	521.7	521.8	522.2
157.5°	537.3	537.2	537.0	537.0	536.8	536.8	536.9	537.0	537.0	537.1	537.5
160°	547.3	547.1	546.9	546.7	546.5	546.4	546.4	546.4	546.4	546.4	546.9
162.5°	556.3	556.0	555.7	555.4	555.1	555.1	555.1	555.2	555.3	555.4	555.9
165°	567.8	567.5	567.2	566.9	566.6	566.4	566.4	566.4	566.4	566.4	567.0
167.5°	577.0	576.6	576.2	575.8	575.4	575.2	575.3	575.4	575.4	575.5	576.2
170°	582.2	581.8	581.4	581.0	580.6	580.3	580.3	580.3	580.3	580.3	581.1
172.5°	586.3	585.9	585.5	585.1	584.7	584.5	584.5	584.5	584.5	584.5	585.1
175°	590.6	590.2	589.8	589.4	589.0	588.7	588.7	588.7	588.7	588.7	589.4
177.5°	592.4	592.1	591.7	591.3	591.0	590.8	590.8	590.8	590.8	590.8	591.3
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0



TEST NUMBER: P332058-930

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-D1

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°	185.1	194.8	204.6	210.9	213.8	216.7	219.6	222.4
90°	176.2	186.3	196.3	202.9	206.0	209.0	212.1	215.2
92.5°	174.1	183.8	193.6	199.7	202.3	204.7	207.2	209.8
95°	179.8	189.0	198.3	204.3	207.2	210.0	212.9	215.7
97.5°	189.4	198.4	207.3	213.2	216.1	218.8	221.7	224.5
100°	197.0	205.5	214.1	220.0	223.0	226.1	229.1	232.2
102.5°	206.8	215.1	223.5	229.0	231.8	234.6	237.4	240.3
105°	221.8	229.8	237.7	243.1	245.9	248.7	251.4	254.2
107.5°	238.6	246.5	254.5	259.7	262.0	264.5	266.8	269.2
110°	250.6	258.4	266.3	271.3	273.3	275.4	277.4	279.5



TEST NUMBER: P332058-930

CATALOG NUMBER: S123DIP-S1165D585U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	261.7	269.4	277.0	282.1	284.5	287.1	289.5	292.0
115°	279.9	286.8	293.8	298.3	300.5	302.7	304.8	307.0
117.5°	297.9	304.7	311.4	315.8	317.7	319.7	321.6	323.5
120°	310.4	316.8	323.3	327.4	329.2	331.0	332.8	334.6
122.5°	323.1	329.1	335.2	339.1	340.8	342.5	344.2	345.9
125°	341.9	347.4	353.0	356.6	358.2	359.7	361.3	362.9
127.5°	360.3	365.4	370.5	373.7	375.2	376.6	378.1	379.5
130°	372.6	377.6	382.5	385.6	386.5	387.5	388.5	389.5
132.5°	384.3	389.0	393.6	396.7	398.1	399.4	400.8	402.2
135°	402.4	407.2	411.8	414.8	416.0	417.3	418.5	419.7
137.5°	420.4	424.4	428.5	431.0	432.1	433.1	434.1	435.2
140°	432.4	436.6	440.8	443.2	443.9	444.7	445.3	446.1
142.5°	443.1	446.8	450.5	452.8	453.6	454.5	455.4	456.2
145°	461.9	464.1	466.3	467.7	468.5	469.2	469.9	470.7
147.5°	480.5	481.1	481.8	482.3	482.7	483.1	483.6	484.0
150°	492.4	492.4	492.4	492.4	492.4	492.4	492.3	492.3
152.5°	504.8	504.9	505.1	504.9	504.5	504.1	503.6	503.2
155°	522.6	523.0	523.4	523.3	522.5	521.8	521.1	520.4
157.5°	538.0	538.4	538.8	538.7	538.2	537.6	537.0	536.5
160°	547.5	548.0	548.5	548.5	548.1	547.7	547.3	546.9
162.5°	556.4	556.9	557.4	557.3	556.7	556.0	555.4	554.7
165°	567.7	568.3	568.9	568.8	568.1	567.4	566.7	566.0
167.5°	576.8	577.5	578.1	578.1	577.5	576.8	576.2	575.5
170°	581.8	582.5	583.3	583.3	582.5	581.8	581.1	580.3
172.5°	585.7	586.4	587.0	587.0	586.3	585.5	584.8	584.1
175°	590.0	590.6	591.3	591.2	590.4	589.7	589.0	588.2
177.5°	591.9	592.4	592.9	592.8	592.2	591.7	591.1	590.5
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0

(END OF REPORT)