

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: P332057-935

Luminaire Tested: **S123DIP-S1165D585U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332057-935
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-S1165D585U935-4F0-1E-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: 6192.7 lumens
Efficiency: N/A
Efficacy: 112.4 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

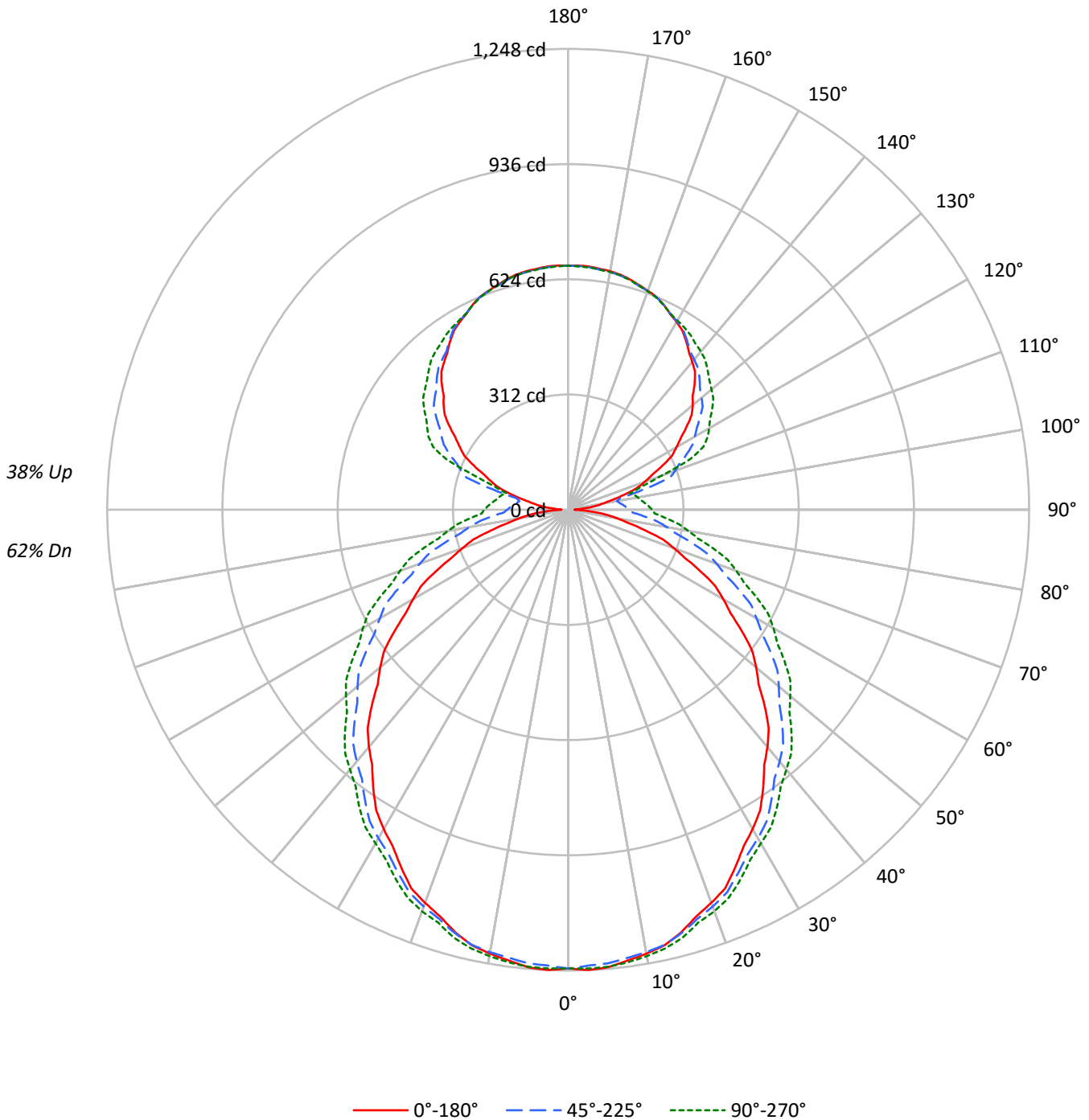
Input Watts (W): 55.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332057-935

CATALOG NUMBER: S123DIP-S1165D585U935-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332057-935

CATALOG NUMBER: S123DIP-S1165D585U935-4F0-1E-UDD-D

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°	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: P332057-935

CATALOG NUMBER: S123DIP-S1165D585U935-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.8	1.9
10°-20°	335.7	5.4
20°-30°	502.2	8.1
30°-40°	599.7	9.7
40°-50°	627.4	10.1
50°-60°	588.8	9.5
60°-70°	491.8	7.9
70°-80°	351.8	5.7
80°-90°	211.7	3.4
90°-100°	155.7	2.5
100°-110°	211.3	3.4
110°-120°	339.7	5.5
120°-130°	387.2	6.3
130°-140°	390.9	6.3
140°-150°	353.6	5.7
150°-160°	282.4	4.6
160°-170°	182.2	2.9
170°-180°	62.8	1.0
0°-30°	955.7	15.4
0°-40°	1555.4	25.1
0°-60°	2771.6	44.8
0°-90°	3826.9	61.8
90°-120°	706.7	11.4
90°-150°	1838.4	29.7
90°-180°	2366.0	38.2
0°-180°	6192.7	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	90	165	211	227	13
95°	45	80	149	193	208	49
105°	157	194	209	164	173	166
115°	281	302	354	390	404	278
125°	391	397	436	464	476	350
135°	484	487	503	528	534	373
145°	557	559	560	572	578	348
155°	612	612	612	614	611	282
165°	646	644	644	647	644	182
175°	661	659	659	662	658	63
180°	661	661	661	661	661	



TEST NUMBER: P332057-935

CATALOG NUMBER: S123DIP-S1165D585U935-4F0-1E-UDD-D

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°	36.1	51.3	66.5	81.7	96.9	112.3	127.9	143.5	159.2	174.8	185.1
90°	18.1	33.9	49.8	65.6	81.4	97.7	114.4	131.2	148.0	164.7	175.4
92.5°	25.7	38.7	51.7	64.6	77.6	92.2	108.3	124.5	140.7	156.9	167.6
95°	44.9	52.1	59.3	66.6	73.9	85.5	101.4	117.4	133.3	149.2	159.3
97.5°	73.4	82.1	90.7	99.2	107.8	115.2	121.4	127.6	133.8	140.1	149.9
100°	95.1	107.0	118.8	130.6	142.4	146.7	143.5	140.3	137.2	134.0	143.5
102.5°	120.0	130.3	140.5	150.8	160.9	163.6	158.6	153.6	148.5	143.5	149.3
105°	157.1	165.6	174.0	182.4	190.9	196.6	199.8	202.9	206.0	209.1	198.1
107.5°	195.0	202.2	209.2	216.3	223.4	233.8	247.7	261.5	275.3	289.1	283.0
110°	220.2	226.5	232.8	239.1	245.4	255.2	268.4	281.6	294.9	308.1	312.3



TEST NUMBER: P332057-935

CATALOG NUMBER: S123DIP-S1165D585U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	245.4	250.6	255.9	261.1	266.4	275.3	288.1	300.8	313.6	326.3	334.0
115°	281.3	285.5	289.8	294.0	298.3	306.3	318.1	330.0	341.8	353.6	361.9
117.5°	317.0	320.1	323.1	326.1	329.2	336.0	346.7	357.4	368.1	378.7	386.8
120°	338.4	340.9	343.4	345.9	348.3	354.6	364.9	375.2	385.5	395.7	403.5
122.5°	361.2	362.7	364.3	365.9	367.5	373.2	383.1	393.0	402.8	412.7	420.0
125°	391.1	391.9	392.8	393.6	394.5	399.5	408.7	417.8	427.0	436.2	442.7
127.5°	421.3	421.9	422.4	423.0	423.5	427.7	435.5	443.2	451.0	458.7	465.0
130°	440.1	440.7	441.3	441.9	442.5	445.9	452.4	458.8	465.3	471.7	477.9
132.5°	457.1	458.0	458.7	459.6	460.4	463.4	468.6	473.7	478.9	484.0	489.9
135°	484.5	484.8	485.2	485.5	485.9	487.9	491.6	495.4	499.1	502.9	508.7
137.5°	507.7	508.3	508.9	509.5	510.1	511.4	513.6	515.7	517.8	519.9	525.1
140°	522.4	523.1	523.7	524.3	525.0	526.0	527.2	528.4	529.6	530.9	535.8
142.5°	536.9	537.4	537.8	538.1	538.6	539.1	539.6	540.0	540.5	541.1	545.4
145°	557.2	557.8	558.2	558.6	559.1	559.5	559.6	559.9	560.1	560.3	562.9
147.5°	575.1	575.6	576.1	576.5	577.0	577.4	577.6	577.8	578.1	578.3	579.2
150°	586.9	587.2	587.5	587.8	588.1	588.4	588.7	588.8	589.1	589.3	589.5
152.5°	597.4	597.6	597.7	597.9	598.1	598.2	598.3	598.5	598.6	598.7	599.1
155°	612.3	612.2	611.9	611.7	611.5	611.5	611.6	611.7	611.7	611.9	612.4
157.5°	624.0	624.0	623.9	623.9	623.9	623.8	623.7	623.6	623.5	623.4	624.1
160°	631.0	630.9	630.9	630.7	630.6	630.5	630.3	630.3	630.2	630.1	630.7
162.5°	637.7	637.4	637.1	636.9	636.5	636.4	636.3	636.2	636.0	635.9	636.7
165°	645.8	645.4	645.1	644.8	644.5	644.2	644.1	644.0	643.9	643.8	644.7
167.5°	652.0	651.6	651.2	650.7	650.3	650.1	650.1	650.1	650.1	650.1	651.0
170°	655.6	655.1	654.7	654.3	653.8	653.6	653.6	653.6	653.6	653.6	654.5
172.5°	658.0	657.5	656.9	656.3	655.8	655.7	655.7	655.8	655.9	656.0	656.9
175°	661.0	660.5	659.9	659.4	658.8	658.6	658.7	658.8	658.9	659.0	659.8
177.5°	661.8	661.3	660.9	660.5	660.0	659.9	660.0	660.0	660.1	660.2	660.9
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0



TEST NUMBER: P332057-935

CATALOG NUMBER: S123DIP-S1165D585U935-4F0-1E-UDD-D

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°	195.4	205.7	216.0	222.7	225.8	228.9	231.9	234.9
90°	186.1	196.7	207.3	214.3	217.6	220.8	224.0	227.2
92.5°	178.2	188.9	199.6	206.4	209.3	212.2	215.1	217.9
95°	169.4	179.4	189.6	196.1	199.1	202.2	205.1	208.1
97.5°	159.7	169.5	179.4	185.9	189.0	192.1	195.2	198.4
100°	153.2	162.7	172.4	178.7	181.8	184.9	188.0	191.1
102.5°	155.2	160.9	166.7	171.2	174.4	177.5	180.7	184.0
105°	187.3	176.3	165.5	161.5	164.5	167.4	170.3	173.1
107.5°	277.0	270.9	264.8	255.7	243.8	231.9	220.0	208.1
110°	316.5	320.7	324.9	320.5	307.3	294.1	280.9	267.7



TEST NUMBER: P332057-935

CATALOG NUMBER: S123DIP-S1165D585U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	341.6	349.3	356.9	360.4	359.8	359.1	358.4	357.8
115°	370.2	378.5	386.8	392.4	395.3	398.1	401.0	403.8
117.5°	394.8	402.8	410.9	416.0	418.5	420.9	423.4	425.8
120°	411.3	419.0	426.9	431.8	433.9	436.0	438.1	440.2
122.5°	427.2	434.5	441.8	446.5	448.8	450.9	453.1	455.3
125°	449.3	455.8	462.3	466.7	469.1	471.4	473.7	476.0
127.5°	471.3	477.6	483.9	488.0	489.8	491.6	493.4	495.2
130°	484.1	490.2	496.4	500.2	501.8	503.4	505.0	506.5
132.5°	495.8	501.7	507.6	511.4	513.2	515.0	516.7	518.4
135°	514.4	520.1	525.9	529.3	530.5	531.7	532.9	534.0
137.5°	530.5	535.7	541.0	544.2	545.5	546.8	548.1	549.4
140°	540.8	545.7	550.7	553.8	555.1	556.4	557.7	558.9
142.5°	549.8	554.2	558.6	561.4	562.6	563.8	565.0	566.2
145°	565.6	568.2	570.8	572.7	573.9	575.1	576.4	577.6
147.5°	580.1	581.1	582.0	582.8	583.4	584.0	584.5	585.1
150°	589.7	590.0	590.1	590.4	590.6	591.0	591.2	591.5
152.5°	599.5	599.9	600.3	600.3	599.9	599.5	599.2	598.7
155°	612.9	613.5	614.1	614.0	613.4	612.7	612.1	611.4
157.5°	624.7	625.3	626.0	625.9	625.0	624.2	623.4	622.5
160°	631.4	632.0	632.7	632.6	631.9	631.1	630.3	629.6
162.5°	637.4	638.2	638.9	638.9	638.3	637.6	636.9	636.3
165°	645.6	646.4	647.3	647.4	646.6	645.8	645.1	644.3
167.5°	651.9	652.7	653.6	653.6	652.7	651.9	651.0	650.1
170°	655.4	656.3	657.1	657.1	656.3	655.4	654.5	653.6
172.5°	657.7	658.6	659.4	659.4	658.5	657.5	656.5	655.6
175°	660.6	661.3	662.1	662.0	661.2	660.3	659.4	658.5
177.5°	661.6	662.3	663.0	662.9	662.0	661.2	660.3	659.4
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0

(END OF REPORT)