

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: P332041-940

Luminaire Tested: **S123DIP-S1000D1195U940-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332041-940
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-S1000D1195U940-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7598.5 lumens
Efficiency: N/A
Efficacy: 116.2 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

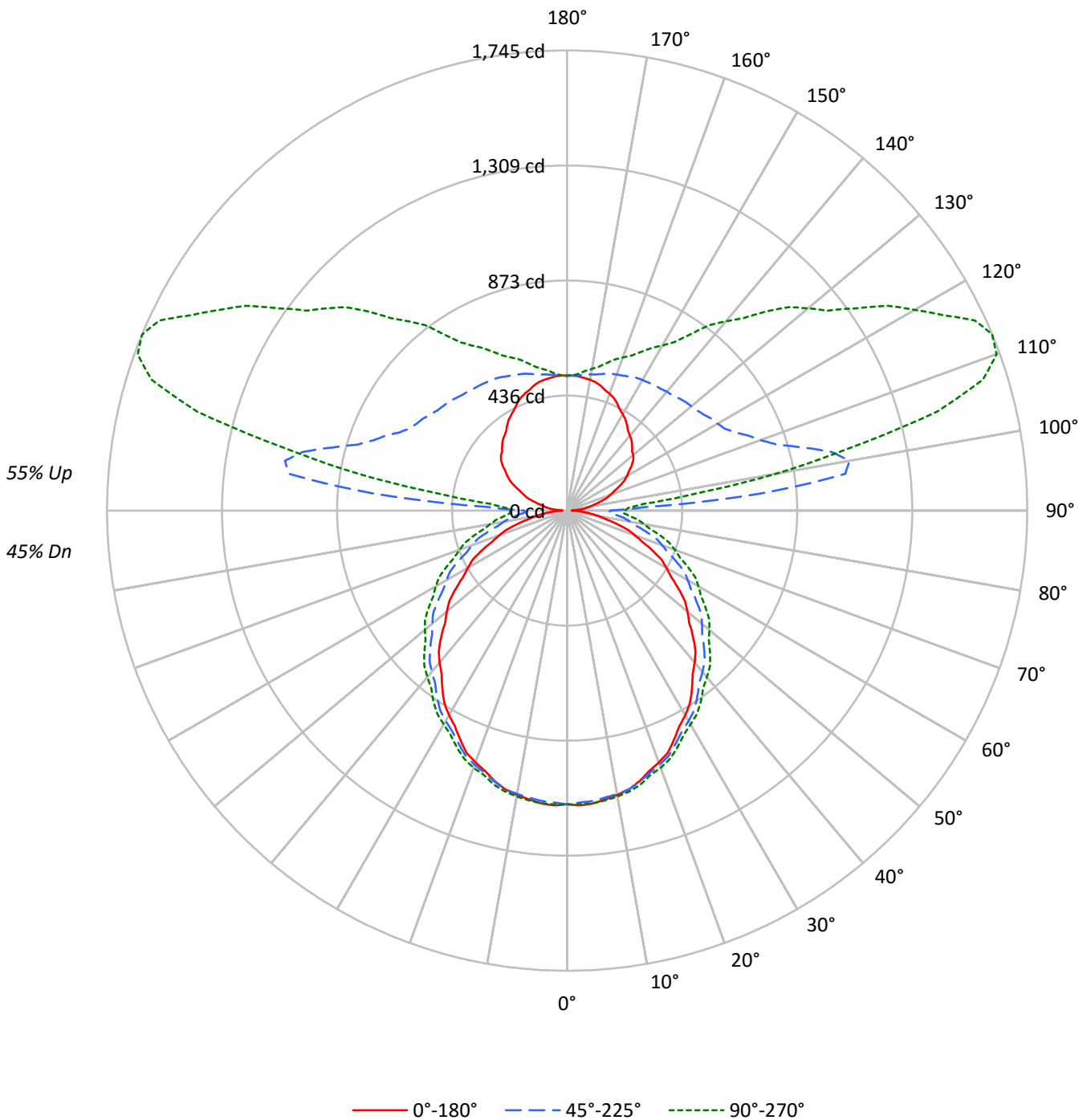
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332041-940

CATALOG NUMBER: S123DIP-S1000D1195U940-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P332041-940

CATALOG NUMBER: S123DIP-S1000D1195U940-4F0-1E-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	106	106	106	106	97	97	97	97	81	81	81		66	66	66		52	52	52	45
1	96	91	87	83	87	83	80	77	69	67	64		56	54	53		44	43	42	36
2	87	79	72	67	79	72	67	62	60	56	52		49	46	43		38	36	34	29
3	79	69	61	55	72	63	57	51	53	48	44		43	39	36		34	31	29	25
4	72	61	53	47	66	56	49	43	47	41	37		38	34	31		30	27	25	21
5	66	54	46	40	60	50	42	37	42	36	32		34	30	26		27	24	21	18
6	61	48	40	34	55	45	37	32	37	32	27		31	26	23		24	21	19	16
7	56	44	35	30	51	40	33	28	34	28	24		28	23	20		22	19	16	14
8	52	39	32	26	47	36	29	25	31	25	21		25	21	18		20	17	15	12
9	48	36	28	23	44	33	26	22	28	23	19		23	19	16		19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17		21	17	14		17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11992	11992	11992
5°	12030	11690	11697
10°	11922	11421	11364
15°	11768	11114	11000
20°	11548	10767	10600
25°	11278	10365	10179
30°	10999	10002	9754
35°	10689	9620	9413
40°	10391	9273	9048
45°	10062	8938	8757
50°	9737	8608	8436
55°	9378	8270	8147
60°	9028	7928	7850
65°	8670	7563	7499
70°	8127	7150	7138
75°	7448	6679	6770
80°	6658	6216	6350
85°	5935	5899	6108



TEST NUMBER: P332041-940

CATALOG NUMBER: S123DIP-S1000D1195U940-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	1.4
10°-20°	301.1	4.0
20°-30°	450.3	5.9
30°-40°	537.8	7.1
40°-50°	562.6	7.4
50°-60°	528.0	6.9
60°-70°	441.0	5.8
70°-80°	315.5	4.2
80°-90°	192.1	2.5
90°-100°	402.9	5.3
100°-110°	893.3	11.8
110°-120°	851.3	11.2
120°-130°	665.9	8.8
130°-140°	513.8	6.8
140°-150°	375.6	4.9
150°-160°	259.6	3.4
160°-170°	152.5	2.0
170°-180°	49.6	0.7
0°-30°	857.0	11.3
0°-40°	1394.8	18.4
0°-60°	2485.4	32.7
0°-90°	3434.0	45.2
90°-120°	2147.5	28.3
90°-150°	3702.8	48.7
90°-180°	4164.0	54.8
0°-180°	7598.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1114	1114	1114	1114	1114	
5°	1115	1113	1106	1115	1114	106
15°	1062	1065	1064	1076	1075	299
25°	959	970	975	989	990	442
35°	825	844	860	878	884	516
45°	675	704	734	757	767	520
55°	515	555	598	630	641	461
65°	356	403	456	491	505	351
75°	193	250	311	349	365	206
85°	60	120	184	224	238	63
90°	18	88	163	206	221	13
95°	49	176	734	336	290	48
105°	130	218	924	1580	1454	138
115°	218	287	702	1489	1706	216
125°	299	354	634	1141	1337	266
135°	348	415	601	923	1067	269
145°	396	452	579	737	815	248
155°	449	484	560	637	664	206
165°	490	504	537	569	579	138
175°	511	511	515	522	521	48
180°	512	512	512	512	512	



TEST NUMBER: P332041-940

CATALOG NUMBER: S123DIP-S1000D1195U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1119.0	1118.4	1117.7	1117.0	1116.4	1115.2	1113.5	1111.8	1110.0	1108.3	1110.0
5°	1115.4	1114.8	1114.3	1113.7	1113.2	1112.1	1110.5	1108.8	1107.2	1105.6	1107.8
7.5°	1104.4	1104.6	1104.7	1104.7	1104.8	1104.1	1102.6	1101.0	1099.4	1097.9	1100.5
10°	1094.8	1095.3	1095.8	1096.4	1096.9	1096.4	1095.1	1093.8	1092.4	1091.1	1093.8
12.5°	1083.1	1083.8	1084.6	1085.3	1086.1	1086.0	1085.1	1084.1	1083.3	1082.4	1084.9
15°	1061.9	1062.7	1063.5	1064.3	1065.1	1065.4	1065.1	1064.9	1064.6	1064.3	1067.1
17.5°	1035.3	1036.9	1038.5	1040.1	1041.7	1042.5	1042.4	1042.2	1042.1	1042.1	1044.5
20°	1015.8	1017.4	1019.0	1020.7	1022.3	1023.4	1024.0	1024.5	1025.0	1025.6	1028.0
22.5°	995.4	997.0	998.7	1000.3	1001.9	1003.1	1003.9	1004.6	1005.4	1006.1	1009.1
25°	958.8	961.4	964.2	966.9	969.6	971.3	972.1	972.9	973.7	974.6	978.0
27.5°	921.9	925.0	928.0	931.1	934.2	936.6	938.3	940.0	941.7	943.5	946.6
30°	895.6	899.2	902.7	906.2	909.7	912.5	914.7	916.9	919.0	921.1	924.4
32.5°	866.6	870.5	874.4	878.3	882.3	885.6	888.5	891.3	894.1	896.9	900.4
35°	825.3	829.6	833.9	838.2	842.6	846.4	850.0	853.5	856.9	860.5	864.5
37.5°	781.6	786.5	791.3	796.1	801.0	805.6	809.9	814.2	818.5	822.9	827.4
40°	752.4	757.3	762.1	767.0	771.9	777.0	782.4	787.8	793.2	798.6	803.2
42.5°	720.4	726.4	732.3	738.2	744.1	749.9	755.5	761.2	766.8	772.4	777.4
45°	674.8	681.3	687.8	694.2	700.7	707.3	714.0	720.8	727.5	734.2	739.4
47.5°	627.0	634.3	641.7	649.0	656.3	663.9	671.5	679.3	687.0	694.7	700.4
50°	595.9	603.4	611.0	618.6	626.1	634.1	642.4	650.8	659.2	667.5	673.7
52.5°	562.8	570.9	578.9	586.8	594.9	603.4	612.7	621.9	631.1	640.3	646.8
55°	514.6	523.5	532.4	541.3	550.2	559.5	569.2	578.9	588.6	598.3	605.6
57.5°	467.5	476.8	486.1	495.3	504.6	514.6	525.2	535.8	546.4	557.1	564.4
60°	434.5	444.2	453.9	463.6	473.3	483.7	494.7	505.9	516.9	528.0	535.5
62.5°	403.4	413.3	423.3	433.2	443.1	454.0	465.7	477.3	489.0	500.8	508.3
65°	355.6	366.1	376.7	387.2	397.7	408.8	420.7	432.6	444.4	456.4	464.4
67.5°	307.0	318.3	329.4	340.5	351.7	363.4	375.4	387.5	399.6	411.7	420.5
70°	273.0	284.6	296.2	307.9	319.5	331.7	344.6	357.7	370.6	383.5	392.2
72.5°	242.0	253.6	265.2	276.8	288.4	300.9	314.2	327.6	341.0	354.4	363.2
75°	193.0	205.6	218.3	231.0	243.7	256.7	270.3	283.7	297.2	310.7	319.6
77.5°	150.3	163.0	175.8	188.6	201.3	214.5	228.2	241.7	255.4	268.9	278.3
80°	120.1	133.4	146.6	159.8	173.0	186.6	200.6	214.7	228.7	242.7	251.9
82.5°	93.9	107.4	120.8	134.2	147.7	161.5	175.8	189.9	204.2	218.5	227.7
85°	59.5	72.9	86.4	100.0	113.4	127.3	141.6	155.9	170.1	184.5	193.7
87.5°	32.7	46.5	60.4	74.5	88.3	102.3	116.6	131.1	145.4	159.8	168.8
90°	17.8	33.2	48.4	64.7	80.1	95.6	112.4	129.3	146.2	163.0	171.2
92.5°	27.6	45.8	66.4	86.4	107.0	135.1	175.8	233.9	291.1	288.7	258.5
95°	48.6	62.2	84.1	112.3	149.7	202.0	303.3	470.8	654.0	734.5	626.9
97.5°	72.0	82.5	100.9	125.7	161.8	216.5	313.3	500.0	795.9	1063.5	1138.1
100°	87.6	97.3	113.2	136.3	169.8	220.7	305.6	471.4	756.3	1086.7	1298.6
102.5°	104.1	113.7	127.9	149.3	179.4	226.5	303.7	446.0	700.9	1027.0	1300.9
105°	129.9	139.5	152.1	171.0	197.2	238.4	305.9	424.2	631.6	924.0	1228.9
107.5°	156.2	164.8	176.3	194.0	218.0	256.1	316.2	415.9	584.8	832.2	1109.4
110°	175.1	183.1	193.1	209.4	231.8	268.7	326.1	415.6	565.3	780.1	1034.7



TEST NUMBER: P332041-940

CATALOG NUMBER: S123DIP-S1000D1195U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	193.3	200.5	209.6	225.0	246.6	282.0	335.6	418.9	551.5	742.8	968.2
115°	218.5	225.9	235.3	248.9	269.7	304.2	353.3	426.1	541.5	701.5	887.2
117.5°	244.5	251.3	258.5	270.0	291.7	323.2	371.2	436.7	535.5	673.1	834.5
120°	261.8	266.3	272.8	284.5	305.5	336.5	382.7	445.5	534.2	659.2	806.2
122.5°	277.5	281.3	287.2	299.1	318.7	350.8	395.7	454.0	535.6	648.5	782.1
125°	298.9	301.0	307.2	318.6	338.3	370.1	414.3	467.6	537.6	633.6	750.0
127.5°	316.1	319.0	326.4	337.7	359.2	390.2	431.8	479.2	541.6	622.5	720.9
130°	326.9	329.8	338.8	351.0	372.5	403.0	442.6	487.3	544.5	615.2	704.2
132.5°	334.2	338.0	348.2	363.0	384.8	414.0	451.7	494.5	545.7	609.5	688.4
135°	348.5	352.3	363.5	378.7	400.2	429.5	464.6	502.8	547.2	600.9	666.9
137.5°	361.9	366.0	377.0	393.3	414.7	441.3	473.9	509.1	547.7	592.8	648.3
140°	370.1	375.2	385.6	402.2	422.8	449.2	480.0	511.9	548.0	588.2	636.8
142.5°	380.0	384.1	395.1	409.8	430.3	454.5	483.9	514.3	547.2	582.6	625.8
145°	395.9	398.8	407.9	423.1	440.4	464.1	491.1	519.1	548.0	579.2	614.5
147.5°	410.9	412.8	421.9	435.3	452.4	472.6	497.3	522.4	548.0	575.2	604.2
150°	421.7	422.7	431.0	444.4	459.0	477.6	501.4	523.2	548.0	571.9	597.8
152.5°	432.5	432.7	441.0	452.7	465.6	483.4	503.9	524.9	545.5	567.8	591.2
155°	448.6	448.6	454.9	465.2	476.5	491.1	508.7	525.3	542.9	560.5	581.2
157.5°	461.5	462.3	467.3	476.4	486.1	497.3	511.4	526.3	539.4	554.1	570.0
160°	471.4	471.4	475.5	483.8	491.1	501.4	513.9	526.3	537.7	549.1	562.6
162.5°	478.8	478.8	482.1	488.8	495.3	503.9	514.7	525.5	534.4	544.1	555.1
165°	490.1	489.0	491.1	496.2	500.4	507.7	515.9	523.2	529.4	536.6	544.9
167.5°	498.6	497.3	498.3	502.3	505.2	509.7	515.8	521.6	524.4	529.2	535.2
170°	503.5	501.4	502.5	505.6	507.7	509.7	514.9	519.1	521.1	524.2	529.4
172.5°	506.8	505.6	505.8	508.1	509.3	510.6	514.9	518.3	518.6	520.0	523.6
175°	510.8	509.7	508.7	510.8	510.8	511.8	513.9	515.9	514.9	514.9	517.0
177.5°	512.6	511.8	511.0	511.8	511.8	511.8	512.6	514.2	512.6	511.8	512.6
180°	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8



TEST NUMBER: P332041-940

CATALOG NUMBER: S123DIP-S1000D1195U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1111.8	1113.5	1115.2	1116.0	1115.7	1115.5	1115.4	1115.1
5°	1109.9	1112.1	1114.3	1115.2	1114.9	1114.6	1114.4	1114.1
7.5°	1103.2	1106.0	1108.7	1109.8	1109.6	1109.2	1108.8	1108.6
10°	1096.4	1099.1	1101.9	1103.0	1102.4	1101.9	1101.4	1100.8
12.5°	1087.3	1089.8	1092.3	1093.2	1092.7	1092.2	1091.6	1091.1
15°	1069.8	1072.5	1075.1	1076.4	1076.1	1075.8	1075.6	1075.3
17.5°	1046.9	1049.4	1051.8	1052.8	1052.4	1052.0	1051.7	1051.2
20°	1030.4	1032.8	1035.3	1036.6	1036.9	1037.1	1037.4	1037.7
22.5°	1012.3	1015.3	1018.4	1019.8	1019.7	1019.6	1019.4	1019.2
25°	981.6	985.1	988.6	990.3	990.3	990.3	990.3	990.3
27.5°	949.5	952.5	955.6	957.2	957.4	957.6	957.9	958.1
30°	927.6	930.9	934.1	935.8	935.8	935.8	935.8	935.8
32.5°	903.8	907.2	910.7	912.8	913.4	914.0	914.7	915.3
35°	868.5	872.6	876.6	879.2	880.3	881.4	882.4	883.5
37.5°	832.1	836.6	841.2	843.9	844.8	845.6	846.5	847.4
40°	807.7	812.3	816.9	819.7	820.8	821.9	823.0	824.0
42.5°	782.4	787.4	792.5	795.7	797.2	798.7	800.2	801.7
45°	744.5	749.7	754.7	758.4	760.5	762.7	764.9	767.0
47.5°	706.2	712.0	717.7	721.5	723.2	724.9	726.5	728.2
50°	679.9	686.1	692.3	696.3	698.3	700.2	702.0	703.9
52.5°	653.2	659.6	666.0	670.4	672.7	675.0	677.3	679.7
55°	612.9	620.2	627.5	632.1	634.4	636.5	638.6	640.8
57.5°	571.8	579.1	586.4	591.4	593.9	596.4	599.0	601.5
60°	543.1	550.6	558.1	563.4	566.4	569.4	572.3	575.2
62.5°	515.9	523.4	530.9	536.1	538.9	541.6	544.4	547.2
65°	472.5	480.6	488.7	494.1	496.8	499.4	502.2	504.9
67.5°	429.4	438.2	447.0	452.6	454.9	457.2	459.4	461.6
70°	400.7	409.4	418.0	423.7	426.4	429.1	431.8	434.5
72.5°	372.1	380.9	389.8	395.6	398.2	400.9	403.7	406.4
75°	328.5	337.4	346.3	352.4	355.6	358.8	362.0	365.3
77.5°	287.8	297.1	306.5	312.5	314.9	317.4	319.9	322.4
80°	261.1	270.3	279.4	285.3	288.0	290.7	293.5	296.1
82.5°	236.8	245.9	255.1	261.1	263.8	266.4	269.1	271.9
85°	202.8	212.0	221.1	227.1	229.8	232.5	235.1	237.9
87.5°	178.2	187.5	196.9	203.2	205.7	208.7	211.5	214.0
90°	181.4	191.6	201.8	209.8	211.4	215.2	218.9	220.6
92.5°	234.5	225.4	226.3	226.7	227.3	226.7	230.2	230.8
95°	509.9	398.1	351.5	319.7	302.7	296.1	291.5	290.1
97.5°	1057.2	880.2	754.7	636.1	562.3	518.4	493.1	486.9
100°	1342.7	1266.6	1153.2	1011.4	909.5	836.5	798.8	802.5
102.5°	1433.4	1438.3	1375.3	1287.2	1208.4	1151.3	1120.2	1099.0
105°	1453.0	1564.1	1591.3	1569.4	1524.2	1487.3	1456.5	1453.8
107.5°	1362.2	1537.7	1635.7	1677.3	1680.5	1669.6	1660.8	1653.7
110°	1279.0	1476.7	1614.2	1691.3	1722.4	1732.9	1733.0	1733.0



TEST NUMBER: P332041-940

CATALOG NUMBER: S123DIP-S1000D1195U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1195.7	1397.2	1550.3	1648.1	1703.5	1731.6	1741.9	1744.6
115°	1085.3	1272.1	1430.8	1548.1	1627.9	1675.7	1698.5	1705.9
117.5°	1002.7	1164.8	1308.0	1426.8	1509.9	1564.2	1596.2	1605.3
120°	958.5	1104.6	1235.1	1343.8	1427.5	1487.5	1514.2	1522.3
122.5°	922.6	1055.2	1176.3	1277.5	1352.1	1406.1	1435.4	1445.2
125°	873.8	992.4	1097.5	1184.2	1252.4	1299.8	1327.7	1336.8
127.5°	830.3	936.3	1031.4	1110.4	1171.3	1212.0	1237.2	1245.7
130°	802.5	901.0	990.0	1063.8	1120.3	1159.2	1182.6	1192.6
132.5°	776.6	867.3	950.3	1020.8	1074.2	1113.4	1134.4	1142.1
135°	741.2	819.7	891.8	954.0	1006.1	1038.5	1058.5	1067.1
137.5°	708.7	773.3	835.5	889.6	933.5	966.4	983.5	989.6
140°	689.5	746.4	800.1	847.4	888.1	918.5	936.4	936.7
142.5°	670.7	719.6	766.3	807.5	842.5	869.5	885.8	886.1
145°	649.8	686.1	721.4	753.0	780.1	802.9	812.3	815.4
147.5°	632.8	660.7	688.0	710.2	730.8	746.5	755.4	757.2
150°	621.6	645.4	667.2	687.2	703.2	715.2	721.9	722.5
152.5°	612.5	633.0	652.3	668.7	681.0	691.7	695.5	695.6
155°	598.8	615.4	631.0	643.4	652.7	661.0	663.1	664.1
157.5°	584.3	598.2	610.2	619.9	628.0	634.3	635.9	635.7
160°	576.0	587.5	597.8	605.0	612.3	618.5	618.5	617.5
162.5°	566.1	575.9	585.3	591.7	596.6	601.9	601.9	600.9
165°	553.2	559.5	566.7	571.9	576.0	580.1	579.2	579.2
167.5°	542.1	546.8	551.0	554.7	556.5	559.5	558.4	558.4
170°	534.6	537.7	541.8	543.9	544.9	547.1	546.0	546.0
172.5°	528.0	530.2	533.6	534.8	535.0	537.1	535.2	534.4
175°	519.1	520.0	522.2	522.2	522.2	523.2	522.2	521.1
177.5°	513.4	514.2	515.1	515.1	514.2	515.1	513.4	513.4
180°	511.8	511.8	511.8	511.8	511.8	511.8	511.8	511.8

(END OF REPORT)