

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: P332021-840

Luminaire Tested: **S123DIP-S1000D805U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332021-840
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-S1000D805U840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7483.7 lumens
Efficiency: N/A
Efficacy: 137.6 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: General Diffuse

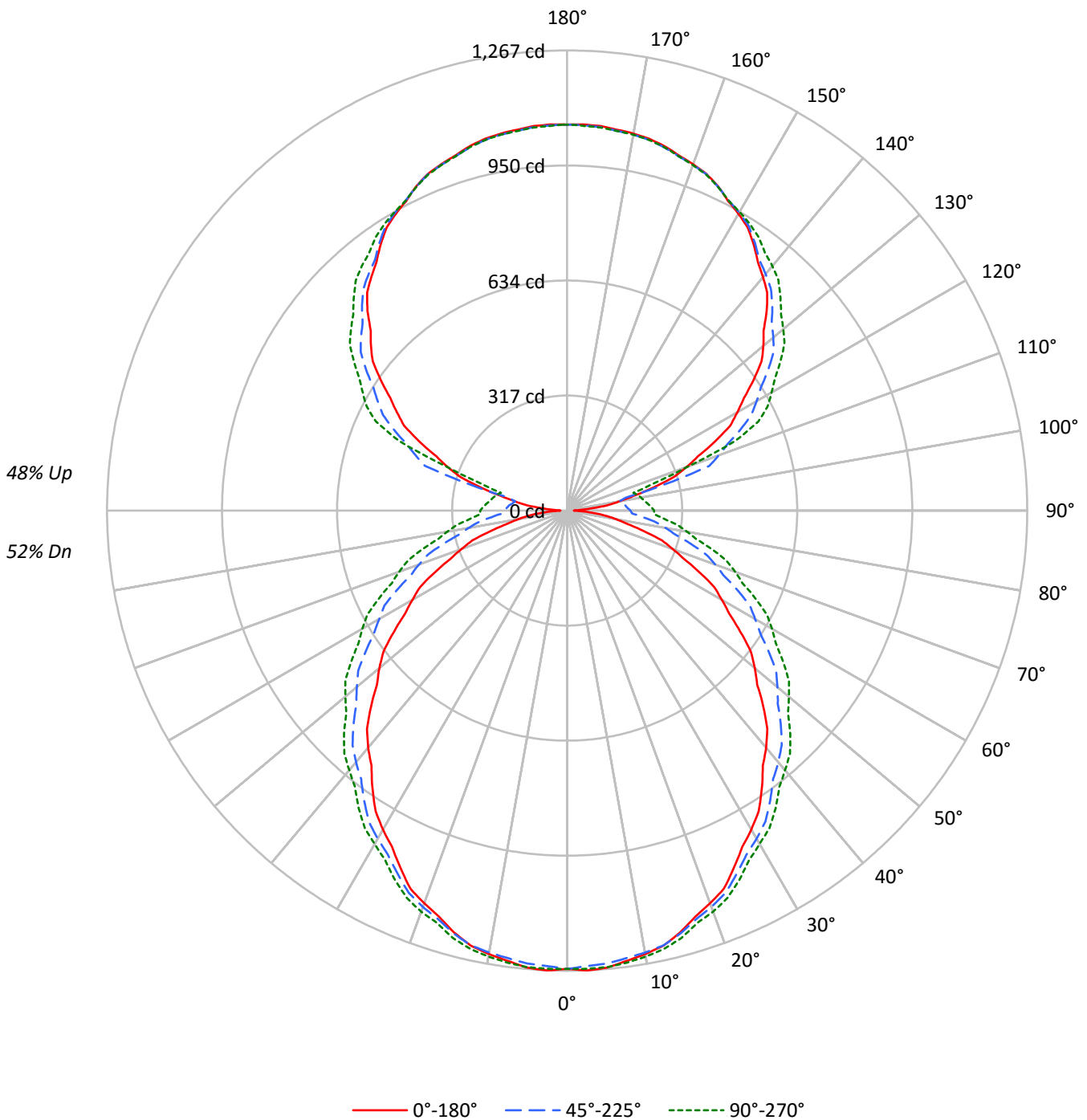
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332021-840

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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	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	39	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°	13581	13581	13581
5°	13623	13239	13246
10°	13501	12935	12870
15°	13327	12588	12458
20°	13078	12192	12005
25°	12772	11738	11529
30°	12457	11328	11046
35°	12104	10895	10660
40°	11767	10501	10247
45°	11396	10122	9918
50°	11028	9750	9554
55°	10621	9366	9226
60°	10225	8977	8892
65°	9818	8564	8493
70°	9204	8097	8084
75°	8432	7563	7667
80°	7539	7041	7193
85°	6723	6680	6917



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.6	1.6
10°-20°	341.0	4.6
20°-30°	510.0	6.8
30°-40°	609.0	8.1
40°-50°	637.2	8.5
50°-60°	598.0	8.0
60°-70°	499.4	6.7
70°-80°	357.3	4.8
80°-90°	216.1	2.9
90°-100°	172.3	2.3
100°-110°	282.4	3.8
110°-120°	507.9	6.8
120°-130°	600.7	8.0
130°-140°	618.6	8.3
140°-150°	566.3	7.6
150°-160°	454.0	6.1
160°-170°	293.0	3.9
170°-180°	101.0	1.3
0°-30°	970.6	13.0
0°-40°	1579.6	21.1
0°-60°	2814.7	37.6
0°-90°	3887.5	51.9
90°-120°	962.6	12.9
90°-150°	2748.3	36.7
90°-180°	3596.0	48.1
0°-180°	7483.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1262	1262	1262	1262	1262	
5°	1263	1260	1252	1262	1262	120
15°	1203	1206	1205	1218	1218	339
25°	1086	1099	1104	1121	1122	500
35°	935	956	974	994	1001	584
45°	764	797	832	857	869	589
55°	583	628	678	713	726	522
65°	403	457	517	556	572	398
75°	218	283	352	396	414	233
85°	67	136	209	254	269	71
90°	19	94	174	222	239	14
95°	63	88	161	207	222	71
105°	246	285	276	181	189	261
115°	448	471	526	565	581	443
125°	626	635	676	705	717	560
135°	777	781	799	825	830	598
145°	895	899	901	913	919	560
155°	984	983	984	987	983	453
165°	1038	1036	1035	1041	1036	293
175°	1063	1059	1060	1064	1059	101
180°	1063	1063	1063	1063	1063	



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CATALOG NUMBER: S123DIP-S1000D805U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7
2.5°	1267.3	1266.6	1265.8	1265.1	1264.4	1262.9	1261.0	1259.1	1257.1	1255.2	1257.1
5°	1263.1	1262.5	1261.9	1261.3	1260.7	1259.5	1257.7	1255.8	1253.9	1252.1	1254.6
7.5°	1250.7	1250.9	1251.0	1251.1	1251.2	1250.4	1248.7	1246.9	1245.1	1243.3	1246.4
10°	1239.8	1240.4	1241.0	1241.6	1242.2	1241.7	1240.2	1238.7	1237.2	1235.7	1238.7
12.5°	1226.6	1227.4	1228.3	1229.1	1230.0	1229.9	1228.9	1227.8	1226.8	1225.8	1228.6
15°	1202.6	1203.6	1204.5	1205.4	1206.3	1206.6	1206.3	1206.0	1205.7	1205.4	1208.5
17.5°	1172.5	1174.3	1176.1	1177.9	1179.7	1180.6	1180.5	1180.3	1180.2	1180.1	1182.9
20°	1150.4	1152.3	1154.1	1155.9	1157.7	1159.0	1159.6	1160.2	1160.8	1161.4	1164.2
22.5°	1127.3	1129.1	1131.0	1132.9	1134.7	1136.0	1136.9	1137.7	1138.6	1139.4	1142.9
25°	1085.8	1088.8	1092.0	1095.0	1098.0	1100.0	1101.0	1101.9	1102.8	1103.7	1107.6
27.5°	1044.0	1047.5	1051.0	1054.5	1057.9	1060.7	1062.7	1064.6	1066.5	1068.5	1072.0
30°	1014.3	1018.3	1022.3	1026.2	1030.3	1033.4	1035.9	1038.3	1040.8	1043.2	1046.9
32.5°	981.4	985.8	990.3	994.7	999.2	1003.0	1006.2	1009.4	1012.6	1015.7	1019.7
35°	934.6	939.5	944.4	949.3	954.2	958.6	962.6	966.5	970.5	974.5	979.1
37.5°	885.1	890.7	896.2	901.6	907.2	912.3	917.3	922.1	927.0	931.9	937.1
40°	852.1	857.7	863.1	868.7	874.1	880.0	886.1	892.2	898.3	904.4	909.6
42.5°	815.9	822.6	829.3	836.1	842.7	849.3	855.7	862.0	868.4	874.7	880.4
45°	764.2	771.5	778.9	786.2	793.6	801.0	808.6	816.3	823.9	831.5	837.4
47.5°	710.0	718.3	726.7	735.0	743.3	751.8	760.5	769.3	778.0	786.8	793.2
50°	674.9	683.4	692.0	700.5	709.0	718.1	727.5	737.0	746.5	756.0	763.0
52.5°	637.4	646.5	655.6	664.6	673.7	683.4	693.9	704.3	714.7	725.2	732.5
55°	582.8	592.9	602.9	613.0	623.1	633.6	644.6	655.6	666.6	677.6	685.9
57.5°	529.5	540.0	550.5	561.0	571.5	582.8	594.8	606.8	618.8	630.9	639.1
60°	492.1	503.0	514.0	525.0	536.0	547.8	560.3	572.9	585.4	597.9	606.4
62.5°	456.9	468.1	479.4	490.6	501.8	514.1	527.4	540.6	553.8	567.1	575.6
65°	402.7	414.7	426.6	438.5	450.4	463.0	476.5	489.9	503.3	516.8	525.9
67.5°	347.7	360.4	373.0	385.7	398.3	411.5	425.2	438.9	452.5	466.3	476.3
70°	309.2	322.3	335.5	348.7	361.8	375.7	390.3	405.1	419.7	434.3	444.1
72.5°	274.1	287.2	300.3	313.5	326.6	340.7	355.9	371.0	386.2	401.3	411.3
75°	218.5	232.9	247.2	261.7	276.0	290.7	306.1	321.3	336.6	351.8	361.9
77.5°	170.2	184.6	199.1	213.6	228.0	243.0	258.4	273.8	289.2	304.6	315.2
80°	136.0	151.1	166.0	181.0	195.9	211.4	227.2	243.2	259.0	274.9	285.3
82.5°	106.3	121.6	136.8	152.0	167.2	182.9	199.0	215.1	231.3	247.4	257.8
85°	67.4	82.6	97.9	113.2	128.5	144.2	160.4	176.5	192.7	208.9	219.3
87.5°	36.8	52.3	67.9	83.4	99.0	114.7	130.8	146.8	162.9	178.8	189.5
90°	18.7	35.3	52.1	68.8	85.5	102.8	120.7	138.6	156.4	174.3	185.3
92.5°	31.4	44.4	57.5	70.5	83.5	98.6	115.5	132.6	149.7	166.7	178.0
95°	63.3	68.0	72.7	77.5	82.2	93.0	109.9	126.7	143.6	160.6	171.3
97.5°	110.3	117.8	125.3	132.8	140.4	144.9	146.6	148.2	150.0	151.6	162.1
100°	145.8	159.1	172.4	185.6	198.9	198.9	185.6	172.3	159.0	145.6	155.9
102.5°	186.4	197.7	209.0	220.4	231.7	229.3	213.2	197.1	181.1	164.9	169.2
105°	246.3	255.5	264.8	274.1	283.3	286.6	284.0	281.3	278.6	276.0	253.5
107.5°	308.1	315.9	323.7	331.4	339.2	350.5	365.5	380.4	395.5	410.4	395.8
110°	349.3	356.2	363.1	370.0	376.9	387.5	401.6	415.8	429.9	444.0	446.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	389.7	395.6	401.3	407.1	412.8	422.6	436.3	449.9	463.5	477.3	485.0
115°	448.2	452.9	457.7	462.3	467.1	475.7	488.3	500.9	513.4	526.0	535.1
117.5°	505.8	509.5	513.0	516.5	520.1	527.5	538.6	549.8	560.9	572.0	580.7
120°	540.8	543.9	547.0	550.1	553.2	560.1	570.7	581.3	591.9	602.5	610.9
122.5°	577.4	579.5	581.6	583.7	585.8	592.0	602.2	612.5	622.8	633.0	640.8
125°	626.2	627.6	629.0	630.5	631.9	637.3	646.9	656.5	666.0	675.6	682.4
127.5°	674.9	676.0	677.1	678.2	679.2	683.9	692.1	700.2	708.4	716.6	723.3
130°	705.2	706.3	707.4	708.5	709.6	713.6	720.3	727.2	734.0	740.8	747.3
132.5°	733.2	734.5	735.9	737.2	738.5	741.9	747.4	752.9	758.3	763.8	770.0
135°	777.3	778.0	778.7	779.5	780.2	782.6	786.7	790.7	794.9	798.9	805.0
137.5°	814.9	816.0	817.1	818.2	819.2	820.9	823.2	825.5	827.8	830.0	835.7
140°	839.0	840.1	841.1	842.2	843.2	844.6	846.0	847.4	848.8	850.3	855.6
142.5°	862.4	863.2	864.0	864.8	865.7	866.4	867.1	867.8	868.5	869.3	873.9
145°	895.1	896.1	897.0	897.9	898.8	899.4	899.8	900.1	900.5	900.8	903.6
147.5°	924.5	925.3	926.1	927.0	927.8	928.4	928.7	929.0	929.4	929.7	930.8
150°	943.4	944.0	944.5	945.0	945.5	946.0	946.3	946.7	947.1	947.5	947.8
152.5°	960.5	960.8	961.0	961.3	961.5	961.7	961.9	962.1	962.4	962.6	963.2
155°	984.5	984.2	983.8	983.5	983.1	983.0	983.2	983.4	983.5	983.7	984.6
157.5°	1003.1	1003.1	1003.1	1003.0	1003.0	1002.9	1002.7	1002.6	1002.4	1002.2	1003.3
160°	1014.5	1014.3	1014.2	1014.0	1013.8	1013.6	1013.5	1013.3	1013.1	1012.9	1014.0
162.5°	1025.2	1024.8	1024.3	1023.9	1023.4	1023.1	1022.9	1022.8	1022.6	1022.4	1023.6
165°	1038.2	1037.6	1037.1	1036.6	1036.1	1035.7	1035.6	1035.4	1035.2	1035.0	1036.4
167.5°	1048.3	1047.6	1046.9	1046.2	1045.5	1045.1	1045.1	1045.1	1045.1	1045.1	1046.5
170°	1054.0	1053.3	1052.6	1051.9	1051.2	1050.9	1050.9	1050.9	1050.9	1050.9	1052.3
172.5°	1057.7	1056.9	1056.1	1055.2	1054.4	1054.1	1054.2	1054.3	1054.5	1054.6	1056.0
175°	1062.7	1061.8	1061.0	1060.1	1059.1	1058.8	1058.9	1059.1	1059.3	1059.6	1060.8
177.5°	1063.9	1063.3	1062.6	1061.9	1061.2	1060.9	1061.0	1061.2	1061.3	1061.4	1062.6
180°	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7
2.5°	1259.1	1261.0	1262.9	1263.8	1263.5	1263.3	1263.1	1262.8
5°	1257.0	1259.5	1261.9	1262.9	1262.6	1262.3	1262.0	1261.7
7.5°	1249.4	1252.5	1255.6	1256.9	1256.6	1256.2	1255.8	1255.5
10°	1241.7	1244.8	1247.9	1249.1	1248.5	1247.9	1247.3	1246.7
12.5°	1231.3	1234.2	1237.0	1238.1	1237.5	1236.9	1236.3	1235.7
15°	1211.5	1214.6	1217.6	1219.0	1218.7	1218.4	1218.1	1217.8
17.5°	1185.6	1188.4	1191.1	1192.2	1191.8	1191.4	1191.0	1190.5
20°	1166.9	1169.6	1172.5	1174.0	1174.3	1174.6	1174.9	1175.2
22.5°	1146.4	1149.8	1153.4	1155.0	1154.8	1154.7	1154.5	1154.3
25°	1111.7	1115.6	1119.5	1121.6	1121.6	1121.6	1121.6	1121.6
27.5°	1075.3	1078.7	1082.2	1084.0	1084.3	1084.5	1084.8	1085.0
30°	1050.6	1054.2	1057.8	1059.8	1059.8	1059.8	1059.8	1059.8
32.5°	1023.6	1027.4	1031.4	1033.7	1034.4	1035.1	1035.9	1036.6
35°	983.6	988.3	992.8	995.7	996.9	998.2	999.4	1000.6
37.5°	942.3	947.5	952.7	955.7	956.7	957.7	958.7	959.7
40°	914.7	920.0	925.1	928.4	929.6	930.8	932.0	933.2
42.5°	886.1	891.7	897.5	901.1	902.8	904.5	906.3	908.0
45°	843.1	849.0	854.7	858.9	861.3	863.7	866.3	868.7
47.5°	799.8	806.4	812.8	817.1	819.0	820.9	822.7	824.7
50°	770.0	777.0	784.1	788.6	790.8	792.9	795.1	797.2
52.5°	739.7	747.0	754.3	759.2	761.8	764.5	767.1	769.7
55°	694.1	702.4	710.6	715.9	718.4	720.8	723.3	725.7
57.5°	647.5	655.8	664.1	669.7	672.6	675.4	678.3	681.2
60°	615.0	623.6	632.1	638.0	641.5	644.8	648.1	651.5
62.5°	584.2	592.8	601.3	607.1	610.3	613.4	616.5	619.7
65°	535.1	544.3	553.4	559.6	562.6	565.6	568.8	571.8
67.5°	486.3	496.2	506.2	512.6	515.1	517.8	520.3	522.8
70°	453.8	463.6	473.4	479.9	482.9	485.9	489.0	492.1
72.5°	421.4	431.4	441.4	448.0	451.0	454.0	457.2	460.2
75°	372.0	382.1	392.1	399.1	402.7	406.4	410.0	413.7
77.5°	325.9	336.5	347.1	353.9	356.6	359.4	362.2	365.1
80°	295.7	306.1	316.4	323.2	326.2	329.2	332.3	335.4
82.5°	268.2	278.5	288.9	295.7	298.7	301.7	304.8	307.9
85°	229.6	240.0	250.4	257.2	260.2	263.3	266.3	269.4
87.5°	200.0	210.5	221.0	227.8	231.0	234.1	237.2	240.3
90°	196.4	207.5	218.6	225.8	229.2	232.7	236.1	239.4
92.5°	189.2	200.6	211.8	218.9	222.0	225.0	228.0	231.1
95°	182.0	192.7	203.3	210.3	213.3	216.3	219.3	222.5
97.5°	172.6	183.1	193.6	200.5	203.7	206.9	210.2	213.4
100°	166.1	176.4	186.7	193.4	196.6	199.9	203.1	206.3
102.5°	173.5	177.7	182.0	185.8	189.1	192.6	195.9	199.2
105°	231.0	208.4	186.0	176.3	179.4	182.5	185.6	188.6
107.5°	381.2	366.6	352.0	334.4	313.7	293.0	272.3	251.5
110°	448.4	450.5	452.6	442.4	419.7	397.1	374.5	351.8



TEST NUMBER: P332021-840

CATALOG NUMBER: S123DIP-S1000D805U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	492.8	500.6	508.5	511.0	508.5	505.8	503.2	500.6
115°	544.2	553.3	562.4	568.5	571.6	574.8	577.9	581.1
117.5°	589.4	598.0	606.6	612.3	614.8	617.3	619.9	622.4
120°	619.4	627.7	636.2	641.5	643.6	645.8	647.9	650.1
122.5°	648.5	656.3	664.1	669.0	671.4	673.6	675.9	678.2
125°	689.1	695.9	702.7	707.3	709.7	712.3	714.8	717.2
127.5°	729.8	736.4	743.1	747.2	748.9	750.6	752.3	754.1
130°	753.8	760.3	766.8	770.8	772.2	773.8	775.3	776.7
132.5°	776.3	782.5	788.8	792.6	794.3	795.9	797.5	799.0
135°	810.9	817.0	823.0	826.5	827.5	828.5	829.5	830.5
137.5°	841.4	847.1	852.7	856.2	857.3	858.5	859.7	860.8
140°	860.8	866.2	871.4	874.6	875.9	877.0	878.2	879.3
142.5°	878.6	883.2	887.9	890.7	891.7	892.8	893.8	894.8
145°	906.5	909.2	912.0	914.0	915.2	916.5	917.7	918.9
147.5°	931.9	933.0	934.0	934.7	935.0	935.3	935.6	935.9
150°	948.1	948.5	948.8	949.1	949.1	949.2	949.3	949.4
152.5°	963.8	964.4	965.1	965.0	964.4	963.7	963.0	962.3
155°	985.5	986.3	987.2	987.1	986.1	985.0	984.0	982.9
157.5°	1004.3	1005.3	1006.4	1006.2	1004.9	1003.5	1002.2	1000.8
160°	1015.0	1016.1	1017.1	1017.0	1015.8	1014.6	1013.4	1012.2
162.5°	1024.8	1026.0	1027.1	1027.2	1026.1	1025.0	1024.0	1022.9
165°	1037.8	1039.3	1040.7	1040.8	1039.6	1038.2	1037.0	1035.8
167.5°	1047.9	1049.4	1050.8	1050.8	1049.4	1047.9	1046.5	1045.1
170°	1053.6	1055.0	1056.4	1056.4	1055.0	1053.6	1052.3	1050.9
172.5°	1057.4	1058.8	1060.3	1060.2	1058.6	1057.1	1055.5	1054.0
175°	1062.0	1063.2	1064.4	1064.3	1063.0	1061.6	1060.2	1058.7
177.5°	1063.7	1064.8	1065.9	1065.8	1064.4	1063.0	1061.6	1060.2
180°	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7

(END OF REPORT)