

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: P332329-840

Luminaire Tested: **S123RDIP-S775D1195U840-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332329-840
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: S123RDIP-S775D1195U840-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7310.6 lumens
Efficiency: N/A
Efficacy: 128.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

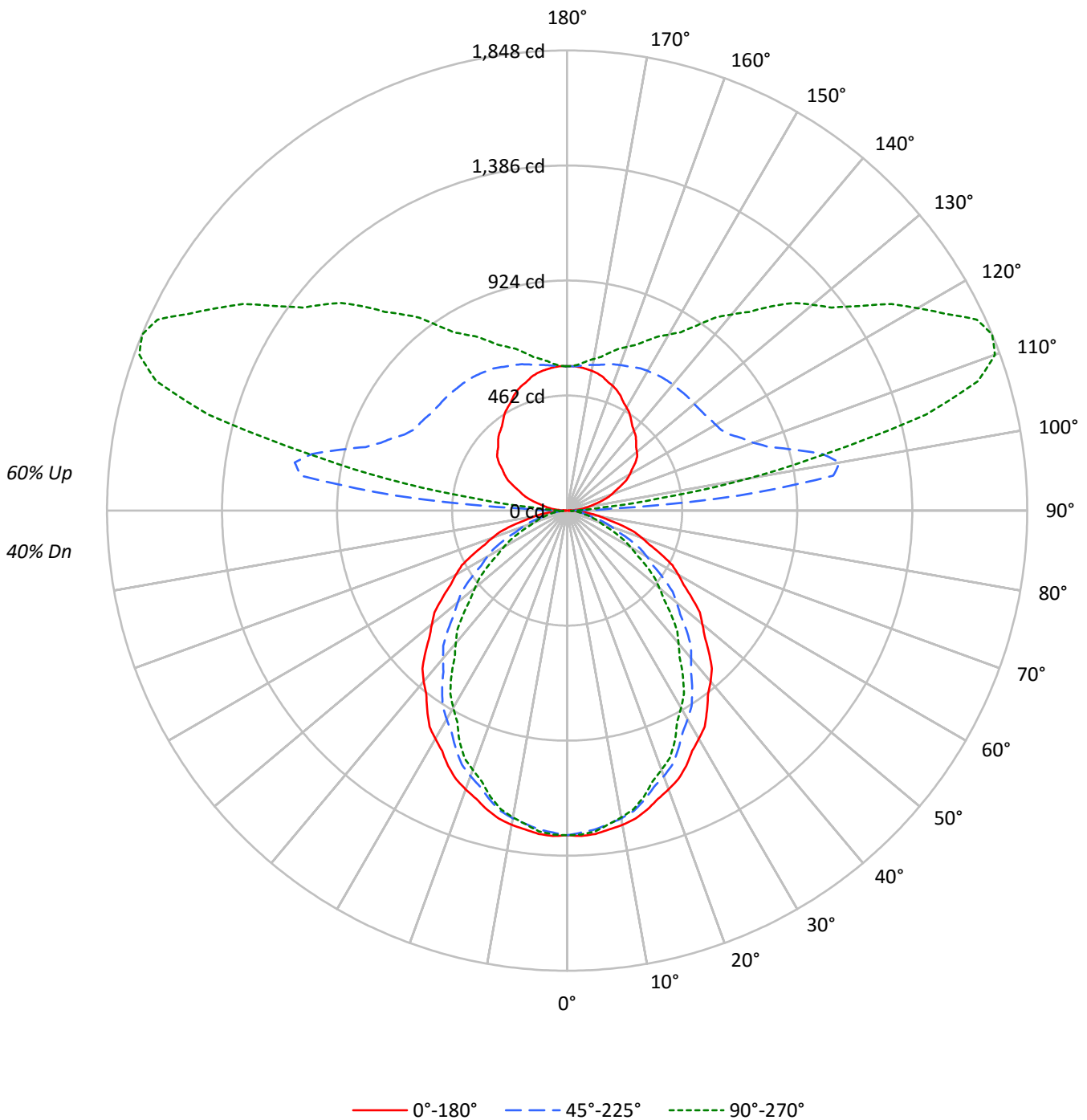
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	96	92	88	85	87	84	81	78	69	66	64	55	53	52	42	41	40	34
2	87	80	74	69	79	73	68	64	60	57	54	48	46	44	37	36	34	29
3	80	71	64	58	73	65	59	54	54	49	45	43	40	37	33	31	30	25
4	73	63	55	49	66	58	51	46	48	43	39	38	35	32	30	28	26	22
5	67	56	48	42	61	51	45	39	43	38	34	35	31	28	27	25	22	19
6	62	50	42	37	56	46	39	34	39	33	29	31	27	25	25	22	20	17
7	57	45	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	34	28	48	38	31	27	32	27	23	26	22	19	21	18	16	13
9	49	38	30	25	45	35	28	24	29	24	21	24	20	17	19	16	14	12
10	46	34	27	23	42	32	26	21	27	22	19	22	18	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14034	14034	14034
5°	14088	13894	13973
10°	14008	13719	13672
15°	13857	13397	13256
20°	13651	12997	12693
25°	13438	12545	12144
30°	13155	12026	11368
35°	12867	11506	10657
40°	12600	10891	9777
45°	12250	10286	8983
50°	11863	9597	8092
55°	11470	8811	7263
60°	11108	7967	6351
65°	10639	7055	5440
70°	10049	5923	4393
75°	9191	4662	4134
80°	8195	4135	3800
85°	6916	3656	3396



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.4	1.7
10°-20°	340.6	4.7
20°-30°	490.5	6.7
30°-40°	552.5	7.6
40°-50°	528.6	7.2
50°-60°	432.9	5.9
60°-70°	292.0	4.0
70°-80°	146.9	2.0
80°-90°	43.4	0.6
90°-100°	322.6	4.4
100°-110°	913.4	12.5
110°-120°	898.5	12.3
120°-130°	716.7	9.8
130°-140°	565.1	7.7
140°-150°	421.7	5.8
150°-160°	294.0	4.0
160°-170°	172.7	2.4
170°-180°	56.2	0.8
0°-30°	953.6	13.0
0°-40°	1506.1	20.6
0°-60°	2467.5	33.8
0°-90°	2949.9	40.4
90°-120°	2134.4	29.2
90°-150°	3837.9	52.5
90°-180°	4361.0	59.7
0°-180°	7310.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1304	1304	1304	1304	1304	
5°	1304	1298	1286	1295	1293	124
15°	1244	1231	1202	1197	1190	350
25°	1132	1104	1056	1035	1022	520
35°	979	940	876	832	811	613
45°	805	755	676	617	590	621
55°	611	557	470	410	387	548
65°	418	358	277	227	214	413
75°	221	170	112	102	99	236
85°	56	34	30	28	28	63
90°	2	14	29	33	34	5
95°	40	130	696	203	136	43
105°	136	201	943	1650	1492	145
115°	240	300	722	1582	1815	238
125°	334	395	674	1220	1432	297
135°	392	468	664	1005	1160	303
145°	447	512	656	824	907	280
155°	508	548	635	722	752	234
165°	555	571	608	645	656	156
175°	578	579	583	591	590	55
180°	580	580	580	580	580	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8
2.5°	1308.0	1307.3	1306.5	1305.8	1305.0	1303.5	1301.2	1299.0	1296.8	1294.4	1296.6
5°	1303.8	1302.6	1301.4	1300.3	1299.1	1297.1	1294.2	1291.4	1288.6	1285.9	1287.9
7.5°	1291.7	1290.5	1289.2	1287.9	1286.7	1284.1	1280.5	1276.9	1273.2	1269.5	1270.7
10°	1281.6	1279.9	1278.3	1276.7	1275.0	1272.0	1267.8	1263.6	1259.4	1255.2	1255.4
12.5°	1267.2	1265.4	1263.5	1261.7	1259.9	1256.4	1251.2	1246.1	1240.8	1235.7	1235.6
15°	1243.5	1240.9	1238.3	1235.8	1233.1	1228.6	1222.0	1215.5	1208.8	1202.2	1201.1
17.5°	1213.7	1210.7	1207.7	1204.7	1201.6	1196.0	1187.6	1179.2	1170.8	1162.6	1160.0
20°	1191.7	1187.9	1184.2	1180.4	1176.7	1170.3	1161.3	1152.5	1143.6	1134.6	1131.6
22.5°	1167.2	1162.9	1158.5	1154.2	1149.8	1143.0	1133.5	1124.0	1114.5	1105.0	1101.2
25°	1131.5	1125.6	1119.6	1113.8	1107.9	1099.5	1088.7	1077.9	1067.1	1056.3	1051.4
27.5°	1088.0	1081.6	1075.1	1068.6	1062.2	1052.9	1040.9	1028.9	1016.7	1004.7	997.8
30°	1058.4	1051.4	1044.4	1037.3	1030.3	1020.2	1007.0	993.8	980.7	967.6	959.6
32.5°	1028.9	1020.9	1012.9	1004.9	996.9	985.9	972.0	958.2	944.2	930.3	921.6
35°	979.2	970.7	962.2	953.8	945.3	933.8	919.3	904.6	890.1	875.6	865.5
37.5°	928.9	919.4	910.0	900.6	891.2	878.8	863.2	847.7	832.1	816.6	805.1
40°	896.7	886.4	876.0	865.7	855.4	841.8	825.2	808.5	791.7	775.1	762.9
42.5°	860.3	850.0	839.6	829.3	819.0	805.2	787.9	770.6	753.5	736.2	722.9
45°	804.7	794.2	783.6	773.0	762.3	748.1	729.9	711.9	693.8	675.7	662.3
47.5°	749.1	737.5	725.9	714.3	702.7	687.8	669.7	651.6	633.5	615.4	600.9
50°	708.4	697.4	686.4	675.3	664.3	649.2	630.3	611.2	592.2	573.1	558.6
52.5°	672.1	660.1	648.1	636.1	624.2	608.7	589.9	571.1	552.2	533.3	518.3
55°	611.2	599.7	588.1	576.6	565.1	549.4	529.4	509.5	489.5	469.5	455.9
57.5°	554.9	542.4	529.9	517.3	504.7	488.5	468.4	448.3	428.2	408.2	395.3
60°	516.0	503.1	490.2	477.3	464.3	448.1	428.6	409.1	389.6	370.1	357.4
62.5°	477.1	464.1	451.2	438.3	425.5	409.2	389.7	370.2	350.7	331.1	319.2
65°	417.7	404.8	391.8	378.9	366.0	350.3	332.0	313.7	295.4	277.0	265.5
67.5°	358.3	345.2	332.1	319.0	306.0	290.6	273.1	255.5	237.9	220.4	211.8
70°	319.3	306.7	294.0	281.2	268.6	254.0	237.5	221.2	204.7	188.2	180.0
72.5°	280.4	267.9	255.4	242.9	230.5	216.7	201.8	186.8	171.9	156.9	150.2
75°	221.0	209.7	198.4	187.1	175.9	163.8	150.9	137.9	125.0	112.1	109.8
77.5°	166.8	156.6	146.4	136.2	126.0	116.8	108.5	100.2	91.9	83.5	82.3
80°	132.2	122.5	112.9	103.3	93.6	86.3	81.4	76.4	71.6	66.7	65.9
82.5°	99.2	90.9	82.5	74.2	65.9	60.6	58.3	55.9	53.7	51.4	50.7
85°	56.0	50.9	45.7	40.5	35.3	32.4	31.7	31.0	30.3	29.6	29.2
87.5°	20.8	19.2	17.6	16.3	14.6	14.0	14.7	15.5	16.2	16.9	16.5
90°	2.3	4.6	7.1	10.6	12.9	15.2	18.8	22.3	25.9	29.3	28.2
92.5°	14.5	21.6	31.4	40.6	50.5	67.9	98.6	149.1	198.5	180.5	136.1
95°	39.9	43.4	56.4	76.2	106.7	152.5	252.3	427.1	619.6	695.8	564.3
97.5°	68.1	69.2	79.3	96.6	126.7	176.2	271.6	468.6	789.4	1078.2	1153.6
100°	86.8	88.0	96.2	112.6	140.8	186.5	268.7	442.3	750.9	1111.2	1342.3
102.5°	106.5	108.7	115.9	131.4	156.7	198.7	272.5	419.8	694.6	1050.2	1351.6
105°	136.1	139.7	146.6	160.8	183.0	219.4	282.8	403.6	625.4	943.3	1280.1
107.5°	167.5	171.1	177.8	191.7	212.6	246.4	302.1	402.4	581.3	849.0	1154.8
110°	190.1	193.6	199.4	212.4	232.3	265.2	318.0	407.2	564.3	795.5	1075.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	210.8	214.3	220.2	233.0	253.0	284.9	334.0	416.6	555.0	759.8	1007.4
115°	240.5	245.2	252.3	264.0	284.0	315.6	360.2	431.8	551.5	721.5	924.5
117.5°	270.3	275.7	281.6	292.4	314.7	344.1	388.1	451.9	553.6	699.0	874.5
120°	290.9	294.5	300.3	312.1	334.4	363.8	406.0	467.0	557.3	688.7	848.3
122.5°	308.8	312.4	318.2	330.8	352.2	383.4	424.7	481.1	563.9	682.2	826.7
125°	334.4	336.8	343.8	356.7	379.0	410.6	451.7	503.3	573.7	673.5	799.0
127.5°	353.9	357.4	366.1	379.2	403.8	435.6	475.1	521.7	585.0	669.2	774.7
130°	366.1	369.6	380.1	394.3	418.9	450.5	489.3	533.8	592.5	666.4	761.4
132.5°	375.5	379.9	391.4	408.3	432.9	463.7	501.5	545.1	598.1	665.5	749.3
135°	391.9	396.6	409.5	427.1	451.7	483.4	519.8	559.7	606.6	664.1	733.4
137.5°	407.4	412.3	425.0	443.7	468.2	497.5	532.4	570.5	612.3	661.5	719.4
140°	417.7	423.5	435.3	454.0	477.6	506.9	540.9	576.1	616.0	660.6	711.0
142.5°	429.0	433.9	446.6	463.4	487.0	514.4	547.4	581.7	618.8	658.7	703.5
145°	447.1	450.5	461.1	478.7	498.7	525.6	556.1	587.8	620.7	655.9	693.5
147.5°	465.3	467.5	477.8	493.0	512.3	535.2	563.2	591.6	620.7	651.5	683.6
150°	477.6	478.7	488.1	503.3	519.8	540.9	567.8	592.5	620.7	647.6	677.0
152.5°	489.8	490.0	499.4	512.7	527.3	547.4	570.7	594.4	617.8	643.0	669.5
155°	508.1	508.1	515.1	526.8	539.7	556.1	576.1	594.9	614.8	634.8	658.2
157.5°	522.6	523.5	529.2	539.5	550.5	563.2	579.2	596.0	610.9	627.5	645.5
160°	533.8	533.8	538.6	548.0	556.1	567.8	582.0	596.0	608.9	621.9	637.1
162.5°	542.3	542.3	546.0	553.6	560.9	570.7	582.9	595.1	605.2	616.2	628.6
165°	555.0	553.8	556.1	562.0	566.7	574.9	584.3	592.5	599.6	607.7	617.1
167.5°	564.6	563.2	564.3	568.9	572.1	577.2	584.1	590.7	593.9	599.4	606.1
170°	570.3	567.8	569.1	572.6	574.9	577.2	583.1	587.8	590.2	593.7	599.6
172.5°	574.0	572.6	572.8	575.4	576.8	578.2	583.1	586.9	587.3	589.0	593.0
175°	578.5	577.2	576.1	578.5	578.5	579.7	582.0	584.3	583.1	583.1	585.5
177.5°	580.6	579.7	578.7	579.7	579.7	579.7	580.6	582.4	580.6	579.7	580.6
180°	579.7	579.7	579.7	579.7	579.7	579.7	579.7	579.7	579.7	579.7	579.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8
2.5°	1298.6	1300.7	1302.7	1303.6	1303.2	1302.8	1302.4	1302.1
5°	1290.0	1292.1	1294.2	1295.1	1294.6	1294.1	1293.6	1293.2
7.5°	1271.9	1273.0	1274.2	1274.4	1273.6	1272.8	1272.0	1271.2
10°	1255.7	1255.9	1256.1	1255.7	1254.5	1253.2	1252.1	1250.9
12.5°	1235.4	1235.3	1235.2	1234.4	1233.0	1231.6	1230.3	1228.9
15°	1199.9	1198.7	1197.6	1196.2	1194.6	1192.9	1191.2	1189.6
17.5°	1157.5	1155.1	1152.6	1150.1	1147.6	1145.2	1142.8	1140.3
20°	1128.5	1125.4	1122.4	1119.4	1116.6	1113.8	1111.0	1108.1
22.5°	1097.4	1093.6	1089.7	1086.5	1083.9	1081.3	1078.6	1076.0
25°	1046.5	1041.6	1036.6	1032.9	1030.3	1027.6	1025.1	1022.5
27.5°	991.0	984.2	977.3	971.9	968.0	964.0	960.1	956.1
30°	951.6	943.5	935.5	929.7	925.9	922.2	918.4	914.6
32.5°	912.8	904.1	895.3	889.0	885.0	881.1	877.2	873.2
35°	855.4	845.3	835.2	828.0	823.7	819.5	815.3	811.0
37.5°	793.6	782.1	770.6	762.3	757.1	751.8	746.7	741.4
40°	750.6	738.4	726.2	717.4	712.0	706.6	701.1	695.8
42.5°	709.4	696.1	682.8	673.7	668.8	664.0	659.1	654.3
45°	648.9	635.5	622.1	612.6	606.9	601.3	595.7	590.1
47.5°	586.2	571.7	557.1	547.3	542.3	537.2	532.3	527.3
50°	544.0	529.4	514.8	504.8	499.5	494.0	488.7	483.2
52.5°	503.1	488.0	472.8	462.8	458.0	453.1	448.3	443.4
55°	442.2	428.6	415.0	405.8	401.1	396.4	391.7	387.0
57.5°	382.4	369.5	356.7	348.2	344.3	340.2	336.2	332.2
60°	344.7	332.0	319.3	311.0	307.0	303.0	299.0	295.0
62.5°	307.3	295.4	283.5	275.4	271.1	267.0	262.9	258.6
65°	254.0	242.5	231.0	223.9	221.4	218.7	216.2	213.6
67.5°	203.2	194.6	185.9	180.3	177.5	174.7	172.0	169.2
70°	171.8	163.5	155.3	150.0	147.3	144.7	142.2	139.6
72.5°	143.5	136.7	130.1	126.1	125.0	124.0	122.9	121.8
75°	107.3	105.0	102.7	101.3	100.8	100.4	99.9	99.4
77.5°	81.0	79.7	78.5	77.6	77.2	76.6	76.1	75.7
80°	65.2	64.5	63.8	63.2	62.7	62.3	61.8	61.3
82.5°	50.0	49.3	48.6	48.2	48.1	48.0	47.9	47.8
85°	28.7	28.2	27.8	27.5	27.5	27.5	27.5	27.5
87.5°	16.5	16.6	16.6	16.9	16.5	16.5	16.6	16.2
90°	29.3	30.5	31.7	34.0	32.8	34.0	35.2	34.0
92.5°	98.8	78.4	69.2	63.1	61.0	57.5	58.7	56.6
95°	422.4	286.3	224.1	181.9	159.6	149.1	140.8	136.1
97.5°	1052.9	843.3	692.1	551.7	465.1	412.3	380.6	370.5
100°	1383.3	1288.3	1151.0	984.4	865.9	780.2	734.5	735.7
102.5°	1493.2	1490.1	1410.1	1304.4	1212.2	1144.5	1106.2	1079.2
105°	1525.3	1642.6	1665.0	1634.5	1580.4	1535.9	1498.3	1492.5
107.5°	1432.8	1623.4	1726.2	1768.0	1768.9	1753.8	1741.2	1730.4
110°	1344.6	1560.5	1708.4	1790.5	1823.3	1832.7	1830.4	1828.1



TEST NUMBER: P332329-840

CATALOG NUMBER: S123RDIP-S775D1195U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1257.3	1477.9	1643.6	1749.2	1809.3	1838.4	1847.2	1847.8
115°	1141.7	1345.7	1518.2	1646.2	1734.1	1785.7	1809.3	1815.1
117.5°	1057.8	1234.1	1389.0	1518.7	1610.5	1669.6	1703.4	1711.4
120°	1013.7	1172.2	1312.9	1431.5	1524.1	1589.8	1618.0	1625.1
122.5°	979.0	1122.4	1252.8	1362.9	1445.3	1504.4	1535.4	1544.3
125°	932.8	1060.7	1173.3	1267.2	1342.3	1393.9	1423.2	1431.5
127.5°	892.4	1006.4	1108.0	1193.5	1260.4	1304.4	1331.0	1338.5
130°	867.1	972.7	1067.7	1147.5	1209.7	1251.9	1276.6	1286.0
132.5°	843.6	940.8	1029.3	1105.3	1163.7	1205.9	1227.8	1234.4
135°	811.9	895.2	971.5	1038.3	1095.9	1131.0	1152.2	1160.4
137.5°	783.0	851.3	917.1	975.0	1023.4	1059.0	1076.8	1082.3
140°	766.2	826.0	882.3	932.8	977.3	1010.3	1029.0	1027.8
142.5°	750.2	801.6	850.4	894.3	932.3	961.4	978.3	977.1
145°	730.9	769.7	807.3	841.2	870.6	895.2	904.6	907.0
147.5°	715.3	746.0	776.3	800.4	822.7	839.4	848.3	849.2
150°	704.0	730.9	755.6	777.9	795.5	808.4	815.5	815.5
152.5°	693.7	716.9	738.7	757.3	771.1	783.0	787.3	787.3
155°	678.1	696.9	714.6	728.6	739.2	748.6	750.9	752.0
157.5°	661.8	677.5	691.1	702.1	711.2	718.3	720.1	719.9
160°	652.4	665.3	677.0	685.2	693.5	700.4	700.4	699.3
162.5°	641.1	652.2	662.9	670.1	675.6	681.7	681.7	680.5
165°	626.5	633.6	641.8	647.6	652.4	657.0	655.9	655.9
167.5°	613.9	619.2	624.0	628.2	630.3	633.6	632.4	632.4
170°	605.4	608.9	613.6	616.0	617.1	619.6	618.3	618.3
172.5°	597.9	600.5	604.3	605.6	605.9	608.2	606.1	605.2
175°	587.8	589.0	591.4	591.4	591.4	592.5	591.4	590.2
177.5°	581.5	582.4	583.4	583.4	582.4	583.4	581.5	581.5
180°	579.7	579.7	579.7	579.7	579.7	579.7	579.7	579.7

(END OF REPORT)