

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: P333591-940

Luminaire Tested: **S125RDIP-S1090D590U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333591-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-19,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDIP-S1090D590U940-4F0-1E-UDD-F4
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1090 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5658.7 lumens
Efficiency: N/A
Efficacy: 116.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.11 / 1.25
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')
CIE Type: Semi-Direct

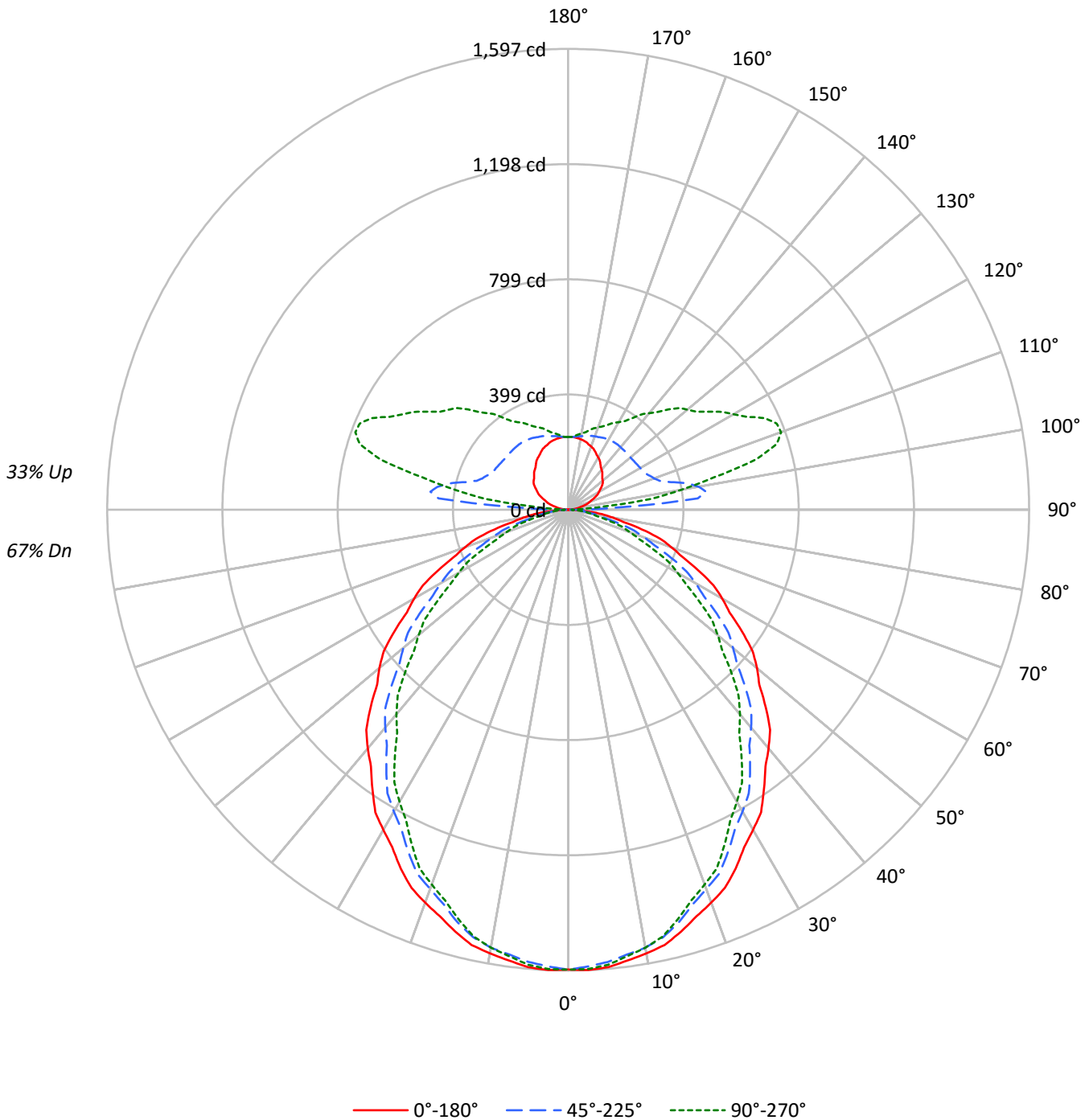
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20						20								20		
RC	80					70						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		105	105	105	105		93	93	93		81	81	81		71	71	71	67
1	102	97	94	90		96	92	89	86		82	79	77		72	70	69		64	62	61	57
2	93	85	79	74		87	81	75	71		72	68	64		64	61	58		56	54	52	48
3	85	75	68	62		80	71	65	59		64	58	54		57	53	49		50	47	44	41
4	78	67	59	53		73	63	56	51		57	51	46		51	46	42		45	41	38	35
5	72	60	52	46		67	57	49	44		51	45	40		46	41	37		41	37	34	31
6	66	54	46	40		62	51	44	38		46	40	35		41	36	33		37	33	30	27
7	61	49	41	35		58	46	39	34		42	36	31		38	33	29		34	30	27	24
8	57	45	37	31		54	42	35	30		38	32	28		35	30	26		31	27	24	22
9	53	41	33	28		50	39	32	27		35	29	25		32	27	23		29	25	22	20
10	50	38	30	25		47	36	29	24		33	27	23		30	25	21		27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10293	10293	10293
5°	10317	10200	10263
10°	10239	10105	10105
15°	10117	9900	9819
20°	9961	9614	9498
25°	9779	9333	9128
30°	9552	9004	8717
35°	9320	8665	8257
40°	9104	8312	7804
45°	8840	7916	7311
50°	8575	7486	6797
55°	8268	7076	6248
60°	7962	6577	5660
65°	7597	5997	4985
70°	7183	5274	4296
75°	6608	4447	3573
80°	5821	3492	2998
85°	4905	2853	2675



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.9	2.6
10°-20°	418.8	7.4
20°-30°	607.3	10.7
30°-40°	692.2	12.2
40°-50°	674.7	11.9
50°-60°	567.9	10.0
60°-70°	398.1	7.0
70°-80°	204.6	3.6
80°-90°	53.1	0.9
90°-100°	182.9	3.2
100°-110°	393.1	6.9
110°-120°	369.0	6.5
120°-130°	299.0	5.3
130°-140°	240.0	4.2
140°-150°	181.1	3.2
150°-160°	127.5	2.3
160°-170°	75.1	1.3
170°-180°	24.4	0.4
0°-30°	1176.0	20.8
0°-40°	1868.2	33.0
0°-60°	3110.9	55.0
0°-90°	3766.7	66.6
90°-120°	945.0	16.7
90°-150°	1665.0	29.4
90°-180°	1892.0	33.4
0°-180°	5658.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1594	1594	1594	1594	1594	
5°	1591	1586	1573	1585	1583	151
15°	1513	1505	1481	1479	1469	426
25°	1372	1353	1310	1294	1281	631
35°	1182	1152	1099	1065	1047	740
45°	968	931	867	820	800	746
55°	734	694	628	576	555	657
65°	497	455	392	346	326	492
75°	265	228	178	153	143	280
85°	66	45	38	37	36	74
90°	0	5	8	11	12	4
95°	17	50	451	205	120	18
105°	58	80	369	726	674	61
115°	103	124	296	638	751	101
125°	142	167	284	508	592	126
135°	167	201	282	426	491	129
145°	194	223	283	352	388	122
155°	222	239	276	312	325	102
165°	242	249	264	281	285	68
175°	252	252	254	257	256	24
180°	252	252	252	252	252	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8
2.5°	1596.7	1596.1	1595.4	1594.7	1594.1	1592.8	1590.6	1588.5	1586.4	1584.2	1586.4
5°	1591.4	1590.4	1589.3	1588.2	1587.2	1585.1	1582.2	1579.2	1576.3	1573.3	1576.0
7.5°	1575.7	1574.8	1573.7	1572.7	1571.6	1569.4	1565.8	1562.4	1558.8	1555.3	1557.2
10°	1561.3	1560.5	1559.7	1558.9	1558.1	1555.9	1552.1	1548.4	1544.6	1540.9	1541.7
12.5°	1544.9	1543.9	1542.9	1541.9	1540.9	1537.8	1532.9	1527.8	1522.8	1517.7	1518.3
15°	1513.1	1511.5	1509.9	1508.3	1506.7	1503.2	1497.5	1491.9	1486.3	1480.7	1480.4
17.5°	1477.3	1474.8	1472.4	1469.9	1467.4	1462.7	1455.6	1448.6	1441.5	1434.4	1433.1
20°	1449.4	1446.7	1444.0	1441.4	1438.7	1433.1	1424.5	1415.9	1407.4	1398.8	1397.5
22.5°	1418.5	1415.9	1413.2	1410.5	1407.8	1402.0	1393.0	1384.0	1375.0	1366.0	1363.4
25°	1372.3	1368.3	1364.3	1360.3	1356.3	1349.3	1339.4	1329.5	1319.6	1309.7	1306.3
27.5°	1319.4	1314.5	1309.6	1304.8	1299.8	1292.2	1281.6	1271.0	1260.3	1249.7	1244.9
30°	1280.9	1275.8	1270.7	1265.6	1260.5	1252.3	1241.1	1229.8	1218.6	1207.4	1201.2
32.5°	1243.2	1237.3	1231.4	1225.5	1219.5	1210.9	1199.4	1187.9	1176.4	1165.0	1158.2
35°	1182.1	1175.7	1169.3	1162.9	1156.5	1147.2	1135.1	1123.1	1111.1	1099.0	1091.3
37.5°	1122.1	1114.4	1106.5	1098.8	1090.9	1080.8	1068.4	1056.0	1043.6	1031.2	1021.8
40°	1079.8	1071.7	1063.7	1055.7	1047.7	1037.2	1024.4	1011.6	998.7	985.9	975.7
42.5°	1035.5	1027.3	1019.0	1010.8	1002.6	991.8	978.5	965.3	952.0	938.7	929.0
45°	967.9	960.1	952.3	944.6	936.8	925.6	910.9	896.2	881.5	866.7	856.0
47.5°	897.8	889.6	881.4	873.3	865.0	853.5	838.7	823.9	809.0	794.2	783.2
50°	853.5	844.6	835.8	827.0	818.1	806.1	790.9	775.6	760.4	745.1	733.9
52.5°	805.3	796.3	787.2	778.2	769.2	757.4	743.1	728.6	714.3	699.9	687.8
55°	734.3	725.8	717.2	708.6	700.1	688.3	673.3	658.4	643.4	628.4	616.4
57.5°	662.5	653.4	644.3	635.1	626.0	614.2	599.8	585.3	570.9	556.4	544.7
60°	616.4	607.0	597.6	588.3	578.9	566.9	552.5	538.1	523.6	509.2	497.4
62.5°	567.2	558.3	549.4	540.4	531.5	519.7	505.1	490.4	475.7	461.0	450.1
65°	497.1	488.0	478.9	469.8	460.7	449.2	435.0	420.8	406.6	392.4	381.7
67.5°	427.6	418.5	409.4	400.3	391.2	379.9	366.2	352.7	339.1	325.5	315.8
70°	380.4	371.3	362.2	353.1	344.0	332.8	319.4	306.0	292.7	279.3	271.0
72.5°	334.2	325.3	316.4	307.6	298.6	287.9	275.4	262.9	250.4	237.9	230.2
75°	264.8	256.8	248.8	240.8	232.7	223.1	211.9	200.6	189.4	178.2	172.3
77.5°	196.0	189.6	183.2	176.7	170.3	162.6	153.6	144.6	135.6	126.6	122.5
80°	156.5	150.1	143.7	137.2	130.8	123.9	116.4	108.9	101.4	93.9	91.5
82.5°	118.0	112.2	106.4	100.7	94.9	89.4	84.3	79.1	74.0	68.8	67.8
85°	66.2	61.3	56.5	51.7	46.9	43.9	42.5	41.2	39.9	38.5	38.3
87.5°	22.3	20.9	19.5	18.3	16.9	16.3	16.2	16.2	16.1	16.1	16.1
90°	0.5	1.0	2.1	3.0	4.1	5.1	5.6	6.6	7.1	8.1	8.6
92.5°	6.2	7.5	11.8	18.1	26.8	41.7	69.5	116.1	166.7	164.0	132.8
95°	16.8	17.3	21.4	26.9	38.2	61.1	115.5	227.4	367.7	450.7	441.0
97.5°	27.9	28.4	31.3	36.9	47.0	63.5	99.5	181.5	328.4	481.3	558.0
100°	35.6	36.6	38.7	44.2	53.9	69.2	98.7	164.8	293.0	459.3	586.5
102.5°	44.1	44.8	46.4	52.4	61.3	76.1	102.4	157.9	266.1	420.6	569.4
105°	57.5	57.5	60.0	65.1	73.2	87.5	109.9	155.2	240.0	368.8	514.8
107.5°	70.5	71.5	73.9	78.1	86.6	99.4	121.1	159.8	229.1	333.1	459.1
110°	79.9	80.9	82.9	87.5	95.1	108.3	129.2	164.3	225.9	316.4	427.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	89.3	90.2	91.8	96.5	104.1	116.9	137.0	170.0	225.9	306.7	403.7
115°	102.7	103.8	105.3	109.9	117.5	130.2	149.0	178.5	227.4	296.0	377.9
117.5°	114.9	116.5	118.2	122.7	131.3	143.7	161.5	188.3	230.7	290.9	362.6
120°	123.1	124.7	126.6	131.3	139.9	152.6	170.4	194.8	234.0	288.4	354.0
122.5°	131.6	132.8	134.4	138.9	148.5	161.1	179.0	202.2	236.8	286.4	346.7
125°	142.4	143.5	146.0	150.5	160.2	173.4	190.2	212.1	241.7	283.8	336.7
127.5°	150.9	152.4	155.7	161.5	171.7	184.9	201.1	221.2	247.0	282.6	327.6
130°	156.1	157.7	161.8	168.4	179.1	192.3	208.0	227.4	250.3	281.8	321.5
132.5°	160.2	162.2	167.0	174.5	185.6	198.8	214.5	232.6	254.0	281.8	316.6
135°	166.8	168.9	175.0	183.2	193.8	207.5	223.3	240.0	258.9	281.8	310.8
137.5°	175.2	176.7	182.4	190.6	201.0	215.2	229.5	245.6	263.5	282.4	305.6
140°	180.0	181.6	187.7	195.8	205.5	219.3	234.0	249.2	265.6	282.9	303.2
142.5°	185.7	186.9	192.6	200.7	210.0	222.9	236.8	251.3	266.7	283.2	301.1
145°	194.3	195.3	200.4	207.5	216.7	228.4	241.7	254.3	268.0	282.9	298.1
147.5°	203.2	203.8	208.2	214.8	222.7	233.1	244.7	256.2	268.6	281.5	294.9
150°	208.6	209.6	213.1	219.7	226.9	235.5	246.7	257.3	268.6	280.3	292.5
152.5°	214.3	214.8	218.0	223.8	230.5	238.4	248.7	258.2	268.1	278.7	289.6
155°	221.8	221.8	224.8	229.9	235.0	242.1	250.7	258.9	267.1	275.7	284.8
157.5°	228.5	228.4	230.9	235.2	239.7	245.0	252.5	259.4	265.7	272.6	280.4
160°	233.0	232.5	234.5	238.1	242.1	246.7	253.3	259.4	264.5	270.6	276.7
162.5°	236.7	236.1	238.2	241.3	244.6	248.3	254.1	259.0	263.3	268.1	273.5
165°	242.1	241.1	242.6	245.1	247.2	250.3	254.3	258.4	261.4	264.5	268.6
167.5°	245.8	245.3	246.2	247.6	249.1	250.9	254.3	257.2	258.6	260.9	263.8
170°	248.3	247.7	248.3	249.2	250.3	251.8	254.3	256.4	257.3	258.9	260.9
172.5°	249.9	249.0	249.4	250.5	251.1	251.8	254.0	255.6	255.7	256.5	258.1
175°	251.8	250.7	251.3	251.8	251.8	251.8	253.3	254.3	253.8	253.8	254.3
177.5°	252.7	251.9	251.9	252.3	251.9	251.9	252.7	253.1	252.3	252.3	252.7
180°	252.3	252.3	252.3	252.3	252.3	252.3	252.3	252.3	252.3	252.3	252.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8
2.5°	1588.5	1590.6	1592.8	1593.7	1593.5	1593.3	1593.0	1592.9
5°	1578.7	1581.4	1584.0	1585.1	1584.6	1584.0	1583.5	1583.0
7.5°	1559.1	1560.9	1562.8	1563.4	1562.8	1562.3	1561.7	1561.0
10°	1542.5	1543.3	1544.1	1544.1	1543.3	1542.5	1541.7	1540.9
12.5°	1518.9	1519.5	1520.1	1519.7	1518.5	1517.3	1516.1	1514.8
15°	1480.2	1479.9	1479.6	1478.3	1475.9	1473.5	1471.1	1468.6
17.5°	1431.7	1430.4	1429.1	1427.5	1425.4	1423.4	1421.5	1419.5
20°	1396.2	1394.8	1393.5	1391.6	1389.2	1386.8	1384.4	1382.0
22.5°	1360.8	1358.2	1355.6	1353.3	1351.3	1349.3	1347.3	1345.3
25°	1302.8	1299.3	1295.8	1292.6	1289.7	1286.7	1283.8	1280.9
27.5°	1240.0	1235.2	1230.3	1226.5	1223.6	1220.8	1217.9	1215.1
30°	1195.1	1188.9	1182.8	1178.5	1176.1	1173.7	1171.3	1168.9
32.5°	1151.5	1144.6	1137.8	1132.9	1129.9	1126.9	1123.7	1120.7
35°	1083.5	1075.8	1068.0	1062.3	1058.5	1054.8	1051.1	1047.3
37.5°	1012.5	1003.3	993.9	987.5	983.8	980.2	976.5	972.9
40°	965.5	955.4	945.2	938.5	935.3	932.1	928.9	925.7
42.5°	919.3	909.5	899.7	892.5	887.8	883.2	878.4	873.7
45°	845.3	834.6	823.9	816.5	812.5	808.5	804.5	800.5
47.5°	772.2	761.2	750.2	742.4	738.0	733.5	729.2	724.7
50°	722.6	711.4	700.2	692.6	688.6	684.6	680.6	676.5
52.5°	675.7	663.6	651.5	643.5	639.4	635.4	631.4	627.4
55°	604.3	592.3	580.2	572.0	567.8	563.5	559.2	554.9
57.5°	532.9	521.1	509.3	501.5	497.8	493.9	490.1	486.3
60°	485.6	473.9	462.1	454.2	450.2	446.2	442.2	438.2
62.5°	439.3	428.3	417.4	409.9	405.9	401.9	397.9	393.9
65°	371.0	360.3	349.6	342.2	338.2	334.2	330.2	326.2
67.5°	305.9	296.1	286.3	279.8	276.6	273.4	270.2	267.0
70°	262.7	254.4	246.1	240.3	237.1	233.9	230.7	227.5
72.5°	222.6	214.9	207.2	202.3	200.2	198.0	195.9	193.8
75°	166.4	160.5	154.6	150.7	148.8	147.0	145.1	143.2
77.5°	118.4	114.3	110.1	107.4	106.0	104.6	103.3	101.8
80°	89.1	86.7	84.3	82.8	82.2	81.7	81.1	80.6
82.5°	66.6	65.5	64.4	63.7	63.3	63.0	62.7	62.3
85°	38.0	37.7	37.5	37.2	36.9	36.6	36.4	36.1
87.5°	16.3	16.4	16.5	16.6	16.3	16.1	16.1	15.8
90°	9.2	9.6	10.2	11.1	11.1	11.1	11.7	11.7
92.5°	90.2	65.5	49.2	41.7	35.2	34.0	33.3	32.5
95°	365.7	288.4	225.9	183.2	147.0	131.7	127.7	119.6
97.5°	544.7	490.4	429.5	370.1	338.7	310.1	295.4	288.9
100°	625.6	600.7	548.3	495.4	460.3	423.7	404.9	396.7
102.5°	652.9	668.2	643.1	607.3	569.8	543.8	523.3	517.2
105°	636.9	706.5	728.9	723.3	707.0	690.3	680.1	674.0
107.5°	579.4	672.4	730.0	756.4	764.7	764.6	761.3	757.2
110°	537.2	633.8	705.5	748.8	771.6	781.3	784.9	784.9



TEST NUMBER: P333591-940

CATALOG NUMBER: S125RDIP-S1090D590U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	503.8	595.6	668.1	719.1	752.5	769.1	777.9	781.6
115°	461.8	540.7	610.4	665.8	705.5	730.0	744.1	750.8
117.5°	434.8	502.7	562.8	613.7	653.4	678.6	692.7	696.8
120°	420.2	481.2	537.2	581.9	619.6	644.0	657.7	661.7
122.5°	409.2	465.7	515.6	557.5	591.0	613.4	627.1	630.8
125°	393.2	445.1	489.4	525.9	554.5	575.3	586.5	591.6
127.5°	376.9	425.3	466.6	501.0	526.7	545.2	555.7	558.0
130°	366.8	411.5	451.2	484.2	509.7	526.5	536.6	539.7
132.5°	356.6	398.5	434.5	466.4	491.8	508.5	517.9	521.4
135°	343.3	378.4	411.0	440.0	462.4	479.1	488.3	491.3
137.5°	332.2	360.5	387.6	412.2	432.2	447.5	455.9	459.3
140°	326.0	350.0	373.4	394.8	413.6	426.8	434.4	436.9
142.5°	320.7	341.0	361.1	379.7	395.7	406.8	414.0	416.2
145°	313.9	329.6	345.4	359.1	371.3	380.0	385.6	387.6
147.5°	307.4	320.1	332.3	342.6	352.3	359.2	362.5	363.4
150°	303.6	314.9	324.5	333.7	341.3	347.4	349.5	350.0
152.5°	299.6	309.6	318.4	325.6	332.0	336.8	338.9	339.4
155°	293.5	301.7	308.7	314.3	319.4	323.0	324.5	325.0
157.5°	287.4	294.1	299.6	304.0	307.9	310.9	312.3	312.2
160°	283.3	288.4	293.5	297.0	300.6	303.2	304.2	303.6
162.5°	278.8	283.6	287.8	291.0	293.7	295.9	296.0	296.0
165°	272.6	276.2	279.3	281.8	283.8	284.8	284.8	284.8
167.5°	266.7	269.1	271.4	273.2	274.3	275.2	274.7	274.6
170°	263.5	265.0	266.5	267.5	268.6	269.1	269.1	268.6
172.5°	259.8	261.4	262.4	263.1	263.3	264.2	263.4	262.9
175°	255.8	255.8	256.9	256.9	256.9	257.3	256.4	255.8
177.5°	253.1	253.5	253.5	253.5	253.1	253.5	252.3	252.3
180°	252.3	252.3	252.3	252.3	252.3	252.3	252.3	252.3

(END OF REPORT)