

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: P333590-840

Luminaire Tested: **S125RDIP-S1090D590U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333590-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-11,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125RDIP-S1090D590U840-4F0-1E-UDD-F1  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6331.5 lumens  
Efficiency: N/A  
Efficacy: 129.7 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

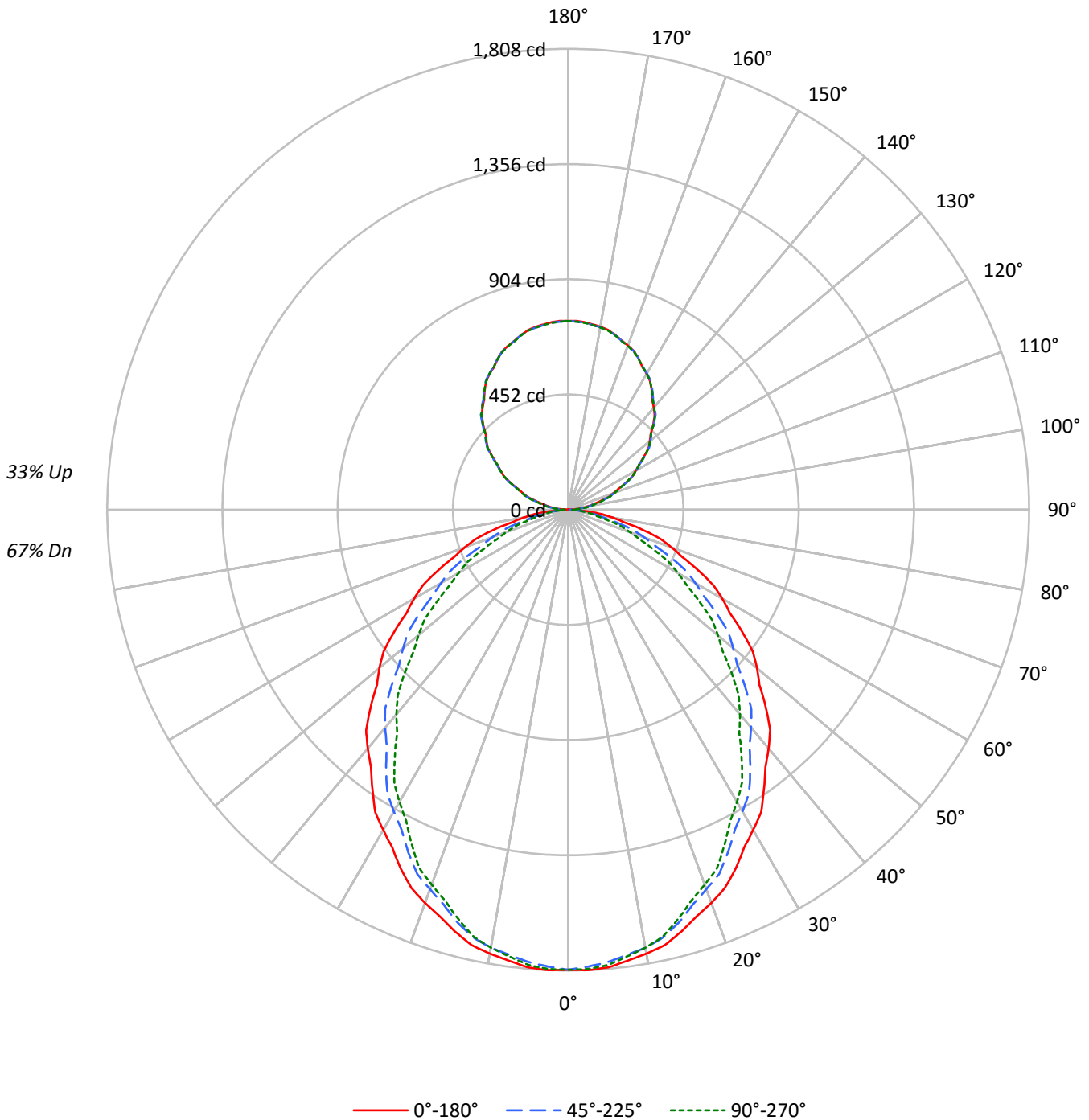
Input Watts (W): 48.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P333590-840

CATALOG NUMBER: S125RDIP-S1090D590U840-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P333590-840

CATALOG NUMBER: S125RDIP-S1090D590U840-4F0-1E-UDD-F1

**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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	98	94	90	96	92	89	86	82	80	77	73	71	69	64	63	62	57
2	93	86	79	74	88	81	76	71	72	68	64	64	61	58	57	54	52	49
3	85	76	68	62	80	72	65	60	64	59	54	57	53	50	51	47	45	41
4	78	67	59	53	73	64	56	51	57	51	47	51	46	43	45	42	39	36
5	72	60	52	46	68	57	50	44	51	45	41	46	41	37	41	37	34	31
6	66	54	46	40	62	51	44	38	46	40	36	42	37	33	37	33	30	27
7	61	49	41	35	58	47	39	34	42	36	32	38	33	29	34	30	27	24
8	57	45	37	31	54	43	35	30	39	33	28	35	30	26	31	27	24	22
9	53	41	33	28	50	39	32	27	36	30	25	32	27	24	29	25	22	20
10	50	38	30	25	47	36	29	25	33	27	23	30	25	21	27	23	20	18

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11657	11657	11657
5°	11684	11551	11622
10°	11596	11444	11444
15°	11457	11212	11120
20°	11281	10888	10757
25°	11075	10570	10337
30°	10818	10197	9871
35°	10555	9813	9351
40°	10309	9413	8838
45°	10011	8965	8280
50°	9711	8478	7698
55°	9364	8014	7076
60°	9016	7448	6409
65°	8604	6791	5645
70°	8135	5973	4864
75°	7483	5036	4047
80°	6590	3954	3396
85°	5550	3231	3031



TEST NUMBER: P333590-840

CATALOG NUMBER: S125RDIP-S1090D590U840-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.7	2.7
10°-20°	474.3	7.5
20°-30°	687.8	10.9
30°-40°	783.9	12.4
40°-50°	764.1	12.1
50°-60°	643.2	10.2
60°-70°	450.9	7.1
70°-80°	231.8	3.7
80°-90°	60.1	0.9
90°-100°	49.6	0.8
100°-110°	146.4	2.3
110°-120°	248.0	3.9
120°-130°	326.4	5.2
130°-140°	365.7	5.8
140°-150°	358.4	5.7
150°-160°	301.1	4.8
160°-170°	200.1	3.2
170°-180°	70.0	1.1
0°-30°	1331.9	21.0
0°-40°	2115.8	33.4
0°-60°	3523.1	55.6
0°-90°	4265.8	67.4
90°-120°	444.0	7.0
90°-150°	1494.5	23.6
90°-180°	2066.0	32.6
0°-180°	6331.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1805	1805	1805	1805	1805	
5°	1802	1796	1782	1794	1793	171
15°	1714	1704	1677	1675	1663	483
25°	1554	1532	1483	1466	1451	715
35°	1339	1304	1245	1206	1186	838
45°	1096	1055	982	929	907	845
55°	832	786	712	652	628	744
65°	563	515	444	392	369	558
75°	300	258	202	173	162	317
85°	75	51	44	42	41	84
90°	1	5	9	12	14	6
95°	38	39	44	48	50	40
105°	131	134	138	141	143	140
115°	248	250	252	251	251	245
125°	362	366	366	365	365	324
135°	471	474	475	475	473	363
145°	571	573	575	575	573	357
155°	653	653	654	656	653	301
165°	710	709	710	712	709	200
175°	738	736	736	739	736	70
180°	740	740	740	740	740	



TEST NUMBER: P333590-840

CATALOG NUMBER: S125RDIP-S1090D590U840-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0
2.5°	1808.3	1807.6	1806.9	1806.0	1805.3	1803.8	1801.4	1799.0	1796.5	1794.1	1796.5
5°	1802.3	1801.1	1799.9	1798.7	1797.5	1795.1	1791.8	1788.5	1785.1	1781.8	1784.8
7.5°	1784.5	1783.4	1782.2	1781.1	1779.9	1777.4	1773.3	1769.4	1765.3	1761.4	1763.5
10°	1768.2	1767.3	1766.4	1765.4	1764.5	1762.0	1757.8	1753.5	1749.3	1745.0	1746.0
12.5°	1749.6	1748.5	1747.4	1746.2	1745.0	1741.6	1736.0	1730.2	1724.5	1718.8	1719.5
15°	1713.6	1711.8	1710.0	1708.2	1706.4	1702.3	1696.0	1689.6	1683.2	1676.9	1676.6
17.5°	1673.0	1670.2	1667.5	1664.7	1661.8	1656.5	1648.5	1640.5	1632.4	1624.5	1623.0
20°	1641.4	1638.4	1635.4	1632.3	1629.3	1623.0	1613.3	1603.6	1593.9	1584.2	1582.7
22.5°	1606.5	1603.5	1600.4	1597.4	1594.4	1587.8	1577.6	1567.4	1557.2	1547.0	1544.1
25°	1554.2	1549.6	1545.1	1540.5	1536.0	1528.1	1516.9	1505.7	1494.5	1483.3	1479.4
27.5°	1494.2	1488.6	1483.1	1477.6	1472.1	1463.4	1451.4	1439.4	1427.3	1415.3	1409.9
30°	1450.6	1444.8	1439.1	1433.3	1427.5	1418.3	1405.5	1392.8	1380.1	1367.4	1360.4
32.5°	1408.0	1401.3	1394.5	1387.9	1381.1	1371.3	1358.3	1345.3	1332.3	1319.4	1311.7
35°	1338.8	1331.5	1324.2	1317.0	1309.7	1299.2	1285.6	1271.9	1258.3	1244.7	1235.9
37.5°	1270.8	1262.0	1253.1	1244.4	1235.5	1224.1	1209.9	1195.9	1181.8	1167.8	1157.2
40°	1222.8	1213.8	1204.7	1195.6	1186.5	1174.7	1160.1	1145.6	1131.0	1116.5	1105.0
42.5°	1172.7	1163.4	1154.1	1144.7	1135.4	1123.2	1108.1	1093.2	1078.1	1063.1	1052.1
45°	1096.1	1087.3	1078.5	1069.8	1061.0	1048.2	1031.6	1014.9	998.3	981.6	969.5
47.5°	1016.7	1007.4	998.2	989.0	979.7	966.6	949.9	933.0	916.3	899.5	887.0
50°	966.5	956.5	946.5	936.5	926.6	912.9	895.6	878.4	861.1	843.8	831.1
52.5°	912.0	901.8	891.5	881.3	871.1	857.8	841.5	825.2	808.9	792.6	778.9
55°	831.6	821.9	812.2	802.5	792.8	779.5	762.5	745.6	728.6	711.7	698.0
57.5°	750.3	740.0	729.6	719.2	708.9	695.6	679.2	662.9	646.5	630.2	616.8
60°	698.0	687.4	676.8	666.2	655.6	642.1	625.7	609.4	593.0	576.6	563.3
62.5°	642.4	632.3	622.2	612.0	601.9	588.5	572.0	555.3	538.8	522.1	509.8
65°	563.0	552.7	542.4	532.1	521.8	508.7	492.6	476.6	460.5	444.4	432.3
67.5°	484.2	473.9	463.6	453.3	443.0	430.2	414.8	399.4	384.1	368.6	357.6
70°	430.8	420.5	410.2	399.9	389.6	376.9	361.7	346.6	331.4	316.3	306.9
72.5°	378.5	368.4	358.3	348.3	338.2	326.1	311.9	297.7	283.6	269.4	260.7
75°	299.9	290.8	281.8	272.7	263.6	252.7	239.9	227.2	214.5	201.8	195.1
77.5°	222.0	214.7	207.4	200.2	192.9	184.1	174.0	163.8	153.6	143.4	138.8
80°	177.2	170.0	162.7	155.4	148.1	140.3	131.8	123.3	114.8	106.3	103.6
82.5°	133.6	127.0	120.5	114.0	107.4	101.3	95.4	89.6	83.8	78.0	76.7
85°	74.9	69.5	64.0	58.6	53.1	49.7	48.2	46.7	45.1	43.6	43.3
87.5°	25.2	23.7	22.2	20.7	19.2	18.5	18.4	18.4	18.3	18.2	18.4
90°	0.6	1.6	2.6	3.6	4.6	5.7	6.6	7.5	8.3	9.2	9.9
92.5°	13.9	14.6	15.3	16.1	16.8	17.7	18.8	19.9	21.0	22.1	22.9
95°	37.5	37.7	38.0	38.2	38.5	39.3	40.5	41.8	43.1	44.3	45.2
97.5°	62.2	62.3	62.4	62.5	62.6	63.5	65.3	67.1	68.9	70.6	71.5
100°	80.7	80.7	80.7	80.7	80.7	81.5	83.1	84.8	86.4	88.2	89.3
102.5°	100.5	101.0	101.5	102.0	102.5	103.2	104.0	104.9	105.7	106.5	107.9
105°	131.4	132.0	132.6	133.3	133.9	134.6	135.4	136.1	136.9	137.6	138.5
107.5°	165.4	166.1	166.7	167.3	168.0	168.6	169.3	169.8	170.4	171.0	171.4
110°	188.9	189.6	190.3	190.9	191.6	192.1	192.4	192.8	193.2	193.6	194.0



TEST NUMBER: P333590-840

CATALOG NUMBER: S125RDIP-S1090D590U840-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	212.9	213.3	213.6	213.9	214.3	214.7	215.2	215.6	216.1	216.6	216.8
115°	248.3	248.8	249.3	249.8	250.3	250.7	251.0	251.3	251.5	251.8	251.7
117.5°	283.8	284.0	284.3	284.5	284.7	285.0	285.2	285.4	285.6	285.9	286.0
120°	305.9	306.6	307.2	307.8	308.5	308.8	309.0	309.1	309.2	309.3	309.3
122.5°	329.9	330.1	330.3	330.5	330.8	331.0	331.4	331.7	332.0	332.4	332.3
125°	362.3	363.1	363.9	364.7	365.5	365.9	366.0	366.2	366.3	366.4	366.2
127.5°	397.0	397.4	397.8	398.2	398.7	399.0	399.1	399.3	399.4	399.6	399.5
130°	417.7	418.3	419.0	419.6	420.2	420.7	420.9	421.2	421.4	421.7	421.6
132.5°	438.4	439.5	440.5	441.5	442.6	443.1	443.0	443.0	442.9	442.9	442.8
135°	471.2	472.0	472.8	473.5	474.3	474.7	474.9	475.0	475.1	475.2	475.2
137.5°	502.1	502.9	503.6	504.3	505.1	505.6	505.9	506.1	506.4	506.8	506.9
140°	521.9	522.6	523.2	523.8	524.5	525.0	525.4	525.8	526.1	526.5	526.8
142.5°	541.8	542.3	542.8	543.4	543.9	544.4	544.9	545.4	545.9	546.3	546.5
145°	570.9	571.4	572.0	572.5	573.0	573.4	573.8	574.2	574.6	574.9	574.9
147.5°	597.8	598.1	598.4	598.7	599.1	599.3	599.6	600.0	600.3	600.6	600.9
150°	615.8	615.7	615.6	615.5	615.3	615.5	616.0	616.5	617.0	617.5	617.5
152.5°	630.6	630.8	631.0	631.2	631.3	631.5	631.7	631.9	632.1	632.4	632.7
155°	653.3	653.3	653.3	653.3	653.3	653.4	653.5	653.6	653.8	653.9	654.4
157.5°	673.6	673.3	673.0	672.8	672.5	672.4	672.5	672.7	672.8	672.9	673.4
160°	685.6	685.2	684.8	684.4	684.0	683.9	684.0	684.2	684.3	684.4	684.9
162.5°	696.2	695.9	695.6	695.3	695.0	694.9	694.9	695.0	695.0	695.0	695.6
165°	710.3	710.0	709.8	709.5	709.3	709.2	709.3	709.5	709.6	709.7	710.2
167.5°	722.4	721.9	721.2	720.7	720.2	720.0	720.0	720.0	720.0	720.0	720.7
170°	728.7	728.2	727.7	727.2	726.7	726.5	726.5	726.5	726.5	726.5	727.2
172.5°	733.4	732.9	732.4	731.8	731.3	731.0	731.0	731.0	731.0	731.0	731.8
175°	738.5	738.0	737.5	737.0	736.5	736.3	736.3	736.3	736.3	736.3	737.0
177.5°	741.2	740.8	740.4	740.0	739.5	739.3	739.2	739.1	739.0	738.9	739.5
180°	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3



TEST NUMBER: P333590-840

CATALOG NUMBER: S125RDIP-S1090D590U840-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0
2.5°	1799.0	1801.4	1803.8	1804.8	1804.6	1804.4	1804.1	1803.9
5°	1787.9	1790.9	1793.9	1795.1	1794.5	1793.9	1793.3	1792.7
7.5°	1765.6	1767.8	1769.9	1770.6	1769.9	1769.3	1768.6	1767.9
10°	1746.9	1747.8	1748.7	1748.7	1747.8	1746.9	1746.0	1745.0
12.5°	1720.2	1720.8	1721.5	1721.1	1719.7	1718.4	1717.0	1715.6
15°	1676.3	1676.0	1675.7	1674.2	1671.4	1668.7	1666.0	1663.2
17.5°	1621.4	1619.9	1618.4	1616.6	1614.3	1612.0	1609.8	1607.6
20°	1581.1	1579.6	1578.1	1576.0	1573.3	1570.5	1567.8	1565.1
22.5°	1541.2	1538.1	1535.2	1532.6	1530.3	1528.1	1525.8	1523.6
25°	1475.4	1471.5	1467.5	1463.9	1460.6	1457.2	1453.9	1450.6
27.5°	1404.3	1398.9	1393.3	1389.0	1385.7	1382.5	1379.3	1376.1
30°	1353.4	1346.5	1339.5	1334.6	1331.9	1329.2	1326.5	1323.7
32.5°	1304.0	1296.3	1288.6	1283.0	1279.6	1276.2	1272.6	1269.2
35°	1227.1	1218.3	1209.5	1203.1	1198.8	1194.6	1190.3	1186.1
37.5°	1146.7	1136.2	1125.6	1118.3	1114.2	1110.0	1105.9	1101.8
40°	1093.5	1082.0	1070.5	1062.9	1059.2	1055.6	1052.0	1048.3
42.5°	1041.1	1030.0	1019.0	1010.8	1005.4	1000.2	994.8	989.5
45°	957.4	945.2	933.1	924.7	920.2	915.6	911.1	906.6
47.5°	874.5	862.0	849.6	840.8	835.8	830.7	825.8	820.7
50°	818.4	805.7	792.9	784.4	779.8	775.3	770.7	766.2
52.5°	765.3	751.5	737.8	728.7	724.2	719.6	715.1	710.5
55°	684.4	670.8	657.1	647.8	643.0	638.1	633.3	628.4
57.5°	603.5	590.2	576.8	567.9	563.7	559.4	555.0	550.8
60°	550.0	536.6	523.3	514.4	509.9	505.3	500.8	496.2
62.5°	497.5	485.0	472.7	464.2	459.7	455.1	450.6	446.1
65°	420.2	408.1	396.0	387.6	383.0	378.5	374.0	369.4
67.5°	346.5	335.4	324.3	316.9	313.3	309.6	306.0	302.4
70°	297.5	288.1	278.7	272.2	268.5	264.9	261.3	257.6
72.5°	252.1	243.4	234.7	229.1	226.7	224.3	221.9	219.4
75°	188.4	181.8	175.1	170.7	168.5	166.4	164.3	162.2
77.5°	134.1	129.5	124.7	121.6	120.1	118.5	116.9	115.3
80°	100.9	98.2	95.4	93.7	93.1	92.5	91.9	91.3
82.5°	75.4	74.1	72.9	72.1	71.7	71.3	71.0	70.6
85°	43.0	42.7	42.4	42.1	41.8	41.5	41.2	40.9
87.5°	18.5	18.6	18.7	18.7	18.5	18.4	18.2	18.1
90°	10.5	11.1	11.8	12.3	12.7	13.0	13.4	13.8
92.5°	23.8	24.6	25.5	26.1	26.4	26.7	26.9	27.2
95°	46.2	47.1	48.0	48.5	48.8	49.1	49.3	49.6
97.5°	72.3	73.2	74.0	74.5	74.6	74.8	74.9	75.1
100°	90.5	91.6	92.7	93.4	93.7	94.0	94.2	94.5
102.5°	109.1	110.4	111.6	112.4	112.8	113.1	113.5	113.8
105°	139.3	140.0	140.8	141.4	141.7	142.1	142.5	142.9
107.5°	171.8	172.2	172.5	172.7	172.7	172.7	172.6	172.6
110°	194.3	194.7	195.1	195.2	195.1	195.0	194.8	194.7





TEST NUMBER: P333590-840

CATALOG NUMBER: S125RDIP-S1090D590U840-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	217.0	217.1	217.3	217.3	217.1	216.8	216.6	216.4
115°	251.5	251.4	251.3	251.2	251.0	250.9	250.7	250.6
117.5°	286.1	286.2	286.3	286.1	285.6	285.1	284.6	284.0
120°	309.3	309.3	309.3	309.1	308.6	308.1	307.6	307.1
122.5°	332.2	332.1	332.0	331.7	331.3	330.9	330.5	330.1
125°	365.9	365.7	365.4	365.2	365.1	365.0	364.8	364.7
127.5°	399.3	399.2	399.1	398.9	398.6	398.4	398.1	397.9
130°	421.4	421.3	421.2	421.0	420.7	420.5	420.2	420.0
132.5°	442.6	442.5	442.4	442.1	441.8	441.4	441.1	440.7
135°	475.2	475.2	475.2	475.0	474.5	474.0	473.5	473.0
137.5°	507.1	507.2	507.4	507.2	506.4	505.8	505.2	504.5
140°	527.0	527.4	527.6	527.4	526.7	526.1	525.4	524.8
142.5°	546.6	546.8	546.9	546.7	546.1	545.4	544.8	544.2
145°	574.9	574.9	574.9	574.7	574.4	574.0	573.6	573.2
147.5°	601.2	601.5	601.8	601.5	600.6	599.8	598.8	598.0
150°	617.5	617.5	617.5	617.4	617.2	616.9	616.7	616.4
152.5°	633.0	633.3	633.6	633.5	633.0	632.6	632.1	631.7
155°	654.9	655.4	655.9	655.9	655.2	654.6	653.9	653.3
157.5°	673.9	674.4	674.9	674.8	673.9	673.1	672.3	671.4
160°	685.4	685.9	686.4	686.4	685.8	685.1	684.5	683.9
162.5°	696.2	696.8	697.5	697.4	696.7	695.9	695.2	694.4
165°	710.7	711.2	711.9	711.7	710.9	710.1	709.3	708.6
167.5°	721.5	722.4	723.1	723.1	722.3	721.4	720.6	719.9
170°	728.0	728.7	729.5	729.4	728.6	727.7	726.8	725.9
172.5°	732.7	733.4	734.2	734.2	733.4	732.6	731.7	730.9
175°	737.8	738.5	739.3	739.2	738.4	737.5	736.6	735.7
177.5°	740.1	740.7	741.3	741.3	740.6	739.9	739.1	738.4
180°	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3

(END OF REPORT)