

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: P333276-940

Luminaire Tested: **S125DIP-S1090D810U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333276-940  
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: S125DIP-S1090D810U940-4F0-1E-UDD-F4  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

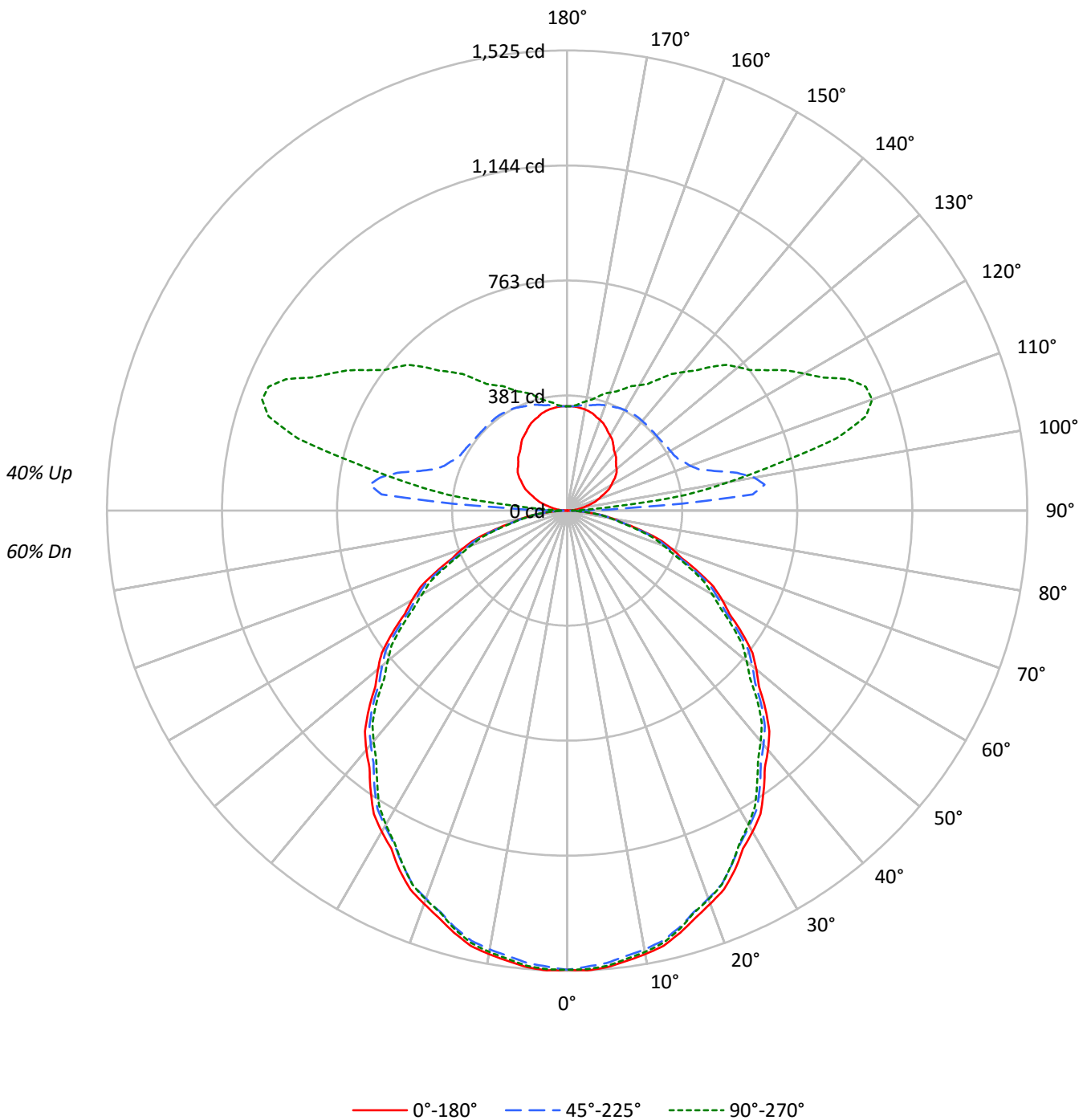
Lumens per Lamp: N/A  
Luminaire Lumens: 6554.7 lumens  
Efficiency: N/A  
Efficacy: 120.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: Semi-Direct  
  
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (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



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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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	66	66	66	60
1	100	96	92	88	93	90	86	83	78	76	73	68	66	64	58	57	55	51
2	91	83	77	72	85	78	73	68	68	64	61	59	56	53	51	49	47	42
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	45	42	40	36
4	76	65	57	51	71	61	54	48	54	48	43	47	42	39	40	37	34	31
5	70	58	50	43	65	55	47	41	48	42	37	42	37	34	36	33	30	27
6	64	52	44	38	60	49	42	36	43	37	33	38	33	29	33	29	26	23
7	60	47	39	33	56	44	37	32	39	33	29	35	30	26	30	26	23	21
8	55	43	35	29	52	40	33	28	36	30	26	32	27	23	28	24	21	19
9	52	39	31	26	48	37	30	25	33	27	23	29	24	21	26	22	19	17
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	24	20	17	15

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

	0°	45°	90°
0°	9827	9827	9827
5°	9849	9756	9818
10°	9789	9686	9742
15°	9682	9570	9610
20°	9531	9407	9423
25°	9368	9213	9204
30°	9165	9004	8959
35°	8949	8779	8656
40°	8728	8535	8413
45°	8488	8312	8147
50°	8225	8043	7801
55°	7970	7739	7523
60°	7665	7432	7167
65°	7303	7065	6825
70°	6956	6637	6411
75°	6338	6128	5916
80°	5642	5553	5415
85°	4905	4994	4728



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.5	2.2
10°-20°	405.3	6.2
20°-30°	598.4	9.1
30°-40°	698.2	10.7
40°-50°	701.3	10.7
50°-60°	615.6	9.4
60°-70°	458.7	7.0
70°-80°	262.3	4.0
80°-90°	78.2	1.2
90°-100°	250.7	3.8
100°-110°	538.9	8.2
110°-120°	505.7	7.7
120°-130°	409.8	6.3
130°-140°	328.9	5.0
140°-150°	248.2	3.8
150°-160°	174.7	2.7
160°-170°	103.0	1.6
170°-180°	33.5	0.5
0°-30°	1147.1	17.5
0°-40°	1845.3	28.2
0°-60°	3162.2	48.2
0°-90°	3961.3	60.4
90°-120°	1295.2	19.8
90°-150°	2282.2	34.8
90°-180°	2593.0	39.6
0°-180°	6554.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1522	1522	1522	1522	1522	
5°	1519	1516	1505	1515	1514	144
15°	1448	1444	1431	1437	1437	408
25°	1315	1308	1293	1295	1292	605
35°	1135	1130	1114	1107	1098	710
45°	929	924	910	896	892	716
55°	708	703	687	677	668	632
65°	478	475	462	452	447	474
75°	254	251	246	242	237	271
85°	66	67	67	66	64	74
90°	1	6	11	15	16	5
95°	23	68	618	280	164	24
105°	79	110	506	995	924	83
115°	141	170	406	875	1029	139
125°	195	229	389	696	811	173
135°	229	275	386	583	674	178
145°	266	305	388	483	531	167
155°	304	327	378	427	446	140
165°	332	341	363	385	390	93
175°	345	345	348	352	351	33
180°	346	346	346	346	346	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6
2.5°	1525.4	1524.8	1524.1	1523.5	1522.9	1521.4	1519.3	1517.2	1515.0	1512.9	1515.0
5°	1519.2	1518.7	1518.1	1517.6	1517.1	1515.5	1512.8	1510.1	1507.4	1504.8	1507.2
7.5°	1505.2	1504.7	1504.1	1503.6	1503.1	1501.3	1498.3	1495.4	1492.5	1489.5	1491.9
10°	1492.7	1492.2	1491.7	1491.1	1490.6	1488.8	1485.9	1482.9	1480.0	1477.0	1479.2
12.5°	1477.3	1476.3	1475.3	1474.4	1473.5	1471.6	1468.8	1466.2	1463.4	1460.6	1462.4
15°	1448.1	1447.3	1446.5	1445.7	1444.9	1443.1	1440.1	1437.2	1434.2	1431.3	1432.6
17.5°	1414.7	1413.5	1412.3	1411.1	1410.0	1407.8	1404.8	1401.8	1398.7	1395.6	1397.3
20°	1386.8	1386.3	1385.7	1385.2	1384.6	1382.6	1379.1	1375.6	1372.2	1368.7	1370.6
22.5°	1358.8	1357.9	1356.9	1355.9	1355.0	1352.8	1349.6	1346.3	1343.1	1339.8	1341.0
25°	1314.6	1313.2	1311.9	1310.5	1309.2	1306.8	1303.3	1299.8	1296.4	1292.9	1293.4
27.5°	1262.8	1261.9	1261.1	1260.3	1259.5	1257.4	1253.7	1250.2	1246.6	1243.0	1243.1
30°	1229.0	1228.2	1227.4	1226.6	1225.8	1223.4	1219.4	1215.4	1211.4	1207.4	1206.8
32.5°	1192.5	1191.2	1190.0	1188.7	1187.6	1185.2	1181.5	1177.9	1174.4	1170.8	1169.8
35°	1135.1	1134.1	1133.0	1131.9	1130.9	1128.5	1124.7	1121.0	1117.2	1113.5	1112.1
37.5°	1075.7	1074.3	1073.0	1071.7	1070.3	1067.9	1064.3	1060.9	1057.3	1053.8	1051.8
40°	1035.3	1033.9	1032.6	1031.3	1029.9	1027.3	1023.6	1019.8	1016.1	1012.4	1010.0
42.5°	991.9	990.8	989.7	988.6	987.4	985.0	981.2	977.5	973.7	970.0	967.8
45°	929.3	928.3	927.2	926.1	925.1	922.9	919.7	916.5	913.3	910.1	906.9
47.5°	861.9	861.9	862.0	862.1	862.1	860.2	856.4	852.5	848.6	844.8	841.5
50°	818.6	817.8	817.0	816.2	815.4	813.3	810.1	806.9	803.7	800.5	797.0
52.5°	774.3	773.6	773.1	772.5	772.0	769.9	766.5	763.0	759.6	756.2	753.1
55°	707.8	707.0	706.2	705.4	704.6	702.3	698.6	694.8	691.1	687.3	684.9
57.5°	637.8	637.3	636.9	636.5	636.1	634.3	631.1	627.9	624.8	621.6	618.5
60°	593.4	592.4	591.3	590.2	589.2	587.2	584.2	581.3	578.4	575.4	572.7
62.5°	547.2	546.4	545.5	544.7	543.9	542.2	539.6	537.1	534.6	532.1	529.1
65°	477.9	477.3	476.8	476.3	475.7	474.0	471.1	468.1	465.2	462.3	459.9
67.5°	410.7	409.6	408.5	407.3	406.3	404.6	402.3	400.2	398.0	395.8	393.8
70°	368.4	367.0	365.7	364.4	363.0	361.1	358.7	356.3	353.9	351.5	349.9
72.5°	322.2	321.2	320.3	319.4	318.5	317.3	315.8	314.1	312.6	311.0	309.2
75°	254.0	253.4	252.9	252.4	251.8	250.9	249.6	248.3	246.9	245.6	244.8
77.5°	191.2	190.9	190.7	190.6	190.3	189.8	189.0	188.3	187.6	186.8	186.4
80°	151.7	151.7	151.7	151.7	151.7	151.4	150.9	150.3	149.8	149.3	149.0
82.5°	117.0	116.5	116.2	115.7	115.3	115.0	114.9	114.9	114.7	114.6	114.1
85°	66.2	66.4	66.7	67.0	67.2	67.4	67.4	67.4	67.4	67.4	67.1
87.5°	26.1	26.3	26.6	26.8	27.1	27.3	27.2	27.3	27.2	27.3	27.4
90°	0.7	1.4	2.8	4.2	5.6	7.0	7.7	9.1	9.7	11.1	11.9
92.5°	8.5	10.3	16.1	24.8	36.8	57.2	95.2	159.1	228.4	224.8	182.0
95°	23.0	23.7	29.2	36.9	52.3	83.6	158.3	311.7	504.1	617.8	604.5
97.5°	38.2	39.1	43.0	50.6	64.4	87.0	136.3	248.8	450.1	659.7	764.8
100°	48.8	50.2	53.0	60.6	73.9	94.8	135.3	225.9	401.6	629.6	803.9
102.5°	60.5	61.3	63.6	71.8	83.9	104.3	140.3	216.4	364.8	576.6	780.5
105°	78.8	78.8	82.3	89.3	100.4	119.9	150.6	212.7	329.1	505.5	705.6
107.5°	96.7	98.0	101.4	107.1	118.7	136.3	165.9	219.1	314.1	456.6	629.2
110°	109.5	110.8	113.6	119.9	130.4	148.5	177.1	225.2	309.6	433.6	585.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	122.3	123.7	125.9	132.2	142.7	160.2	187.7	233.0	309.6	420.3	553.3
115°	140.8	142.2	144.4	150.6	161.0	178.5	204.3	244.7	311.7	405.8	518.0
117.5°	157.6	159.7	161.9	168.2	180.0	196.9	221.3	258.2	316.3	398.7	497.0
120°	168.7	170.9	173.6	179.9	191.7	209.2	233.5	267.1	320.7	395.3	485.3
122.5°	180.5	182.0	184.2	190.5	203.5	220.9	245.3	277.1	324.6	392.5	475.2
125°	195.2	196.6	200.1	206.3	219.6	237.7	260.7	290.7	331.2	389.1	461.5
127.5°	206.8	208.9	213.4	221.3	235.4	253.5	275.7	303.3	338.6	387.4	449.0
130°	214.0	216.2	221.7	230.8	245.4	263.6	285.2	311.7	343.0	386.3	440.7
132.5°	219.6	222.3	229.0	239.2	254.3	272.5	294.1	318.9	348.0	386.3	434.0
135°	228.7	231.5	239.9	251.0	265.6	284.5	306.1	329.1	354.9	386.3	426.0
137.5°	240.1	242.2	250.0	261.2	275.5	294.9	314.6	336.6	361.1	387.1	418.9
140°	246.8	248.9	257.3	268.4	281.7	300.5	320.7	341.6	363.9	387.6	415.5
142.5°	254.6	256.2	263.9	275.1	287.8	305.5	324.6	344.5	365.6	388.3	412.8
145°	266.4	267.7	274.7	284.5	297.0	313.1	331.2	348.6	367.5	387.6	408.6
147.5°	278.6	279.5	285.4	294.5	305.4	319.5	335.4	351.2	368.1	385.8	404.2
150°	285.9	287.2	292.1	301.2	310.9	322.8	338.1	352.8	368.1	384.1	400.9
152.5°	293.6	294.5	298.8	306.7	316.0	326.7	340.9	353.9	367.6	381.9	397.0
155°	304.0	304.0	308.2	315.1	322.1	331.9	343.8	354.9	366.0	377.9	390.5
157.5°	313.2	313.1	316.4	322.4	328.5	335.9	346.1	355.6	364.3	373.7	384.3
160°	319.3	318.6	321.5	326.3	331.9	338.1	347.2	355.6	362.6	371.0	379.3
162.5°	324.3	323.7	326.5	330.7	335.2	340.4	348.3	355.0	360.9	367.6	374.8
165°	331.9	330.5	332.6	336.1	338.9	343.0	348.6	354.2	358.4	362.6	368.1
167.5°	336.9	336.2	337.4	339.4	341.3	344.0	348.6	352.5	354.5	357.7	361.6
170°	340.3	339.6	340.3	341.6	343.0	345.1	348.6	351.4	352.8	354.9	357.7
172.5°	342.5	341.3	341.9	343.3	344.1	345.1	348.0	350.3	350.5	351.5	353.7
175°	345.1	343.8	344.5	345.1	345.1	345.1	347.2	348.6	347.9	347.9	348.6
177.5°	346.3	345.3	345.3	345.8	345.3	345.3	346.3	347.0	345.8	345.8	346.3
180°	345.8	345.8	345.8	345.8	345.8	345.8	345.8	345.8	345.8	345.8	345.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6
2.5°	1517.2	1519.3	1521.4	1522.4	1522.2	1522.0	1521.8	1521.6
5°	1509.6	1512.0	1514.4	1515.5	1515.2	1514.9	1514.7	1514.4
7.5°	1494.2	1496.6	1499.0	1500.0	1499.8	1499.5	1499.2	1499.0
10°	1481.3	1483.5	1485.6	1486.6	1486.3	1486.0	1485.8	1485.5
12.5°	1464.1	1465.8	1467.5	1468.4	1468.3	1468.2	1468.2	1468.1
15°	1434.0	1435.3	1436.6	1437.3	1437.3	1437.3	1437.3	1437.3
17.5°	1399.0	1400.6	1402.3	1402.5	1401.1	1399.8	1398.5	1397.1
20°	1372.4	1374.3	1376.2	1376.4	1375.1	1373.8	1372.4	1371.1
22.5°	1342.3	1343.5	1344.7	1344.9	1344.0	1343.1	1342.2	1341.2
25°	1294.0	1294.5	1295.0	1294.9	1294.1	1293.2	1292.4	1291.6
27.5°	1243.2	1243.3	1243.5	1243.1	1242.3	1241.5	1240.7	1239.9
30°	1206.3	1205.8	1205.2	1204.6	1203.8	1203.0	1202.2	1201.4
32.5°	1168.9	1167.9	1167.0	1165.7	1164.3	1162.9	1161.4	1159.9
35°	1110.8	1109.5	1108.1	1106.4	1104.3	1102.2	1100.0	1097.9
37.5°	1049.8	1047.8	1045.9	1044.3	1043.0	1041.8	1040.5	1039.4
40°	1007.5	1005.1	1002.7	1001.1	1000.3	999.5	998.7	997.9
42.5°	965.6	963.4	961.3	959.5	958.3	957.1	955.8	954.6
45°	903.7	900.4	897.2	895.2	894.4	893.6	892.8	892.0
47.5°	838.3	835.0	831.8	829.2	827.3	825.5	823.6	821.7
50°	793.5	790.1	786.6	783.9	782.0	780.2	778.3	776.4
52.5°	750.1	747.1	744.0	741.5	739.3	737.3	735.2	733.1
55°	682.5	680.1	677.7	675.6	673.7	671.8	669.9	668.1
57.5°	615.5	612.3	609.2	607.2	606.2	605.1	604.1	603.1
60°	570.1	567.4	564.7	562.4	560.5	558.7	556.8	554.9
62.5°	526.3	523.4	520.5	518.4	516.9	515.5	514.0	512.6
65°	457.4	455.0	452.6	450.8	449.8	448.7	447.6	446.6
67.5°	391.7	389.7	387.6	386.3	385.7	385.0	384.4	383.8
70°	348.3	346.7	345.1	343.8	342.7	341.6	340.5	339.5
72.5°	307.5	305.6	303.8	302.4	301.3	300.2	299.2	298.1
75°	244.0	243.2	242.4	241.4	240.3	239.2	238.2	237.1
77.5°	185.8	185.4	184.9	184.3	183.5	182.8	182.0	181.3
80°	148.7	148.5	148.2	147.8	147.2	146.7	146.2	145.6
82.5°	113.6	113.2	112.7	112.4	112.3	112.2	112.1	111.9
85°	66.9	66.6	66.3	65.9	65.4	64.8	64.3	63.8
87.5°	27.6	27.7	27.8	27.9	27.5	27.0	26.8	26.3
90°	12.6	13.3	13.9	15.3	15.3	15.3	16.1	16.1
92.5°	123.6	89.7	67.5	57.2	48.2	46.5	45.6	44.5
95°	501.3	395.3	309.6	251.0	201.5	180.6	175.0	163.8
97.5°	746.6	672.3	588.7	507.3	464.2	425.2	404.9	396.0
100°	857.6	823.4	751.6	679.1	631.0	580.8	555.0	543.9
102.5°	894.9	916.1	881.5	832.5	781.0	745.3	717.3	708.9
105°	872.9	968.5	999.2	991.5	969.1	946.1	932.2	923.8
107.5°	794.2	921.8	1000.5	1036.9	1048.2	1048.0	1043.5	1037.9
110°	736.3	868.7	967.1	1026.3	1057.7	1070.9	1075.8	1075.8





TEST NUMBER: P333276-940

CATALOG NUMBER: S125DIP-S1090D810U940-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	690.5	816.3	915.7	985.6	1031.4	1054.2	1066.3	1071.4
115°	633.1	741.2	836.7	912.7	967.1	1000.5	1020.0	1029.1
117.5°	596.0	689.1	771.4	841.2	895.5	930.1	949.5	955.0
120°	575.9	659.6	736.3	797.6	849.2	882.7	901.5	907.0
122.5°	560.9	638.4	706.7	764.2	810.2	840.9	859.7	864.7
125°	539.0	610.1	670.7	720.9	760.0	788.5	803.9	810.8
127.5°	516.7	583.0	639.6	686.6	722.0	747.3	761.8	764.8
130°	502.7	564.1	618.4	663.8	698.7	721.7	735.6	739.8
132.5°	488.7	546.2	595.6	639.2	674.0	697.1	709.9	714.6
135°	470.6	518.7	563.4	603.1	633.7	656.7	669.3	673.5
137.5°	455.3	494.2	531.3	565.0	592.5	613.4	625.0	629.6
140°	446.9	479.7	511.8	541.0	566.9	585.0	595.4	598.9
142.5°	439.7	467.4	495.0	520.4	542.3	557.7	567.6	570.4
145°	430.2	451.8	473.4	492.2	509.0	520.8	528.5	531.3
147.5°	421.2	438.8	455.4	469.7	482.9	492.4	496.9	498.1
150°	416.3	431.6	444.8	457.4	467.9	476.2	479.0	479.7
152.5°	410.6	424.4	436.5	446.2	455.0	461.7	464.5	465.2
155°	402.3	413.5	423.2	430.9	437.8	442.7	444.8	445.5
157.5°	394.0	403.1	410.6	416.7	422.1	426.1	428.1	427.9
160°	388.3	395.3	402.3	407.2	412.1	415.5	417.0	416.3
162.5°	382.2	388.6	394.5	398.8	402.6	405.5	405.8	405.6
165°	373.7	378.6	382.8	386.3	389.1	390.5	390.5	390.5
167.5°	365.6	368.8	372.0	374.5	375.9	377.2	376.7	376.5
170°	361.1	363.3	365.3	366.8	368.1	368.8	368.8	368.1
172.5°	356.1	358.2	359.8	360.6	360.9	362.1	361.1	360.3
175°	350.7	350.7	352.1	352.1	352.1	352.8	351.4	350.7
177.5°	347.0	347.5	347.5	347.5	347.0	347.5	345.8	345.8
180°	345.8	345.8	345.8	345.8	345.8	345.8	345.8	345.8

(END OF REPORT)