

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: P333456-830

Luminaire Tested: **S125DIW-S1090D1560U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333456-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S1090D1560U830-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9901.5 lumens  
Efficiency: N/A  
Efficacy: 129.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

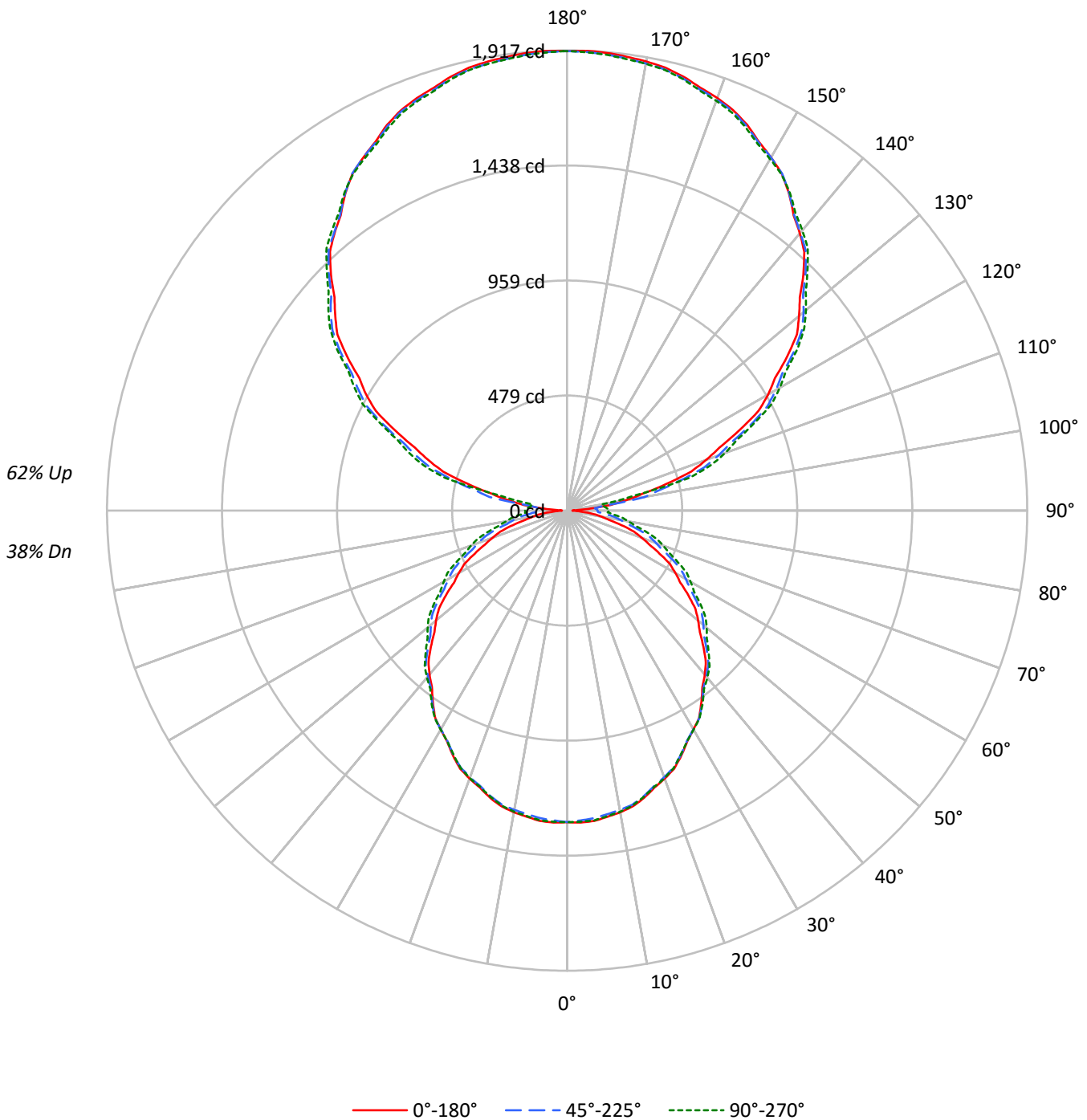
Input Watts (W): 76.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P333456-830

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### Luminous Intensity Polar Plot





TEST NUMBER: P333456-830

CATALOG NUMBER: S125DIW-S1090D1560U830-4F0-1E-UDD-D

**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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	95	90	86	82	86	82	78	75	66	64	62	52	51	49	39	38	37	31
2	86	78	72	67	78	71	66	61	58	54	51	45	43	40	34	32	31	25
3	78	69	61	55	71	62	56	51	51	46	42	40	37	34	30	28	26	21
4	71	61	53	47	64	55	48	43	45	40	36	35	32	29	27	24	22	18
5	65	54	46	40	59	49	42	37	40	35	31	32	28	25	24	21	19	16
6	60	48	40	34	54	44	37	32	36	31	27	29	25	22	22	19	17	14
7	56	43	35	30	50	40	33	28	33	27	23	26	22	19	20	17	15	12
8	51	39	32	26	47	36	29	24	30	24	21	24	20	17	18	15	13	11
9	48	36	28	23	43	33	26	22	27	22	18	22	18	15	17	14	12	10
10	45	33	25	21	40	30	24	19	25	20	16	20	16	14	15	13	11	9

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

	0°	45°	90°
0°	8382	8382	8382
5°	8399	8227	8253
10°	8339	8080	8068
15°	8240	7905	7833
20°	8107	7687	7597
25°	7947	7455	7307
30°	7754	7199	7044
35°	7574	6964	6802
40°	7390	6715	6559
45°	7184	6503	6343
50°	6986	6274	6153
55°	6748	6056	5928
60°	6488	5808	5700
65°	6217	5549	5444
70°	5908	5194	5179
75°	5420	4854	4854
80°	4780	4442	4501
85°	4183	4164	4388



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.7	1.2
10°-20°	348.4	3.5
20°-30°	518.1	5.2
30°-40°	613.7	6.2
40°-50°	634.5	6.4
50°-60°	584.5	5.9
60°-70°	472.5	4.8
70°-80°	316.4	3.2
80°-90°	168.1	1.7
90°-100°	161.6	1.6
100°-110°	496.6	5.0
110°-120°	823.0	8.3
120°-130°	1023.6	10.3
130°-140°	1084.5	11.0
140°-150°	1009.6	10.2
150°-160°	814.9	8.2
160°-170°	527.0	5.3
170°-180°	181.8	1.8
0°-30°	989.2	10.0
0°-40°	1602.9	16.2
0°-60°	2821.9	28.5
0°-90°	3778.9	38.2
90°-120°	1481.2	15.0
90°-150°	4598.9	46.4
90°-180°	6123.0	61.8
0°-180°	9901.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1298	1298	1298	1298	1298	
5°	1298	1295	1286	1296	1295	123
15°	1239	1240	1232	1239	1234	349
25°	1126	1129	1122	1127	1121	518
35°	975	983	980	983	984	610
45°	803	816	823	832	833	619
55°	617	637	658	671	677	551
65°	425	454	485	503	509	422
75°	234	268	308	332	340	248
85°	70	112	156	183	195	75
90°	22	74	127	162	176	17
95°	98	124	116	149	160	116
105°	429	455	493	517	526	454
115°	791	808	841	858	858	784
125°	1119	1128	1153	1167	1170	999
135°	1392	1399	1405	1418	1416	1072
145°	1612	1613	1613	1620	1618	1007
155°	1774	1766	1768	1771	1761	817
165°	1872	1864	1864	1872	1862	528
175°	1914	1906	1907	1917	1906	182
180°	1914	1914	1914	1914	1914	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1297.9	1297.9	1297.9	1297.9	1297.9	1297.9	1297.9	1297.9	1297.9	1297.9	1297.9
2.5°	1300.9	1300.4	1300.0	1299.6	1299.1	1298.1	1296.5	1294.9	1293.4	1291.8	1293.4
5°	1297.9	1297.3	1296.8	1296.2	1295.6	1294.3	1292.3	1290.3	1288.4	1286.4	1288.6
7.5°	1286.4	1286.2	1285.9	1285.7	1285.5	1284.4	1282.3	1280.3	1278.3	1276.2	1278.2
10°	1276.2	1276.2	1276.2	1276.2	1276.2	1275.1	1272.8	1270.5	1268.3	1266.0	1268.0
12.5°	1262.0	1262.2	1262.4	1262.6	1262.9	1262.1	1260.3	1258.5	1256.7	1254.8	1256.4
15°	1239.3	1239.6	1239.9	1240.2	1240.5	1239.6	1237.7	1235.7	1233.7	1231.7	1233.4
17.5°	1209.8	1210.3	1210.9	1211.4	1212.0	1211.4	1209.4	1207.4	1205.4	1203.4	1204.8
20°	1188.5	1189.0	1189.6	1190.1	1190.7	1190.0	1188.0	1186.0	1184.0	1182.0	1182.9
22.5°	1163.9	1165.0	1166.0	1167.1	1168.1	1167.4	1165.3	1163.1	1160.8	1158.7	1159.7
25°	1126.1	1126.9	1127.8	1128.6	1129.4	1129.1	1127.4	1125.7	1124.0	1122.3	1123.4
27.5°	1083.8	1085.1	1086.3	1087.6	1088.8	1088.4	1086.6	1084.6	1082.7	1080.8	1081.6
30°	1052.3	1054.0	1055.6	1057.3	1059.0	1059.0	1057.3	1055.6	1054.0	1052.3	1052.8
32.5°	1023.8	1025.2	1026.7	1028.2	1029.6	1029.7	1028.5	1027.3	1026.1	1024.8	1025.4
35°	974.7	976.7	978.6	980.6	982.6	983.2	982.3	981.5	980.6	979.8	980.6
37.5°	925.6	927.4	929.2	930.9	932.7	933.6	933.3	933.0	932.7	932.5	933.6
40°	891.9	894.2	896.5	898.7	901.0	902.0	901.7	901.4	901.2	900.9	902.0
42.5°	855.3	858.3	861.2	864.1	867.0	868.8	869.5	870.1	870.7	871.4	872.7
45°	802.9	806.0	809.1	812.2	815.3	817.6	819.0	820.4	821.8	823.2	825.2
47.5°	749.2	752.1	755.0	757.8	760.7	763.4	765.8	768.3	770.7	773.1	776.0
50°	712.6	715.7	718.8	721.9	725.0	728.1	731.2	734.3	737.4	740.6	743.7
52.5°	673.8	677.7	681.5	685.2	689.0	692.8	696.6	700.4	704.2	707.9	711.3
55°	617.1	621.6	626.1	630.7	635.2	639.7	644.2	648.8	653.3	657.8	660.9
57.5°	559.1	564.5	570.0	575.4	580.8	586.2	591.4	596.5	601.7	606.9	610.5
60°	520.4	526.0	531.7	537.3	543.0	548.7	554.3	560.0	565.6	571.3	575.5
62.5°	482.8	488.4	494.1	499.7	505.4	511.2	517.4	523.5	529.6	535.6	540.4
65°	425.0	431.5	438.0	444.5	451.0	457.6	464.4	471.2	478.0	484.7	489.0
67.5°	370.5	376.8	383.0	389.4	395.6	402.2	409.2	416.0	422.9	429.8	435.0
70°	330.8	337.3	343.8	350.3	356.8	363.7	371.1	378.4	385.8	393.1	398.5
72.5°	292.2	298.9	305.6	312.4	319.1	326.4	334.5	342.5	350.5	358.5	364.4
75°	234.1	241.5	248.8	256.2	263.5	271.7	280.8	289.8	298.9	307.9	313.6
77.5°	178.4	186.9	195.4	203.9	212.4	220.9	229.6	238.4	247.0	255.7	261.9
80°	143.7	152.2	160.7	169.2	177.7	186.7	196.3	205.9	215.6	225.2	231.4
82.5°	112.3	121.1	130.1	139.0	148.0	157.3	167.2	177.0	186.9	196.7	202.7
85°	69.9	79.3	88.6	97.9	107.3	116.9	126.8	136.7	146.6	156.5	162.7
87.5°	40.0	49.6	59.1	68.6	78.2	88.0	98.0	108.1	118.2	128.2	135.1
90°	21.8	33.4	45.0	56.5	68.1	79.7	91.6	103.4	115.2	127.1	135.2
92.5°	40.2	46.8	53.3	59.9	66.5	75.8	87.6	99.3	111.1	123.0	130.8
95°	97.5	103.9	110.2	116.6	123.0	125.1	122.7	120.4	117.9	115.6	123.4
97.5°	183.9	192.2	200.5	208.8	217.2	214.1	199.6	185.2	170.8	156.4	153.4
100°	250.9	257.8	264.8	271.6	278.5	287.1	297.4	307.7	318.0	328.3	287.3
102.5°	319.1	325.8	332.5	339.2	345.9	354.0	363.6	373.2	382.8	392.4	389.2
105°	428.6	434.4	440.2	445.9	451.8	458.8	467.3	475.8	484.3	492.8	498.4
107.5°	542.2	546.1	550.0	553.8	557.7	564.0	572.8	581.5	590.3	599.1	604.7
110°	616.1	619.5	622.9	626.3	629.7	635.7	644.2	652.8	661.4	670.0	674.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	686.5	690.0	693.5	697.0	700.4	706.2	714.3	722.4	730.4	738.5	742.4
115°	790.9	794.4	798.0	801.5	805.0	810.7	818.3	826.0	833.7	841.3	845.2
117.5°	898.8	900.0	901.3	902.6	903.8	908.5	916.6	924.8	932.9	941.1	944.2
120°	967.0	967.4	968.0	968.6	969.0	973.1	980.5	988.0	995.4	1002.9	1007.0
122.5°	1026.1	1027.7	1029.3	1030.9	1032.5	1036.6	1043.3	1050.1	1056.8	1063.5	1067.4
125°	1118.9	1120.8	1122.8	1124.6	1126.6	1130.4	1136.0	1141.7	1147.4	1153.0	1156.3
127.5°	1206.5	1207.8	1209.0	1210.3	1211.6	1214.5	1218.9	1223.4	1227.9	1232.3	1235.8
130°	1260.9	1262.3	1263.5	1264.8	1266.1	1268.9	1273.2	1277.4	1281.7	1286.0	1289.0
132.5°	1314.4	1316.2	1318.0	1319.7	1321.4	1323.5	1325.9	1328.2	1330.6	1332.9	1336.7
135°	1391.6	1393.2	1394.9	1396.5	1398.1	1399.5	1400.9	1402.2	1403.5	1405.0	1408.0
137.5°	1462.5	1464.0	1465.4	1466.8	1468.2	1469.1	1469.5	1469.9	1470.3	1470.7	1474.1
140°	1508.1	1508.7	1509.4	1510.0	1510.6	1510.9	1510.9	1510.9	1510.8	1510.8	1514.6
142.5°	1550.1	1550.3	1550.4	1550.6	1550.7	1551.0	1551.5	1552.0	1552.6	1553.0	1555.9
145°	1611.7	1612.0	1612.4	1612.7	1613.1	1613.3	1613.3	1613.3	1613.3	1613.3	1615.0
147.5°	1664.3	1664.2	1664.1	1664.0	1663.8	1664.0	1664.3	1664.7	1665.1	1665.5	1666.3
150°	1698.4	1697.7	1697.1	1696.5	1695.8	1695.8	1696.5	1697.1	1697.7	1698.4	1699.0
152.5°	1731.3	1729.9	1728.5	1727.1	1725.7	1725.3	1726.0	1726.6	1727.3	1727.9	1728.5
155°	1773.6	1771.7	1769.8	1767.9	1766.0	1765.4	1766.0	1766.6	1767.3	1767.9	1768.9
157.5°	1806.2	1805.1	1803.9	1802.8	1801.7	1801.1	1801.2	1801.3	1801.3	1801.4	1802.4
160°	1828.9	1827.0	1825.1	1823.3	1821.4	1820.5	1820.9	1821.2	1821.5	1821.8	1823.1
162.5°	1847.1	1845.2	1843.3	1841.4	1839.5	1838.7	1839.0	1839.4	1839.7	1839.9	1841.7
165°	1871.5	1869.6	1867.6	1865.8	1863.9	1863.1	1863.4	1863.8	1864.1	1864.3	1866.2
167.5°	1889.6	1887.7	1885.7	1883.8	1881.8	1881.0	1881.3	1881.6	1882.0	1882.3	1884.5
170°	1899.9	1897.6	1895.5	1893.2	1891.0	1890.1	1890.4	1890.7	1891.0	1891.3	1893.9
172.5°	1906.7	1904.5	1902.2	1900.1	1897.8	1897.1	1897.6	1898.2	1898.8	1899.3	1901.6
175°	1914.0	1912.1	1910.3	1908.4	1906.5	1905.7	1906.0	1906.3	1906.7	1907.0	1909.5
177.5°	1917.4	1915.9	1914.4	1912.9	1911.4	1910.7	1911.0	1911.3	1911.5	1911.8	1913.5
180°	1914.0	1914.0	1914.0	1914.0	1914.0	1914.0	1914.0	1914.0	1914.0	1914.0	1914.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1297.9	1297.9	1297.9	1297.9	1297.9	1297.9	1297.9	1297.9
2.5°	1294.9	1296.5	1298.1	1298.7	1298.5	1298.3	1298.1	1297.9
5°	1290.9	1293.2	1295.4	1296.5	1296.2	1295.9	1295.6	1295.3
7.5°	1280.2	1282.1	1284.1	1285.0	1284.7	1284.4	1284.1	1283.8
10°	1270.0	1272.0	1273.9	1274.8	1274.5	1274.2	1273.9	1273.7
12.5°	1257.9	1259.4	1260.9	1261.3	1260.7	1259.9	1259.1	1258.4
15°	1235.1	1236.8	1238.5	1238.8	1237.7	1236.5	1235.4	1234.3
17.5°	1206.1	1207.3	1208.6	1208.9	1208.2	1207.6	1206.9	1206.3
20°	1183.7	1184.6	1185.4	1185.9	1185.9	1185.9	1185.9	1185.9
22.5°	1160.8	1161.9	1162.9	1163.1	1162.4	1161.8	1161.1	1160.5
25°	1124.5	1125.7	1126.8	1126.6	1125.2	1123.8	1122.4	1121.0
27.5°	1082.3	1083.2	1083.9	1084.1	1083.5	1083.1	1082.5	1082.0
30°	1053.4	1054.0	1054.5	1054.7	1054.4	1054.1	1053.9	1053.6
32.5°	1026.0	1026.5	1027.1	1027.2	1026.9	1026.6	1026.3	1026.1
35°	981.5	982.3	983.2	983.5	983.5	983.5	983.5	983.5
37.5°	934.7	935.9	937.0	937.5	937.4	937.3	937.1	937.0
40°	903.1	904.3	905.4	906.3	906.8	907.4	908.0	908.5
42.5°	874.0	875.4	876.8	877.5	877.6	877.7	877.9	878.0
45°	827.2	829.2	831.1	832.3	832.5	832.8	833.1	833.4
47.5°	778.9	781.7	784.7	786.4	787.0	787.7	788.2	788.9
50°	746.8	749.9	753.0	755.0	755.8	756.7	757.5	758.4
52.5°	714.6	717.9	721.3	723.3	723.9	724.5	725.2	725.8
55°	664.0	667.1	670.2	672.4	673.5	674.7	675.8	676.9
57.5°	614.1	617.6	621.2	623.4	624.2	625.1	625.9	626.8
60°	579.8	584.0	588.2	590.8	591.6	592.5	593.3	594.2
62.5°	545.1	549.8	554.5	557.3	558.5	559.5	560.5	561.7
65°	493.2	497.5	501.7	504.4	505.6	506.7	507.8	509.0
67.5°	440.1	445.3	450.4	453.7	455.2	456.7	458.1	459.6
70°	403.9	409.3	414.6	418.2	419.9	421.6	423.3	425.0
72.5°	370.2	376.1	381.8	385.4	386.6	387.9	389.1	390.4
75°	319.2	324.9	330.5	334.0	335.5	336.9	338.3	339.7
77.5°	268.2	274.4	280.6	284.3	285.4	286.5	287.7	288.8
80°	237.6	243.8	250.1	253.7	254.9	256.0	257.1	258.3
82.5°	208.7	214.7	220.6	224.7	226.8	228.8	230.8	232.8
85°	168.9	175.1	181.3	185.6	187.8	190.1	192.4	194.6
87.5°	141.9	148.6	155.5	159.9	162.1	164.3	166.5	168.6
90°	143.2	151.3	159.4	164.9	167.8	170.7	173.6	176.5
92.5°	138.6	146.6	154.4	159.5	161.9	164.4	166.7	169.2
95°	131.2	139.0	146.8	151.7	153.6	155.6	157.6	159.6
97.5°	150.4	147.5	144.5	144.0	145.9	147.9	149.8	151.7
100°	246.2	205.2	164.2	143.8	144.3	144.7	145.2	145.6
102.5°	386.0	382.8	379.7	368.2	348.5	328.7	309.0	289.2
105°	504.1	509.7	515.4	519.1	520.8	522.5	524.1	525.8
107.5°	610.4	616.0	621.7	624.9	625.8	626.6	627.4	628.2
110°	678.7	683.2	687.6	691.0	693.2	695.6	697.9	700.1





TEST NUMBER: P333456-830

CATALOG NUMBER: S125DIW-S1090D1560U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	746.4	750.4	754.3	757.1	758.6	760.1	761.7	763.2
115°	849.0	852.8	856.7	858.5	858.3	858.1	857.9	857.7
117.5°	947.4	950.6	953.8	955.9	957.0	958.1	959.2	960.3
120°	1011.2	1015.4	1019.5	1021.7	1021.8	1021.9	1022.1	1022.2
122.5°	1071.4	1075.3	1079.3	1081.2	1081.1	1080.9	1080.8	1080.6
125°	1159.5	1162.8	1166.0	1167.9	1168.4	1168.8	1169.3	1169.8
127.5°	1239.3	1242.7	1246.2	1247.6	1247.0	1246.2	1245.6	1244.9
130°	1292.0	1295.1	1298.1	1299.5	1299.3	1299.1	1299.0	1298.8
132.5°	1340.5	1344.3	1348.0	1349.7	1349.3	1349.0	1348.6	1348.2
135°	1411.0	1414.1	1417.1	1418.3	1417.9	1417.4	1416.9	1416.5
137.5°	1477.6	1481.1	1484.6	1486.0	1485.5	1485.1	1484.5	1484.0
140°	1518.2	1522.0	1525.8	1527.2	1526.4	1525.7	1524.9	1524.2
142.5°	1558.6	1561.4	1564.1	1565.2	1564.4	1563.7	1562.9	1562.2
145°	1616.7	1618.4	1620.1	1620.6	1619.9	1619.1	1618.3	1617.6
147.5°	1667.1	1667.9	1668.8	1668.3	1666.5	1664.8	1663.0	1661.2
150°	1699.6	1700.3	1700.9	1700.1	1697.9	1695.6	1693.4	1691.1
152.5°	1729.2	1729.8	1730.4	1729.7	1727.4	1725.2	1723.0	1720.8
155°	1769.8	1770.8	1771.7	1770.8	1768.4	1765.9	1763.3	1760.8
157.5°	1803.4	1804.4	1805.4	1804.7	1802.1	1799.6	1797.1	1794.6
160°	1824.3	1825.6	1826.8	1826.3	1823.7	1821.2	1818.6	1816.2
162.5°	1843.5	1845.3	1847.0	1846.5	1843.8	1841.0	1838.2	1835.4
165°	1868.1	1870.1	1872.0	1871.6	1869.2	1866.6	1864.1	1861.5
167.5°	1886.8	1889.0	1891.3	1891.0	1888.2	1885.4	1882.5	1879.7
170°	1896.4	1898.9	1901.4	1901.3	1898.5	1895.6	1892.7	1889.9
172.5°	1903.8	1906.1	1908.4	1908.1	1905.3	1902.4	1899.6	1896.8
175°	1911.9	1914.5	1917.0	1916.8	1914.0	1911.2	1908.4	1905.5
177.5°	1915.3	1917.0	1918.8	1918.7	1916.7	1914.7	1912.6	1910.6
180°	1914.0	1914.0	1914.0	1914.0	1914.0	1914.0	1914.0	1914.0

(END OF REPORT)