

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: P333396-940

Luminaire Tested: **S125DIW-S610D1560U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333396-940  
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-S610D1560U940-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 610 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: 7704.9 lumens  
Efficiency: N/A  
Efficacy: 127.1 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

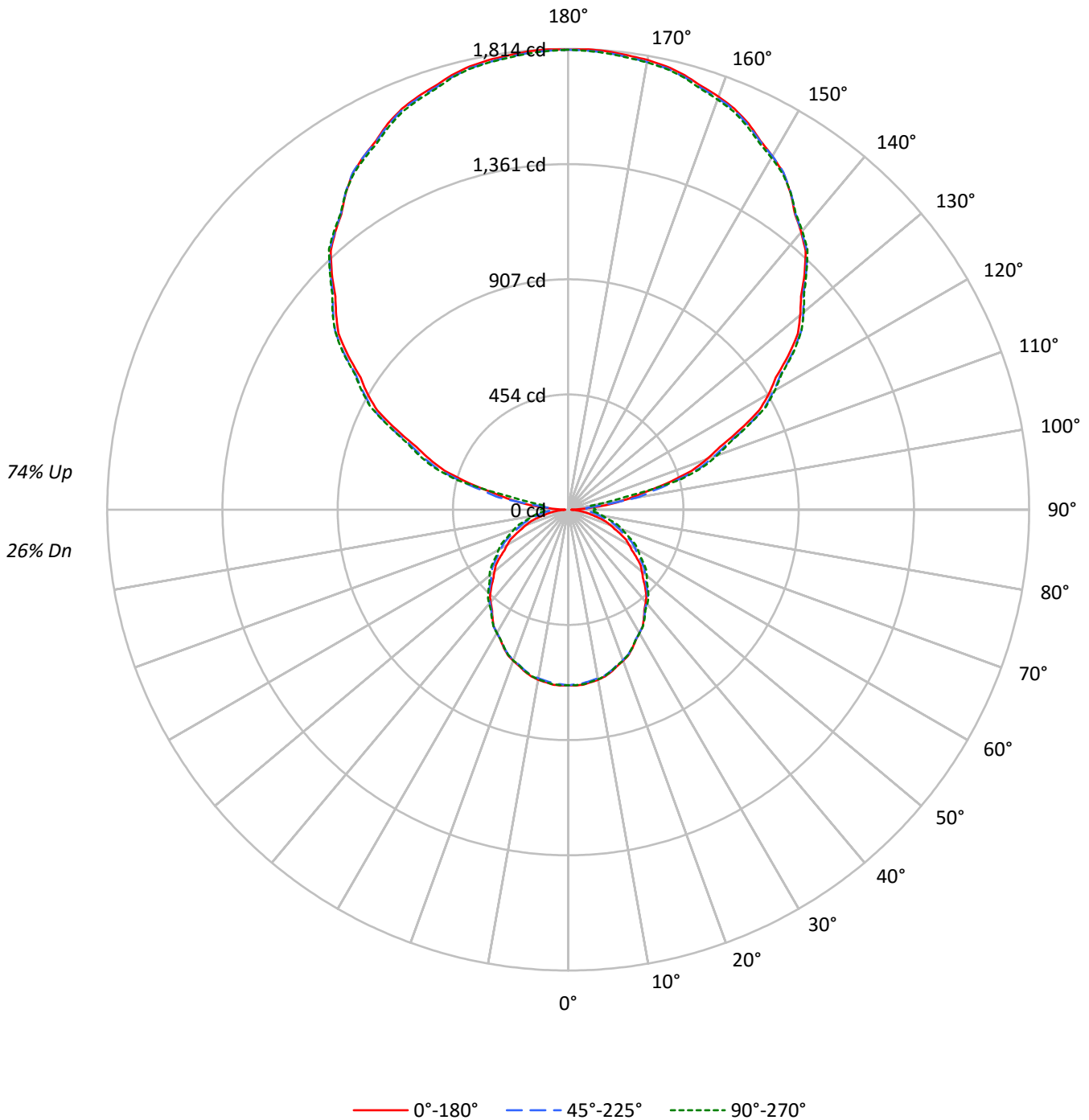
Input Watts (W): 60.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	101	101	101	91	91	91	91	70	70	70	51	51	51	34	34	34	26
1	92	88	84	80	82	78	75	72	61	58	56	44	43	42	30	29	28	21
2	84	76	70	65	74	68	63	59	53	49	46	39	37	35	26	24	23	17
3	76	67	60	54	68	60	54	49	46	42	39	34	31	29	23	21	20	15
4	69	59	51	45	62	53	46	41	41	36	33	30	27	25	20	18	17	12
5	64	52	44	39	56	47	40	35	37	32	28	27	24	21	18	16	15	11
6	58	47	39	33	52	42	35	30	33	28	24	24	21	18	16	14	13	9
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	15	13	11	8
8	50	38	30	25	44	34	28	23	27	22	19	20	17	14	14	12	10	7
9	46	34	27	22	41	31	25	20	25	20	17	18	15	13	13	10	9	7
10	43	31	24	20	38	28	22	18	22	18	15	17	14	11	12	10	8	6

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

	0°	45°	90°
0°	4463	4463	4463
5°	4472	4380	4394
10°	4440	4302	4295
15°	4388	4209	4171
20°	4316	4093	4045
25°	4232	3969	3891
30°	4129	3833	3751
35°	4033	3708	3622
40°	3935	3576	3493
45°	3825	3463	3378
50°	3720	3340	3276
55°	3593	3225	3156
60°	3455	3093	3035
65°	3310	2956	2898
70°	3145	2767	2758
75°	2887	2586	2585
80°	2548	2365	2396
85°	2232	2219	2336



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.3	0.8
10°-20°	185.5	2.4
20°-30°	275.9	3.6
30°-40°	326.8	4.2
40°-50°	337.9	4.4
50°-60°	311.2	4.0
60°-70°	251.6	3.3
70°-80°	168.5	2.2
80°-90°	91.1	1.2
90°-100°	114.8	1.5
100°-110°	441.7	5.7
110°-120°	759.8	9.9
120°-130°	957.7	12.4
130°-140°	1021.3	13.3
140°-150°	954.2	12.4
150°-160°	770.9	10.0
160°-170°	498.6	6.5
170°-180°	172.0	2.2
0°-30°	526.7	6.8
0°-40°	853.5	11.1
0°-60°	1502.6	19.5
0°-90°	2013.8	26.1
90°-120°	1316.3	17.1
90°-150°	4249.6	55.2
90°-180°	5691.0	73.9
0°-180°	7704.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	691	691	691	691	691	
5°	691	690	685	690	690	66
15°	660	660	656	660	657	186
25°	600	601	598	600	597	276
35°	519	523	522	524	524	325
45°	428	435	438	443	444	330
55°	329	339	350	357	360	294
65°	226	242	258	268	271	224
75°	125	143	164	177	181	132
85°	37	60	83	98	104	40
90°	12	45	77	99	108	10
95°	85	97	71	92	97	104
105°	401	417	437	450	454	425
115°	745	757	775	782	778	738
125°	1056	1065	1079	1084	1084	943
135°	1316	1323	1325	1330	1326	1014
145°	1524	1526	1526	1530	1526	953
155°	1678	1670	1673	1676	1666	773
165°	1771	1763	1764	1771	1761	500
175°	1811	1803	1804	1814	1803	172
180°	1811	1811	1811	1811	1811	



TEST NUMBER: P333396-940

CATALOG NUMBER: S125DIW-S610D1560U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1
2.5°	692.7	692.4	692.2	692.0	691.7	691.2	690.4	689.5	688.7	687.8	688.7
5°	691.1	690.7	690.5	690.2	689.8	689.2	688.1	687.1	686.0	684.9	686.2
7.5°	684.9	684.8	684.7	684.6	684.5	683.9	682.8	681.7	680.6	679.6	680.6
10°	679.6	679.6	679.6	679.6	679.6	678.9	677.7	676.5	675.3	674.1	675.2
12.5°	672.0	672.1	672.2	672.3	672.4	672.0	671.0	670.1	669.1	668.2	669.0
15°	659.9	660.0	660.2	660.3	660.5	660.0	659.0	657.9	656.9	655.9	656.7
17.5°	644.2	644.4	644.8	645.1	645.4	645.0	644.0	642.9	641.9	640.8	641.5
20°	632.8	633.1	633.4	633.7	634.0	633.6	632.6	631.5	630.4	629.4	629.8
22.5°	619.8	620.4	620.9	621.4	622.0	621.6	620.5	619.3	618.1	617.0	617.5
25°	599.6	600.0	600.5	600.9	601.4	601.2	600.3	599.4	598.4	597.5	598.2
27.5°	577.1	577.7	578.5	579.1	579.8	579.6	578.5	577.6	576.5	575.5	575.9
30°	560.3	561.2	562.1	563.0	563.9	563.9	563.0	562.1	561.2	560.3	560.6
32.5°	545.1	545.9	546.7	547.5	548.2	548.3	547.7	547.0	546.4	545.6	546.0
35°	519.0	520.0	521.1	522.1	523.2	523.5	523.1	522.5	522.1	521.7	522.1
37.5°	492.8	493.8	494.7	495.7	496.7	497.0	497.0	496.8	496.6	496.5	497.0
40°	474.9	476.2	477.3	478.6	479.7	480.3	480.1	480.0	479.8	479.7	480.3
42.5°	455.4	457.0	458.5	460.1	461.7	462.6	463.0	463.3	463.6	464.0	464.7
45°	427.5	429.2	430.8	432.5	434.2	435.3	436.1	436.8	437.6	438.4	439.4
47.5°	399.0	400.5	402.0	403.5	405.1	406.4	407.8	409.0	410.4	411.6	413.2
50°	379.4	381.0	382.7	384.4	386.0	387.7	389.3	391.0	392.6	394.3	396.0
52.5°	358.8	360.8	362.8	364.9	366.8	368.9	371.0	372.9	375.0	376.9	378.7
55°	328.6	331.0	333.4	335.8	338.2	340.6	343.0	345.4	347.9	350.3	352.0
57.5°	297.7	300.6	303.4	306.4	309.2	312.1	314.9	317.6	320.4	323.2	325.0
60°	277.1	280.1	283.1	286.1	289.2	292.1	295.2	298.2	301.2	304.2	306.5
62.5°	257.1	260.0	263.1	266.1	269.1	272.2	275.4	278.7	282.0	285.3	287.8
65°	226.3	229.8	233.2	236.7	240.1	243.7	247.3	250.9	254.5	258.2	260.4
67.5°	197.3	200.6	203.9	207.3	210.6	214.2	217.8	221.5	225.2	228.9	231.6
70°	176.1	179.6	183.1	186.5	190.0	193.7	197.6	201.5	205.5	209.4	212.2
72.5°	155.5	159.2	162.7	166.3	169.9	173.8	178.1	182.4	186.6	190.9	194.0
75°	124.7	128.6	132.5	136.4	140.4	144.7	149.5	154.4	159.2	164.0	166.9
77.5°	95.0	99.5	104.1	108.5	113.1	117.6	122.3	126.9	131.5	136.2	139.5
80°	76.6	81.1	85.6	90.2	94.6	99.4	104.6	109.7	114.8	119.9	123.2
82.5°	59.7	64.5	69.3	74.0	78.8	83.8	89.0	94.3	99.5	104.8	107.9
85°	37.3	42.3	47.2	52.2	57.2	62.2	67.5	72.8	78.0	83.4	86.7
87.5°	21.4	26.7	32.0	37.3	42.6	48.0	53.5	59.1	64.6	70.2	73.9
90°	12.2	19.4	26.6	33.8	41.0	48.2	55.4	62.6	69.8	77.0	81.9
92.5°	30.4	33.2	36.0	38.8	41.6	46.5	53.6	60.7	67.8	74.9	79.7
95°	85.3	88.4	91.4	94.3	97.4	95.8	89.6	83.4	77.1	71.0	75.7
97.5°	167.7	172.9	178.0	183.2	188.2	182.1	164.6	147.1	129.6	112.1	106.8
100°	231.7	235.7	239.8	243.8	247.8	252.9	258.9	264.9	270.9	277.0	235.7
102.5°	296.6	300.7	304.7	308.7	312.8	317.5	323.0	328.3	333.8	339.2	333.9
105°	400.7	404.4	408.0	411.5	415.2	419.2	423.7	428.3	432.7	437.3	440.3
107.5°	508.9	511.0	513.0	515.1	517.1	520.6	525.6	530.5	535.4	540.4	543.4
110°	579.3	581.0	582.9	584.7	586.5	589.8	594.6	599.4	604.2	609.0	611.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	645.9	648.0	650.1	652.3	654.5	657.8	662.3	666.7	671.2	675.6	677.3
115°	745.0	747.6	750.1	752.7	755.2	758.6	762.8	767.0	771.2	775.4	776.9
117.5°	847.7	848.4	849.0	849.6	850.2	853.0	857.8	862.6	867.5	872.4	873.3
120°	912.1	912.3	912.5	912.6	912.8	915.0	919.4	923.7	928.1	932.5	934.4
122.5°	968.5	969.8	971.3	972.6	973.9	976.4	980.3	984.0	987.7	991.5	993.4
125°	1056.4	1058.4	1060.3	1062.3	1064.2	1066.7	1069.7	1072.7	1075.7	1078.7	1080.0
127.5°	1139.8	1141.1	1142.5	1143.8	1145.1	1147.0	1149.2	1151.6	1153.9	1156.1	1157.7
130°	1191.3	1192.7	1194.0	1195.3	1196.7	1198.5	1201.0	1203.4	1205.8	1208.2	1209.4
132.5°	1242.3	1244.0	1245.7	1247.4	1249.1	1250.4	1251.4	1252.4	1253.4	1254.4	1256.3
135°	1315.5	1317.1	1318.8	1320.4	1322.1	1323.1	1323.6	1324.0	1324.5	1324.9	1326.3
137.5°	1382.8	1384.2	1385.6	1387.1	1388.5	1389.2	1389.2	1389.1	1389.1	1389.1	1391.0
140°	1426.2	1426.8	1427.5	1428.1	1428.6	1428.9	1428.7	1428.5	1428.4	1428.3	1430.5
142.5°	1466.0	1466.2	1466.4	1466.7	1467.0	1467.3	1467.8	1468.2	1468.6	1469.1	1470.6
145°	1524.2	1524.6	1525.1	1525.5	1526.0	1526.3	1526.3	1526.3	1526.3	1526.3	1527.3
147.5°	1574.6	1574.4	1574.3	1574.2	1574.0	1574.2	1574.6	1574.9	1575.3	1575.7	1576.3
150°	1606.8	1606.1	1605.6	1605.0	1604.4	1604.4	1605.0	1605.6	1606.1	1606.8	1607.4
152.5°	1637.9	1636.6	1635.3	1634.0	1632.6	1632.3	1632.9	1633.5	1634.1	1634.7	1635.3
155°	1677.9	1676.1	1674.4	1672.6	1670.8	1670.2	1670.8	1671.3	1672.0	1672.6	1673.5
157.5°	1708.8	1707.7	1706.6	1705.6	1704.5	1704.0	1704.1	1704.1	1704.1	1704.2	1705.2
160°	1730.3	1728.5	1726.7	1724.9	1723.1	1722.3	1722.7	1723.0	1723.2	1723.6	1724.7
162.5°	1747.5	1745.7	1743.9	1742.0	1740.3	1739.5	1739.8	1740.2	1740.4	1740.7	1742.4
165°	1770.6	1768.8	1766.9	1765.1	1763.4	1762.6	1762.9	1763.3	1763.5	1763.8	1765.6
167.5°	1787.7	1785.9	1784.0	1782.2	1780.3	1779.6	1779.9	1780.1	1780.5	1780.7	1782.9
170°	1797.4	1795.3	1793.2	1791.1	1789.0	1788.1	1788.4	1788.8	1789.0	1789.3	1791.7
172.5°	1803.8	1801.8	1799.7	1797.6	1795.5	1794.7	1795.3	1795.8	1796.4	1796.9	1799.0
175°	1810.8	1809.0	1807.2	1805.4	1803.7	1803.0	1803.2	1803.5	1803.8	1804.1	1806.5
177.5°	1814.0	1812.6	1811.2	1809.7	1808.3	1807.7	1807.9	1808.2	1808.4	1808.7	1810.4
180°	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1
2.5°	689.5	690.4	691.2	691.5	691.4	691.3	691.2	691.1
5°	687.3	688.6	689.7	690.3	690.2	690.0	689.8	689.7
7.5°	681.6	682.7	683.8	684.2	684.0	683.9	683.8	683.6
10°	676.3	677.3	678.3	678.8	678.7	678.5	678.3	678.1
12.5°	669.8	670.6	671.5	671.6	671.2	670.8	670.5	670.0
15°	657.6	658.5	659.4	659.6	659.0	658.4	657.8	657.2
17.5°	642.2	642.8	643.5	643.7	643.4	643.0	642.7	642.3
20°	630.4	630.8	631.2	631.4	631.4	631.4	631.4	631.4
22.5°	618.0	618.7	619.2	619.3	618.9	618.6	618.2	617.9
25°	598.8	599.4	599.9	599.9	599.1	598.4	597.6	596.9
27.5°	576.3	576.8	577.2	577.2	576.9	576.7	576.4	576.1
30°	560.9	561.2	561.5	561.6	561.4	561.2	561.2	561.0
32.5°	546.3	546.5	546.9	547.0	546.8	546.6	546.5	546.4
35°	522.5	523.1	523.5	523.7	523.7	523.7	523.7	523.7
37.5°	497.7	498.3	498.9	499.2	499.1	499.0	499.0	498.9
40°	480.9	481.5	482.1	482.5	482.9	483.1	483.5	483.8
42.5°	465.4	466.1	466.8	467.3	467.3	467.3	467.4	467.5
45°	440.4	441.5	442.6	443.2	443.4	443.4	443.6	443.8
47.5°	414.7	416.3	417.8	418.7	419.1	419.4	419.7	420.1
50°	397.6	399.3	400.9	402.0	402.4	402.9	403.3	403.8
52.5°	380.5	382.3	384.1	385.1	385.5	385.8	386.1	386.5
55°	353.6	355.3	356.9	358.0	358.6	359.3	359.8	360.4
57.5°	327.0	328.9	330.7	331.9	332.4	332.9	333.3	333.8
60°	308.7	310.9	313.3	314.6	315.0	315.5	315.9	316.4
62.5°	290.3	292.7	295.2	296.8	297.3	297.9	298.5	299.1
65°	262.6	264.9	267.2	268.6	269.2	269.8	270.4	271.0
67.5°	234.3	237.1	239.8	241.6	242.4	243.2	244.0	244.7
70°	215.1	217.9	220.8	222.7	223.6	224.4	225.4	226.3
72.5°	197.2	200.2	203.3	205.2	205.9	206.5	207.2	207.9
75°	170.0	173.0	176.0	177.9	178.6	179.4	180.1	180.9
77.5°	142.8	146.2	149.5	151.4	151.9	152.6	153.2	153.8
80°	126.5	129.8	133.1	135.1	135.7	136.3	137.0	137.5
82.5°	111.1	114.3	117.5	119.7	120.7	121.8	122.9	123.9
85°	90.0	93.3	96.6	98.8	100.0	101.2	102.5	103.6
87.5°	77.7	81.4	85.2	87.7	88.9	90.2	91.4	92.6
90°	86.9	91.9	96.8	100.3	102.3	104.2	106.1	108.1
92.5°	84.5	89.3	94.2	97.4	98.8	100.3	101.7	103.3
95°	80.5	85.3	90.2	93.1	94.2	95.1	96.2	97.3
97.5°	101.7	96.4	91.1	89.0	90.1	91.0	92.1	93.1
100°	194.4	153.1	111.8	91.0	90.7	90.4	90.2	89.9
102.5°	328.4	323.1	317.7	305.3	286.0	266.5	247.2	227.8
105°	443.3	446.3	449.3	451.2	452.0	452.7	453.4	454.2
107.5°	546.4	549.5	552.5	554.0	554.1	554.1	554.2	554.2
110°	613.0	614.9	616.9	618.6	619.9	621.3	622.6	624.0





TEST NUMBER: P333396-940

CATALOG NUMBER: S125DIW-S610D1560U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	678.9	680.5	682.1	683.1	683.8	684.4	685.1	685.7
115°	778.5	780.0	781.5	781.9	781.0	780.1	779.2	778.3
117.5°	874.3	875.4	876.4	877.0	877.3	877.5	877.7	878.0
120°	936.4	938.3	940.3	941.0	940.4	939.8	939.2	938.6
122.5°	995.1	997.0	998.9	999.3	998.5	997.7	996.9	996.0
125°	1081.1	1082.4	1083.6	1084.1	1084.0	1083.9	1083.7	1083.5
127.5°	1159.3	1160.8	1162.4	1162.5	1161.2	1159.8	1158.5	1157.2
130°	1210.7	1211.8	1213.1	1213.3	1212.5	1211.8	1211.1	1210.3
132.5°	1258.2	1260.2	1262.0	1262.6	1261.8	1260.9	1260.1	1259.2
135°	1327.7	1329.0	1330.3	1330.5	1329.5	1328.5	1327.4	1326.4
137.5°	1392.9	1394.7	1396.7	1397.1	1396.2	1395.3	1394.3	1393.3
140°	1432.8	1435.0	1437.3	1437.8	1436.6	1435.4	1434.2	1433.1
142.5°	1472.1	1473.6	1475.2	1475.3	1474.2	1473.0	1471.8	1470.6
145°	1528.3	1529.4	1530.4	1530.4	1529.2	1528.0	1526.8	1525.6
147.5°	1576.8	1577.4	1578.1	1577.4	1575.5	1573.6	1571.7	1569.9
150°	1607.9	1608.6	1609.2	1608.4	1606.1	1603.9	1601.6	1599.4
152.5°	1635.9	1636.5	1637.1	1636.3	1634.2	1632.1	1630.0	1627.8
155°	1674.4	1675.3	1676.1	1675.3	1673.0	1670.6	1668.2	1665.8
157.5°	1706.1	1707.1	1708.1	1707.4	1705.0	1702.5	1700.1	1697.8
160°	1725.9	1727.2	1728.3	1727.8	1725.4	1723.0	1720.6	1718.2
162.5°	1744.1	1745.8	1747.4	1747.0	1744.4	1741.7	1739.1	1736.4
165°	1767.4	1769.2	1771.0	1770.7	1768.4	1765.9	1763.5	1761.1
167.5°	1785.0	1787.2	1789.3	1789.0	1786.4	1783.7	1781.0	1778.3
170°	1794.1	1796.5	1798.8	1798.8	1796.1	1793.4	1790.6	1788.0
172.5°	1801.2	1803.3	1805.4	1805.2	1802.5	1799.8	1797.2	1794.5
175°	1808.8	1811.2	1813.7	1813.5	1810.8	1808.1	1805.4	1802.8
177.5°	1812.0	1813.7	1815.3	1815.3	1813.3	1811.4	1809.5	1807.6
180°	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8

(END OF REPORT)