

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: P333457-940

Luminaire Tested: **S125DIW-S1090D1560U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333457-940  
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: S125DIW-S1090D1560U940-4F0-1E-UDD-D1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8629.0 lumens  
Efficiency: N/A  
Efficacy: 112.7 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: General Diffuse

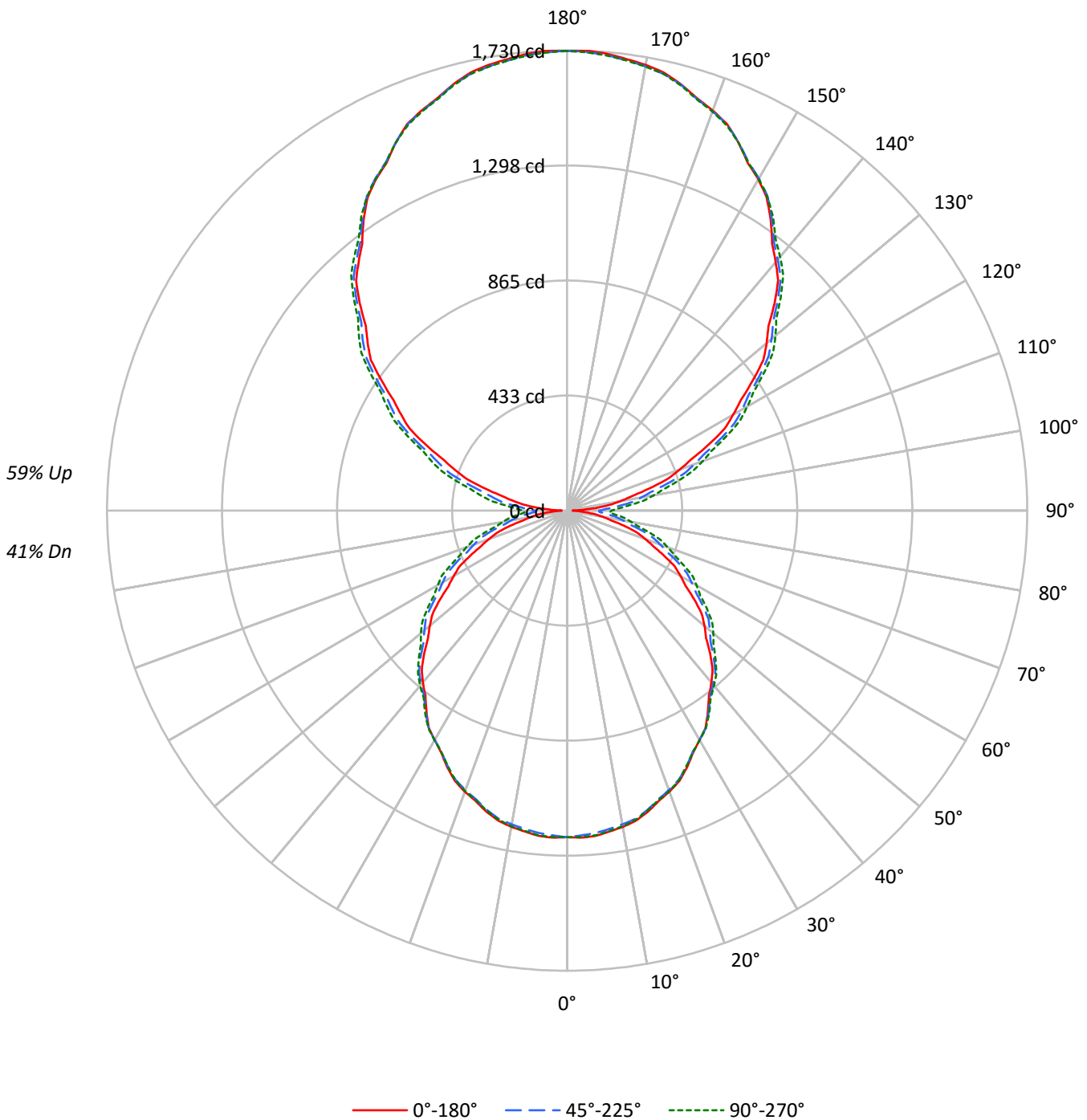
Input Watts (W): 76.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79		63	63	63		48	48	48	41
1	95	91	87	83	87	83	79	76	68	65	63		54	53	51		42	41	39	34
2	86	79	73	67	78	72	67	62	59	55	52		47	44	42		36	34	33	28
3	79	69	62	56	71	63	57	51	52	47	43		42	38	35		32	30	28	23
4	72	61	53	47	65	56	49	43	46	41	37		37	33	30		28	26	24	20
5	66	54	46	40	60	50	42	37	41	36	31		33	29	26		26	23	20	17
6	61	48	40	34	55	44	37	32	37	31	27		30	26	23		23	20	18	15
7	56	44	36	30	51	40	33	28	33	28	24		27	23	20		21	18	16	13
8	52	40	32	26	47	36	29	25	30	25	21		25	21	18		19	16	14	12
9	48	36	29	23	44	33	26	22	28	22	19		23	19	16		18	15	13	11
10	45	33	26	21	41	30	24	20	25	20	17		21	17	14		17	14	12	10

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

	0°	45°	90°
0°	7930	7930	7930
5°	7946	7783	7808
10°	7889	7644	7633
15°	7796	7478	7410
20°	7670	7273	7188
25°	7518	7053	6912
30°	7336	6810	6664
35°	7165	6588	6435
40°	6992	6353	6205
45°	6796	6152	6001
50°	6609	5935	5821
55°	6384	5729	5609
60°	6137	5495	5392
65°	5882	5250	5150
70°	5590	4914	4900
75°	5128	4592	4592
80°	4524	4201	4257
85°	3962	3938	4152



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.1	1.3
10°-20°	329.6	3.8
20°-30°	490.2	5.7
30°-40°	580.6	6.7
40°-50°	600.3	7.0
50°-60°	553.0	6.4
60°-70°	447.0	5.2
70°-80°	299.4	3.5
80°-90°	159.0	1.8
90°-100°	202.9	2.4
100°-110°	406.0	4.7
110°-120°	622.0	7.2
120°-130°	786.3	9.1
130°-140°	864.4	10.0
140°-150°	838.9	9.7
150°-160°	702.8	8.1
160°-170°	467.2	5.4
170°-180°	163.5	1.9
0°-30°	935.9	10.8
0°-40°	1516.5	17.6
0°-60°	2669.7	30.9
0°-90°	3575.1	41.4
90°-120°	1230.8	14.3
90°-150°	3720.5	43.1
90°-180°	5054.0	58.6
0°-180°	8629.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1228	1225	1217	1226	1226	116
15°	1172	1173	1165	1172	1168	330
25°	1065	1068	1062	1066	1060	490
35°	922	930	927	930	930	577
45°	760	772	779	787	788	586
55°	584	603	622	635	640	522
65°	402	430	459	476	482	399
75°	222	253	291	314	321	235
85°	66	106	148	174	184	71
90°	21	70	120	153	167	18
95°	103	138	192	226	238	106
105°	317	344	388	419	432	339
115°	587	602	635	654	661	580
125°	851	859	883	899	904	761
135°	1102	1110	1119	1134	1135	850
145°	1334	1338	1342	1348	1349	833
155°	1525	1525	1526	1531	1525	702
165°	1658	1656	1657	1661	1654	468
175°	1724	1719	1719	1726	1717	164
180°	1728	1728	1728	1728	1728	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9
2.5°	1230.7	1230.3	1229.8	1229.5	1229.0	1228.1	1226.5	1225.0	1223.6	1222.1	1223.6
5°	1227.9	1227.4	1226.8	1226.3	1225.7	1224.5	1222.6	1220.8	1218.9	1217.0	1219.1
7.5°	1217.0	1216.8	1216.6	1216.4	1216.2	1215.1	1213.2	1211.2	1209.3	1207.4	1209.2
10°	1207.4	1207.4	1207.4	1207.4	1207.4	1206.3	1204.2	1202.0	1199.9	1197.7	1199.6
12.5°	1193.9	1194.1	1194.4	1194.5	1194.8	1194.0	1192.3	1190.6	1188.9	1187.1	1188.7
15°	1172.5	1172.8	1173.0	1173.3	1173.6	1172.8	1170.9	1169.0	1167.2	1165.3	1166.9
17.5°	1144.5	1145.0	1145.6	1146.1	1146.7	1146.0	1144.2	1142.3	1140.4	1138.5	1139.8
20°	1124.4	1124.9	1125.4	1126.0	1126.5	1125.8	1123.9	1122.0	1120.2	1118.3	1119.1
22.5°	1101.2	1102.2	1103.1	1104.1	1105.1	1104.5	1102.4	1100.4	1098.2	1096.2	1097.2
25°	1065.3	1066.1	1066.9	1067.7	1068.5	1068.2	1066.6	1065.0	1063.4	1061.8	1062.8
27.5°	1025.4	1026.5	1027.7	1028.9	1030.1	1029.7	1028.0	1026.1	1024.3	1022.5	1023.2
30°	995.5	997.1	998.7	1000.3	1001.9	1001.9	1000.3	998.7	997.1	995.5	996.0
32.5°	968.6	969.9	971.3	972.8	974.1	974.2	973.0	971.9	970.7	969.6	970.1
35°	922.1	924.0	925.9	927.7	929.6	930.1	929.3	928.5	927.7	926.9	927.7
37.5°	875.7	877.4	879.0	880.7	882.4	883.2	883.0	882.7	882.4	882.2	883.2
40°	843.8	846.0	848.1	850.2	852.4	853.4	853.1	852.8	852.6	852.3	853.4
42.5°	809.1	812.0	814.8	817.5	820.3	822.0	822.6	823.1	823.8	824.4	825.6
45°	759.6	762.5	765.4	768.4	771.3	773.5	774.8	776.1	777.5	778.8	780.7
47.5°	708.8	711.5	714.3	716.9	719.7	722.2	724.5	726.8	729.2	731.4	734.1
50°	674.1	677.1	680.0	683.0	685.9	688.8	691.8	694.7	697.7	700.6	703.6
52.5°	637.5	641.1	644.7	648.3	651.8	655.4	659.1	662.6	666.2	669.8	673.0
55°	583.8	588.1	592.4	596.6	600.9	605.2	609.5	613.8	618.0	622.3	625.3
57.5°	529.0	534.0	539.2	544.4	549.5	554.6	559.5	564.4	569.3	574.2	577.6
60°	492.3	497.7	503.0	508.4	513.7	519.1	524.4	529.8	535.1	540.5	544.5
62.5°	456.7	462.1	467.4	472.8	478.1	483.7	489.5	495.3	501.1	506.8	511.2
65°	402.1	408.2	414.4	420.5	426.7	432.9	439.3	445.8	452.2	458.6	462.6
67.5°	350.5	356.5	362.4	368.4	374.3	380.5	387.1	393.6	400.1	406.6	411.5
70°	313.0	319.1	325.3	331.4	337.6	344.1	351.1	358.0	365.0	371.9	377.0
72.5°	276.4	282.8	289.1	295.5	301.8	308.8	316.5	324.0	331.6	339.2	344.7
75°	221.5	228.5	235.4	242.4	249.3	257.1	265.6	274.2	282.8	291.3	296.7
77.5°	168.8	176.8	184.9	192.9	200.9	209.0	217.2	225.5	233.7	241.9	247.8
80°	136.0	144.0	152.0	160.1	168.1	176.6	185.7	194.8	203.9	213.0	218.9
82.5°	106.2	114.6	123.1	131.5	140.0	148.8	158.2	167.5	176.8	186.1	191.8
85°	66.2	75.0	83.8	92.6	101.5	110.6	119.9	129.3	138.7	148.0	153.9
87.5°	37.8	46.9	55.9	64.9	74.0	83.3	92.7	102.3	111.8	121.3	127.8
90°	20.6	31.6	42.5	53.5	64.4	75.4	86.7	97.8	109.1	120.2	127.9
92.5°	49.8	59.5	69.1	78.6	88.3	99.0	110.8	122.7	134.6	146.5	154.4
95°	103.1	110.7	118.2	125.7	133.3	143.1	155.2	167.3	179.3	191.5	199.4
97.5°	159.4	165.9	172.5	179.0	185.5	195.1	208.0	221.0	233.8	246.7	254.3
100°	201.5	207.1	212.8	218.4	224.0	233.0	245.5	257.9	270.4	282.8	291.1
102.5°	246.8	253.2	259.6	266.0	272.3	280.7	291.1	301.3	311.7	322.0	330.3
105°	317.4	323.2	329.0	334.7	340.5	348.4	358.2	368.0	377.8	387.6	394.8
107.5°	395.7	400.7	405.9	411.0	416.2	423.3	432.3	441.4	450.5	459.6	465.7
110°	449.5	454.2	459.0	463.7	468.3	474.9	483.3	491.7	500.1	508.5	514.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	505.5	508.8	512.2	515.5	518.9	524.8	533.2	541.5	550.0	558.4	563.7
115°	586.8	590.0	593.0	596.0	599.1	604.4	612.0	619.6	627.1	634.6	639.2
117.5°	668.5	670.3	672.0	673.8	675.6	680.0	687.2	694.3	701.3	708.5	713.3
120°	720.1	722.5	724.7	727.0	729.3	733.7	740.1	746.6	753.0	759.5	764.0
122.5°	775.1	776.1	776.9	777.8	778.7	782.6	789.3	796.0	802.7	809.4	813.5
125°	850.7	852.2	853.8	855.3	856.8	860.4	866.0	871.7	877.4	883.0	886.7
127.5°	930.2	930.9	931.7	932.5	933.2	935.9	940.7	945.5	950.2	954.9	958.6
130°	978.7	979.8	981.1	982.3	983.6	986.3	990.7	995.0	999.3	1003.7	1007.1
132.5°	1026.1	1028.5	1030.9	1033.2	1035.6	1038.2	1041.0	1043.7	1046.5	1049.4	1052.8
135°	1102.5	1104.0	1105.5	1107.1	1108.6	1110.4	1112.6	1114.8	1117.0	1119.1	1122.6
137.5°	1174.3	1175.8	1177.4	1178.9	1180.4	1182.0	1183.5	1185.1	1186.7	1188.2	1191.8
140°	1219.6	1221.1	1222.6	1224.1	1225.6	1226.9	1228.1	1229.3	1230.5	1231.6	1235.1
142.5°	1265.9	1266.9	1268.0	1269.0	1270.1	1271.1	1272.4	1273.5	1274.7	1275.9	1278.8
145°	1333.9	1334.9	1335.8	1336.8	1337.7	1338.5	1339.4	1340.3	1341.2	1342.1	1343.5
147.5°	1395.7	1396.3	1397.0	1397.7	1398.3	1399.0	1399.7	1400.4	1401.1	1401.9	1403.0
150°	1437.6	1437.3	1437.1	1436.7	1436.5	1436.9	1438.1	1439.3	1440.5	1441.7	1441.7
152.5°	1472.0	1472.5	1472.9	1473.3	1473.7	1474.2	1474.7	1475.2	1475.6	1476.1	1476.9
155°	1525.1	1525.1	1525.1	1525.1	1525.1	1525.2	1525.5	1525.8	1526.1	1526.4	1527.6
157.5°	1572.4	1571.7	1571.1	1570.4	1569.8	1569.6	1569.9	1570.2	1570.5	1570.7	1572.0
160°	1600.4	1599.5	1598.6	1597.7	1596.8	1596.5	1596.8	1597.1	1597.4	1597.7	1598.8
162.5°	1625.1	1624.4	1623.8	1623.2	1622.5	1622.2	1622.2	1622.3	1622.4	1622.4	1623.9
165°	1658.2	1657.6	1657.0	1656.4	1655.8	1655.6	1656.0	1656.3	1656.5	1656.9	1658.0
167.5°	1686.1	1685.0	1683.8	1682.6	1681.4	1680.8	1680.8	1680.8	1680.8	1680.8	1682.6
170°	1701.2	1700.0	1698.8	1697.6	1696.5	1695.9	1695.9	1695.9	1695.9	1695.9	1697.6
172.5°	1712.0	1710.8	1709.6	1708.4	1707.2	1706.6	1706.6	1706.6	1706.6	1706.6	1708.4
175°	1724.1	1722.9	1721.7	1720.5	1719.3	1718.7	1718.7	1718.7	1718.7	1718.7	1720.5
177.5°	1730.3	1729.3	1728.4	1727.4	1726.4	1725.8	1725.6	1725.4	1725.1	1724.9	1726.4
180°	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9
2.5°	1225.0	1226.5	1228.1	1228.7	1228.5	1228.2	1228.1	1227.9
5°	1221.3	1223.4	1225.6	1226.5	1226.3	1226.0	1225.7	1225.5
7.5°	1211.1	1213.0	1214.9	1215.7	1215.4	1215.1	1214.9	1214.6
10°	1201.5	1203.4	1205.2	1206.0	1205.8	1205.5	1205.2	1205.0
12.5°	1190.1	1191.5	1192.9	1193.3	1192.7	1191.9	1191.2	1190.5
15°	1168.5	1170.1	1171.7	1172.0	1170.9	1169.8	1168.8	1167.7
17.5°	1141.0	1142.2	1143.4	1143.7	1143.1	1142.5	1141.8	1141.2
20°	1119.9	1120.7	1121.5	1122.0	1122.0	1122.0	1122.0	1122.0
22.5°	1098.2	1099.2	1100.2	1100.4	1099.7	1099.1	1098.5	1097.9
25°	1063.9	1065.0	1066.0	1065.9	1064.5	1063.2	1061.8	1060.5
27.5°	1024.0	1024.8	1025.5	1025.6	1025.1	1024.7	1024.1	1023.7
30°	996.6	997.1	997.6	997.8	997.6	997.3	997.0	996.8
32.5°	970.6	971.2	971.7	971.8	971.5	971.3	971.0	970.7
35°	928.5	929.3	930.1	930.5	930.5	930.5	930.5	930.5
37.5°	884.3	885.4	886.4	886.9	886.8	886.7	886.5	886.4
40°	854.4	855.5	856.6	857.4	857.9	858.4	859.0	859.5
42.5°	826.9	828.2	829.5	830.2	830.3	830.4	830.5	830.6
45°	782.6	784.4	786.3	787.4	787.6	787.9	788.2	788.5
47.5°	736.9	739.6	742.3	744.0	744.6	745.2	745.7	746.4
50°	706.5	709.4	712.4	714.3	715.1	715.9	716.7	717.5
52.5°	676.1	679.2	682.4	684.3	684.8	685.5	686.1	686.6
55°	628.2	631.2	634.1	636.1	637.2	638.3	639.4	640.4
57.5°	580.9	584.3	587.7	589.8	590.6	591.4	592.2	593.0
60°	548.5	552.5	556.5	558.9	559.7	560.5	561.3	562.1
62.5°	515.7	520.1	524.6	527.3	528.3	529.3	530.3	531.4
65°	466.6	470.6	474.7	477.2	478.3	479.4	480.5	481.5
67.5°	416.3	421.2	426.1	429.3	430.6	432.0	433.4	434.8
70°	382.1	387.2	392.3	395.7	397.3	398.9	400.5	402.1
72.5°	350.3	355.8	361.2	364.6	365.8	366.9	368.1	369.3
75°	302.0	307.4	312.7	316.0	317.4	318.7	320.0	321.4
77.5°	253.7	259.6	265.5	268.9	270.0	271.1	272.2	273.2
80°	224.8	230.7	236.6	240.0	241.1	242.2	243.3	244.3
82.5°	197.4	203.1	208.7	212.6	214.5	216.4	218.4	220.3
85°	159.8	165.7	171.6	175.6	177.7	179.9	182.0	184.1
87.5°	134.2	140.6	147.1	151.4	153.5	155.5	157.6	159.6
90°	135.5	143.2	150.8	156.0	158.8	161.6	164.3	167.1
92.5°	162.3	170.2	178.2	183.3	185.9	188.4	190.9	193.5
95°	207.4	215.3	223.4	228.5	231.0	233.5	235.9	238.4
97.5°	261.9	269.5	277.1	282.0	284.2	286.3	288.5	290.7
100°	299.4	307.7	316.0	321.3	323.5	325.7	327.9	330.1
102.5°	338.7	347.0	355.3	360.7	363.1	365.6	368.0	370.5
105°	401.9	409.0	416.2	421.2	423.9	426.7	429.4	432.2
107.5°	472.0	478.1	484.4	488.2	489.8	491.4	493.0	494.6
110°	520.4	526.4	532.4	536.1	537.7	539.3	540.8	542.4





TEST NUMBER: P333457-940

CATALOG NUMBER: S125DIW-S1090D1560U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	569.0	574.3	579.5	582.8	584.2	585.5	586.8	588.2
115°	643.6	648.2	652.7	655.6	656.9	658.3	659.5	660.8
117.5°	718.1	722.8	727.6	730.3	730.9	731.6	732.2	732.8
120°	768.6	773.1	777.7	780.2	780.6	781.0	781.4	781.8
122.5°	817.6	821.7	825.8	828.2	828.8	829.5	830.1	830.8
125°	890.4	894.0	897.8	900.1	901.2	902.1	903.2	904.3
127.5°	962.2	965.9	969.6	971.9	972.9	973.7	974.7	975.7
130°	1010.6	1014.1	1017.4	1019.6	1020.3	1021.0	1021.8	1022.5
132.5°	1056.2	1059.6	1063.1	1065.0	1065.2	1065.6	1065.9	1066.1
135°	1126.1	1129.5	1133.0	1134.9	1135.0	1135.1	1135.2	1135.4
137.5°	1195.2	1198.7	1202.3	1203.8	1203.4	1203.0	1202.6	1202.1
140°	1238.7	1242.2	1245.7	1247.3	1246.9	1246.4	1246.1	1245.6
142.5°	1281.7	1284.5	1287.5	1288.6	1288.3	1287.8	1287.4	1286.9
145°	1344.8	1346.1	1347.5	1348.3	1348.4	1348.6	1348.8	1349.0
147.5°	1404.2	1405.3	1406.4	1406.2	1404.7	1403.1	1401.6	1400.1
150°	1441.7	1441.7	1441.7	1441.5	1441.2	1440.8	1440.6	1440.2
152.5°	1477.6	1478.3	1479.0	1478.8	1477.8	1476.8	1475.8	1474.7
155°	1528.7	1530.0	1531.2	1531.1	1529.6	1528.0	1526.5	1525.1
157.5°	1573.2	1574.4	1575.6	1575.2	1573.2	1571.2	1569.2	1567.3
160°	1600.1	1601.2	1602.5	1602.3	1600.8	1599.3	1597.9	1596.3
162.5°	1625.3	1626.7	1628.2	1628.0	1626.3	1624.5	1622.8	1621.0
165°	1659.2	1660.5	1661.6	1661.3	1659.6	1657.8	1656.0	1654.1
167.5°	1684.4	1686.1	1687.9	1687.9	1686.0	1684.3	1682.4	1680.5
170°	1699.4	1701.2	1703.0	1702.9	1700.8	1698.7	1696.6	1694.5
172.5°	1710.2	1712.0	1713.8	1713.8	1711.9	1710.0	1708.2	1706.4
175°	1722.3	1724.1	1725.9	1725.7	1723.7	1721.5	1719.5	1717.3
177.5°	1727.8	1729.2	1730.6	1730.5	1728.8	1727.2	1725.5	1723.9
180°	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1

(END OF REPORT)