

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: P333415-940

Luminaire Tested: **S125DIW-S850D1050U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333415-940  
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-S850D1050U940-4F0-1E-UDD-D1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6168.1 lumens  
Efficiency: N/A  
Efficacy: 117.3 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: General Diffuse

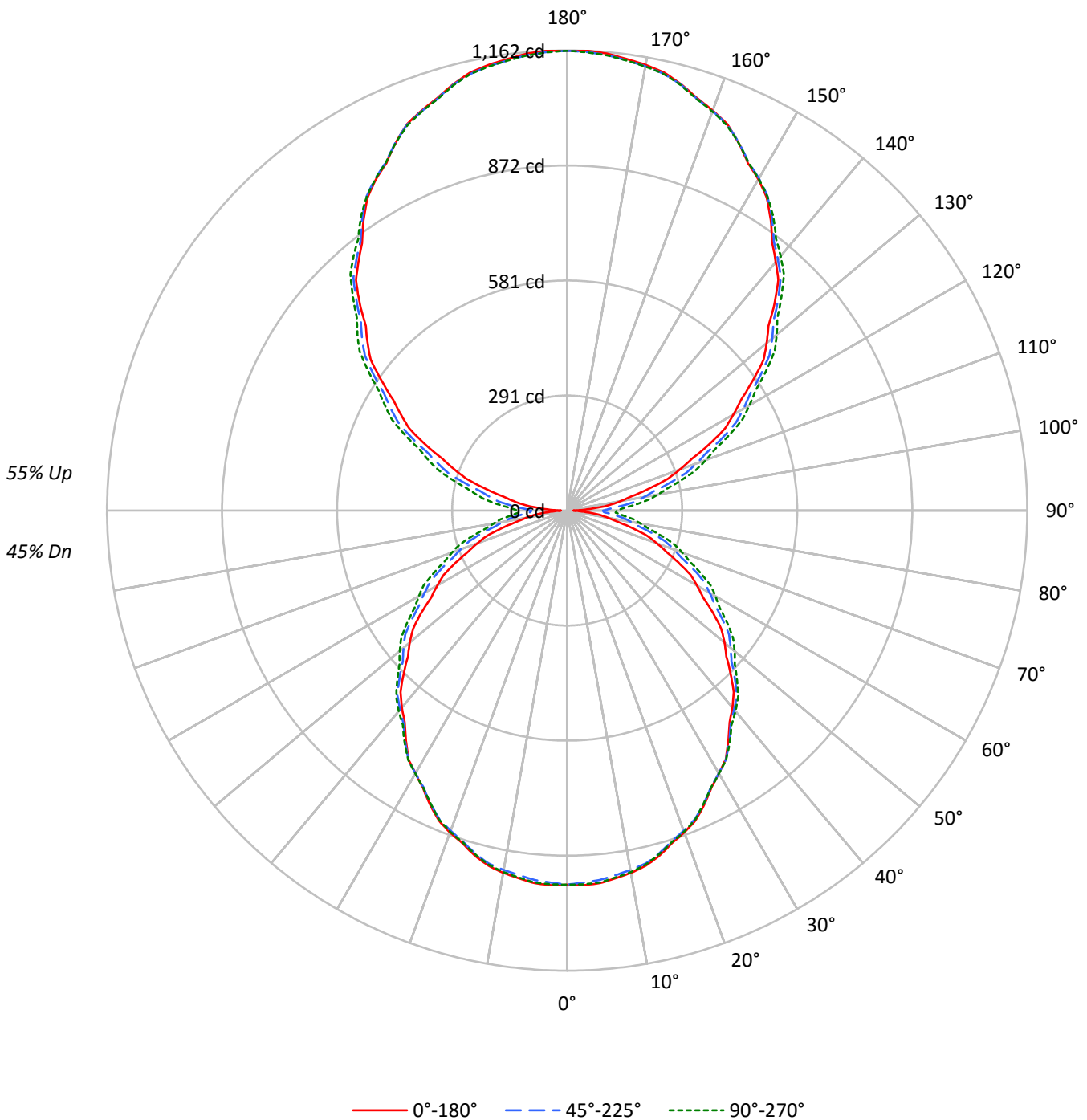
Input Watts (W): 52.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	96	91	87	83	88	84	80	77	69	67	65	56	54	53	44	43	42	36
2	87	79	73	68	79	73	67	63	60	56	53	49	46	44	38	36	35	30
3	79	70	62	56	72	64	57	52	53	48	44	43	40	37	34	31	29	25
4	72	61	53	47	66	56	49	44	47	42	37	38	34	31	30	27	25	21
5	66	55	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	49	41	35	56	45	38	32	38	32	28	31	27	23	24	21	19	16
7	56	44	36	30	51	41	33	28	34	29	24	28	24	21	22	19	17	14
8	52	40	32	27	48	37	30	25	31	26	22	26	21	18	20	17	15	13
9	49	36	29	24	44	34	27	22	28	23	19	24	19	16	19	16	14	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

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

	0°	45°	90°
0°	6101	6101	6101
5°	6113	5988	6007
10°	6069	5881	5872
15°	5998	5753	5701
20°	5900	5595	5529
25°	5784	5425	5318
30°	5644	5239	5126
35°	5513	5068	4951
40°	5379	4888	4773
45°	5228	4733	4617
50°	5084	4566	4479
55°	4912	4408	4315
60°	4722	4227	4149
65°	4525	4039	3961
70°	4301	3780	3769
75°	3945	3533	3533
80°	3483	3233	3276
85°	3046	3031	3195



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.3	1.4
10°-20°	253.6	4.1
20°-30°	377.1	6.1
30°-40°	446.7	7.2
40°-50°	461.8	7.5
50°-60°	425.4	6.9
60°-70°	343.9	5.6
70°-80°	230.3	3.7
80°-90°	122.0	2.0
90°-100°	144.8	2.3
100°-110°	279.1	4.5
110°-120°	422.1	6.8
120°-130°	530.7	8.6
130°-140°	581.8	9.4
140°-150°	563.8	9.1
150°-160°	472.2	7.7
160°-170°	313.9	5.1
170°-180°	109.8	1.8
0°-30°	720.0	11.7
0°-40°	1166.7	18.9
0°-60°	2053.9	33.3
0°-90°	2750.1	44.6
90°-120°	845.9	13.7
90°-150°	2522.2	40.9
90°-180°	3418.0	55.4
0°-180°	6168.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	945	945	945	945	945	
5°	945	942	936	943	943	90
15°	902	903	896	902	898	254
25°	820	822	817	820	816	377
35°	709	715	713	716	716	444
45°	584	594	599	605	607	451
55°	449	464	479	489	493	401
65°	309	331	353	366	370	307
75°	170	195	224	242	247	181
85°	51	82	114	134	142	54
90°	16	53	90	115	125	13
95°	71	97	137	163	172	72
105°	214	234	267	290	300	229
115°	395	406	431	446	451	391
125°	572	577	596	608	613	512
135°	741	746	753	764	766	571
145°	896	899	902	906	907	560
155°	1025	1025	1026	1029	1025	472
165°	1114	1112	1113	1116	1111	314
175°	1158	1155	1155	1160	1154	110
180°	1161	1161	1161	1161	1161	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6
2.5°	946.8	946.6	946.2	945.8	945.5	944.8	943.6	942.4	941.3	940.1	941.3
5°	944.6	944.2	943.8	943.3	943.0	942.0	940.6	939.1	937.7	936.3	937.9
7.5°	936.3	936.1	935.9	935.8	935.6	934.8	933.4	931.8	930.3	928.9	930.3
10°	928.9	928.9	928.9	928.9	928.9	928.1	926.4	924.8	923.1	921.5	922.9
12.5°	918.5	918.6	918.8	919.0	919.2	918.6	917.3	916.0	914.6	913.3	914.4
15°	902.1	902.2	902.4	902.6	902.9	902.2	900.8	899.4	897.9	896.4	897.7
17.5°	880.6	880.9	881.4	881.7	882.2	881.6	880.2	878.8	877.4	875.9	876.8
20°	865.0	865.4	865.8	866.2	866.7	866.1	864.7	863.3	861.7	860.3	860.9
22.5°	847.2	847.9	848.6	849.4	850.2	849.7	848.1	846.5	844.9	843.3	844.1
25°	819.6	820.2	820.8	821.4	822.1	821.7	820.6	819.3	818.1	816.8	817.6
27.5°	788.8	789.8	790.7	791.6	792.5	792.2	790.9	789.4	788.0	786.7	787.2
30°	765.9	767.1	768.4	769.5	770.8	770.8	769.5	768.4	767.1	765.9	766.3
32.5°	745.1	746.2	747.3	748.3	749.4	749.5	748.6	747.7	746.8	745.9	746.3
35°	709.4	710.9	712.3	713.7	715.2	715.6	715.0	714.3	713.7	713.1	713.7
37.5°	673.6	674.9	676.3	677.6	678.9	679.5	679.2	679.0	678.9	678.7	679.5
40°	649.2	650.9	652.5	654.2	655.8	656.5	656.3	656.1	655.9	655.7	656.5
42.5°	622.5	624.6	626.8	628.9	631.1	632.4	632.8	633.3	633.7	634.2	635.2
45°	584.3	586.7	588.9	591.1	593.4	595.0	596.1	597.1	598.2	599.1	600.7
47.5°	545.3	547.4	549.5	551.6	553.7	555.6	557.4	559.2	560.9	562.7	564.8
50°	518.6	520.8	523.2	525.4	527.6	529.9	532.2	534.5	536.7	539.0	541.3
52.5°	490.4	493.2	496.0	498.7	501.5	504.3	507.0	509.8	512.6	515.3	517.7
55°	449.2	452.5	455.8	459.1	462.4	465.7	469.0	472.3	475.5	478.8	481.1
57.5°	406.9	410.9	414.8	418.7	422.8	426.6	430.4	434.2	437.9	441.8	444.3
60°	378.8	382.9	387.0	391.1	395.2	399.4	403.5	407.6	411.7	415.8	418.9
62.5°	351.3	355.4	359.6	363.7	367.8	372.1	376.6	381.0	385.4	389.9	393.3
65°	309.3	314.1	318.8	323.5	328.2	333.1	338.0	343.0	347.9	352.8	356.0
67.5°	269.7	274.3	278.8	283.4	287.9	292.7	297.7	302.8	307.8	312.8	316.6
70°	240.8	245.5	250.2	255.0	259.8	264.7	270.1	275.4	280.8	286.1	290.1
72.5°	212.7	217.5	222.4	227.3	232.2	237.6	243.4	249.3	255.1	261.0	265.2
75°	170.4	175.8	181.1	186.5	191.8	197.8	204.4	211.0	217.5	224.1	228.2
77.5°	129.8	136.0	142.2	148.4	154.5	160.8	167.1	173.4	179.8	186.2	190.6
80°	104.7	110.8	117.0	123.1	129.4	135.9	142.9	149.9	156.9	163.9	168.4
82.5°	81.7	88.2	94.7	101.2	107.7	114.5	121.7	128.9	136.0	143.2	147.6
85°	50.9	57.7	64.6	71.3	78.1	85.1	92.3	99.5	106.7	113.9	118.4
87.5°	29.1	36.0	42.9	49.8	56.7	63.8	71.1	78.4	85.6	92.9	97.8
90°	15.7	23.9	32.1	40.3	48.5	56.8	65.2	73.6	82.0	90.4	96.1
92.5°	35.2	42.4	49.7	56.9	64.0	72.1	81.0	89.9	98.8	107.6	113.6
95°	70.8	76.5	82.3	88.0	93.8	101.1	110.1	119.1	128.1	137.1	143.1
97.5°	108.5	113.5	118.4	123.4	128.4	135.6	145.2	154.7	164.3	173.7	179.4
100°	136.7	141.0	145.3	149.6	154.0	160.7	170.0	179.1	188.3	197.5	203.7
102.5°	167.0	171.8	176.6	181.4	186.2	192.5	200.2	207.9	215.7	223.5	229.6
105°	214.4	218.6	222.9	227.2	231.5	237.4	244.8	252.1	259.5	266.9	272.2
107.5°	266.7	270.5	274.3	278.1	282.0	287.2	294.1	301.0	307.8	314.7	319.3
110°	302.8	306.3	309.8	313.3	316.7	321.6	328.1	334.4	340.7	347.1	351.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	340.5	343.0	345.4	347.9	350.4	354.8	361.2	367.6	373.9	380.3	384.3
115°	394.9	397.3	399.5	401.7	403.9	408.0	413.7	419.5	425.2	431.0	434.4
117.5°	449.7	451.0	452.4	453.6	455.0	458.3	463.8	469.1	474.6	480.0	483.7
120°	484.4	486.1	487.7	489.3	490.9	494.2	499.1	504.0	509.0	513.9	517.4
122.5°	521.3	521.9	522.5	523.2	523.9	526.7	531.8	536.9	542.0	547.1	550.3
125°	572.0	573.0	574.0	575.1	576.0	578.7	583.0	587.3	591.7	595.9	598.9
127.5°	625.4	625.8	626.2	626.8	627.2	629.3	632.8	636.5	640.2	643.7	646.6
130°	657.8	658.6	659.4	660.2	661.0	663.1	666.4	669.7	672.9	676.2	678.9
132.5°	689.6	691.3	692.9	694.5	696.1	697.9	700.1	702.2	704.4	706.5	709.2
135°	740.9	741.9	743.0	744.0	744.9	746.3	747.9	749.6	751.2	752.8	755.5
137.5°	789.2	790.1	791.2	792.2	793.2	794.2	795.4	796.6	797.7	798.8	801.5
140°	819.6	820.6	821.5	822.5	823.6	824.5	825.3	826.1	826.9	827.7	830.4
142.5°	850.6	851.3	851.9	852.7	853.4	854.1	854.9	855.7	856.5	857.3	859.4
145°	896.3	896.9	897.5	898.1	898.8	899.3	899.9	900.5	901.2	901.7	902.8
147.5°	937.7	938.2	938.6	939.0	939.4	940.0	940.4	940.8	941.4	941.8	942.6
150°	965.9	965.7	965.5	965.3	965.1	965.4	966.2	967.0	967.8	968.6	968.6
152.5°	989.0	989.3	989.5	989.9	990.2	990.4	990.8	991.0	991.4	991.8	992.2
155°	1024.6	1024.6	1024.6	1024.6	1024.6	1024.7	1024.9	1025.1	1025.3	1025.6	1026.4
157.5°	1056.4	1056.0	1055.5	1055.1	1054.6	1054.5	1054.7	1054.9	1055.2	1055.3	1056.1
160°	1075.2	1074.6	1074.0	1073.4	1072.8	1072.6	1072.8	1073.0	1073.2	1073.4	1074.2
162.5°	1091.8	1091.4	1090.9	1090.5	1090.0	1089.8	1089.9	1089.9	1090.0	1090.0	1091.0
165°	1114.1	1113.7	1113.2	1112.9	1112.4	1112.3	1112.6	1112.8	1112.9	1113.1	1113.9
167.5°	1132.8	1132.0	1131.2	1130.4	1129.6	1129.3	1129.3	1129.3	1129.3	1129.3	1130.4
170°	1143.0	1142.2	1141.4	1140.6	1139.8	1139.3	1139.3	1139.3	1139.3	1139.3	1140.6
172.5°	1150.2	1149.4	1148.6	1147.8	1147.0	1146.6	1146.6	1146.6	1146.6	1146.6	1147.8
175°	1158.3	1157.5	1156.7	1155.9	1155.1	1154.7	1154.7	1154.7	1154.7	1154.7	1155.9
177.5°	1162.5	1161.8	1161.2	1160.6	1159.9	1159.5	1159.3	1159.2	1159.0	1158.9	1159.8
180°	1161.0	1161.0	1161.0	1161.0	1161.0	1161.0	1161.0	1161.0	1161.0	1161.0	1161.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6
2.5°	942.4	943.6	944.8	945.3	945.1	944.9	944.8	944.6
5°	939.6	941.2	942.9	943.6	943.3	943.2	943.0	942.8
7.5°	931.7	933.2	934.6	935.2	935.0	934.9	934.6	934.4
10°	924.3	925.8	927.2	927.8	927.6	927.5	927.2	927.0
12.5°	915.5	916.7	917.7	918.0	917.5	916.9	916.4	915.9
15°	898.9	900.2	901.4	901.6	900.8	899.9	899.1	898.3
17.5°	877.8	878.8	879.7	879.9	879.4	879.0	878.4	878.0
20°	861.6	862.2	862.8	863.1	863.1	863.1	863.1	863.1
22.5°	844.9	845.6	846.4	846.6	846.1	845.6	845.1	844.6
25°	818.5	819.3	820.1	820.0	818.9	818.0	816.9	815.9
27.5°	787.7	788.4	788.9	789.1	788.6	788.3	787.9	787.6
30°	766.7	767.1	767.5	767.7	767.4	767.2	767.0	766.8
32.5°	746.7	747.1	747.5	747.6	747.4	747.3	747.0	746.8
35°	714.3	715.0	715.6	715.9	715.9	715.9	715.9	715.9
37.5°	680.3	681.1	681.9	682.3	682.2	682.2	682.1	682.0
40°	657.3	658.2	659.0	659.6	660.0	660.4	660.8	661.2
42.5°	636.1	637.1	638.1	638.6	638.7	638.8	638.9	639.0
45°	602.1	603.5	604.9	605.7	606.0	606.2	606.4	606.6
47.5°	566.9	569.0	571.1	572.4	572.8	573.3	573.7	574.2
50°	543.5	545.8	548.0	549.5	550.1	550.7	551.3	552.0
52.5°	520.1	522.5	525.0	526.5	526.9	527.4	527.8	528.2
55°	483.3	485.6	487.9	489.4	490.2	491.1	491.9	492.7
57.5°	446.9	449.5	452.1	453.7	454.3	455.0	455.6	456.2
60°	422.0	425.1	428.2	430.0	430.6	431.2	431.9	432.5
62.5°	396.7	400.1	403.6	405.6	406.4	407.2	408.0	408.8
65°	359.0	362.1	365.2	367.1	368.0	368.8	369.6	370.4
67.5°	320.3	324.0	327.8	330.2	331.3	332.3	333.4	334.5
70°	294.0	297.9	301.8	304.3	305.6	306.8	308.1	309.3
72.5°	269.5	273.7	277.9	280.5	281.4	282.3	283.2	284.1
75°	232.4	236.5	240.6	243.2	244.2	245.2	246.2	247.3
77.5°	195.2	199.7	204.3	207.0	207.8	208.6	209.4	210.3
80°	173.0	177.5	182.0	184.7	185.6	186.4	187.2	188.0
82.5°	151.9	156.2	160.6	163.5	165.1	166.5	168.0	169.5
85°	123.0	127.5	132.1	135.1	136.8	138.4	140.1	141.7
87.5°	102.8	107.7	112.6	115.9	117.4	119.0	120.6	122.2
90°	101.8	107.6	113.3	117.3	119.3	121.4	123.3	125.4
92.5°	119.5	125.4	131.3	135.1	137.1	138.9	140.8	142.7
95°	149.0	155.0	161.0	164.8	166.7	168.4	170.3	172.2
97.5°	185.0	190.6	196.4	200.0	201.6	203.2	204.9	206.5
100°	209.7	215.9	222.0	225.9	227.6	229.2	230.8	232.5
102.5°	235.7	241.8	248.0	251.9	253.7	255.5	257.3	259.1
105°	277.5	282.9	288.2	291.9	293.9	296.0	298.0	300.1
107.5°	324.0	328.7	333.4	336.4	337.6	338.8	340.0	341.3
110°	356.1	360.6	365.2	368.0	369.3	370.5	371.8	373.0





TEST NUMBER: P333415-940

CATALOG NUMBER: S125DIW-S850D1050U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	388.3	392.4	396.4	399.0	400.0	401.1	402.2	403.2
115°	438.0	441.5	445.0	447.3	448.3	449.3	450.3	451.4
117.5°	487.3	491.0	494.6	496.8	497.4	497.9	498.6	499.2
120°	520.9	524.4	527.9	529.9	530.3	530.7	531.2	531.6
122.5°	553.4	556.6	559.8	561.7	562.2	562.8	563.5	564.0
125°	601.7	604.6	607.5	609.4	610.2	611.0	611.9	612.7
127.5°	649.4	652.3	655.1	656.9	657.7	658.5	659.3	660.1
130°	681.5	684.2	686.9	688.6	689.2	689.8	690.5	691.1
132.5°	711.9	714.5	717.2	718.7	719.0	719.3	719.6	719.9
135°	758.1	760.8	763.5	765.0	765.2	765.4	765.6	765.9
137.5°	804.1	806.8	809.5	810.7	810.6	810.4	810.2	810.0
140°	833.0	835.7	838.4	839.5	839.4	839.2	839.0	838.8
142.5°	861.7	863.8	866.0	867.0	866.8	866.7	866.5	866.3
145°	903.7	904.8	905.8	906.5	906.7	906.9	907.1	907.3
147.5°	943.4	944.3	945.1	945.0	944.0	943.0	942.0	941.0
150°	968.6	968.6	968.6	968.5	968.3	968.1	967.9	967.7
152.5°	992.7	993.2	993.6	993.5	992.8	992.2	991.5	990.8
155°	1027.2	1028.0	1028.8	1028.6	1027.6	1026.6	1025.6	1024.6
157.5°	1056.9	1057.7	1058.5	1058.3	1056.9	1055.6	1054.3	1053.0
160°	1075.0	1075.8	1076.7	1076.5	1075.5	1074.5	1073.5	1072.5
162.5°	1092.0	1092.9	1093.9	1093.8	1092.6	1091.5	1090.3	1089.1
165°	1114.7	1115.5	1116.3	1116.2	1115.0	1113.7	1112.6	1111.3
167.5°	1131.7	1132.8	1134.1	1134.1	1132.8	1131.6	1130.3	1129.1
170°	1141.7	1143.0	1144.2	1144.1	1142.6	1141.3	1139.9	1138.4
172.5°	1149.0	1150.2	1151.4	1151.4	1150.1	1148.9	1147.6	1146.4
175°	1157.1	1158.3	1159.6	1159.4	1158.1	1156.6	1155.2	1153.8
177.5°	1160.8	1161.8	1162.7	1162.6	1161.5	1160.4	1159.3	1158.2
180°	1161.0	1161.0	1161.0	1161.0	1161.0	1161.0	1161.0	1161.0

(END OF REPORT)