

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: P333427-930

Luminaire Tested: **S125DIW-S850D1560U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333427-930  
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-S850D1560U930-4F0-1E-UDD-D1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 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: 7087.5 lumens  
Efficiency: N/A  
Efficacy: 104.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

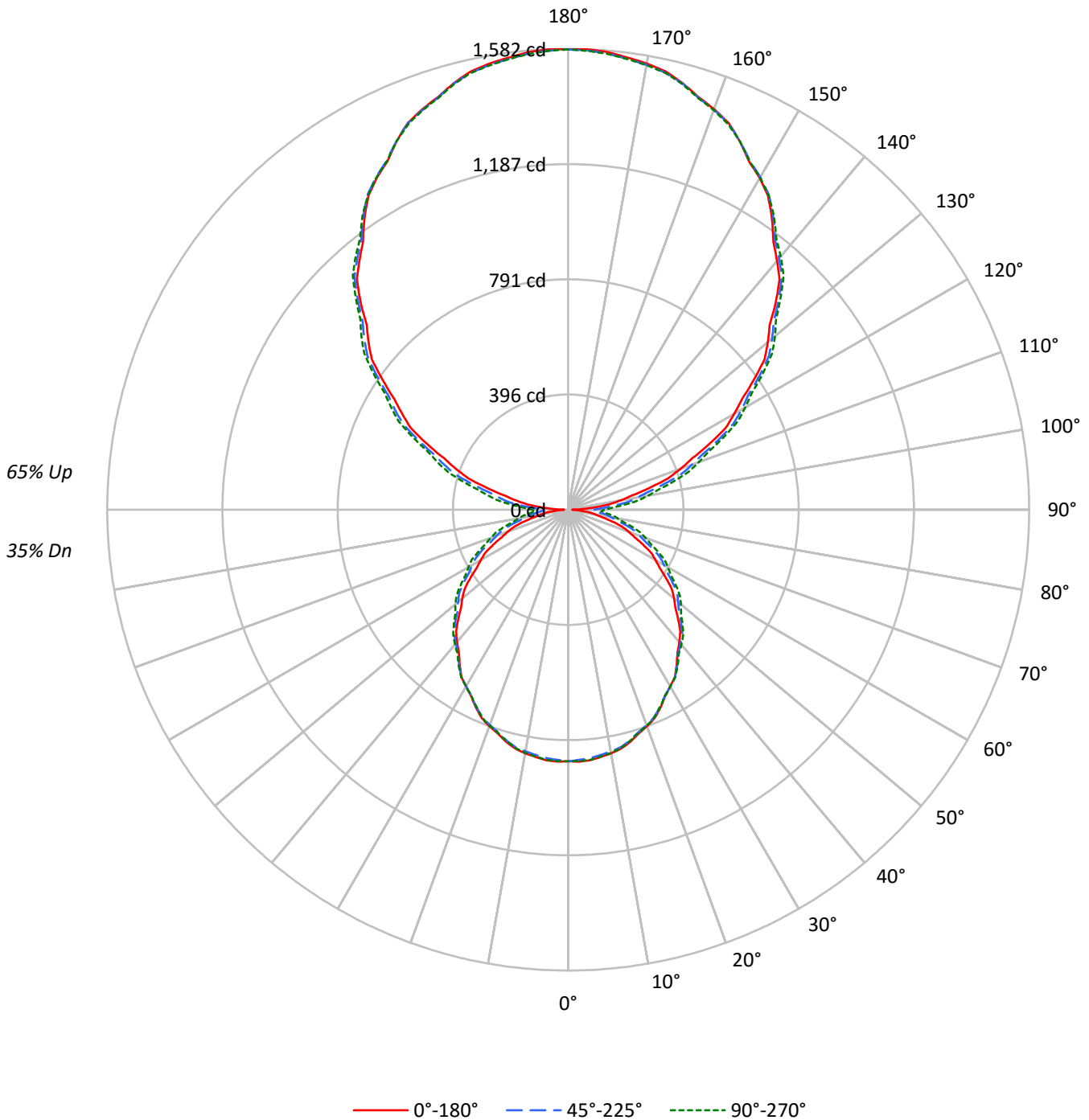
Input Watts (W): 68.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	35
1	94	90	86	82	85	81	78	75	65	63	61	50	49	47	37	36	35	29
2	85	78	72	66	77	70	65	61	57	53	50	44	41	39	32	31	29	24
3	78	68	61	55	70	62	56	50	50	45	41	39	36	33	28	26	25	20
4	71	60	52	46	64	55	48	43	44	39	35	34	31	28	25	23	21	17
5	65	53	45	39	58	49	42	36	39	34	30	31	27	24	23	20	18	15
6	60	48	40	34	54	43	36	31	35	30	26	28	24	21	20	18	16	13
7	55	43	35	30	50	39	32	27	32	27	23	25	21	18	19	16	14	11
8	51	39	31	26	46	35	29	24	29	24	20	23	19	16	17	14	13	10
9	47	35	28	23	43	32	26	21	26	21	18	21	17	15	16	13	11	9
10	44	32	25	21	40	30	23	19	24	19	16	19	16	13	15	12	10	8

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

	0°	45°	90°
0°	5577	5577	5577
5°	5589	5475	5492
10°	5549	5377	5369
15°	5484	5260	5212
20°	5394	5115	5055
25°	5288	4960	4863
30°	5160	4791	4687
35°	5040	4634	4526
40°	4918	4469	4364
45°	4780	4328	4221
50°	4649	4175	4095
55°	4491	4030	3946
60°	4317	3865	3793
65°	4137	3693	3622
70°	3931	3457	3446
75°	3607	3230	3231
80°	3183	2957	2996
85°	2789	2770	2923



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.7	1.2
10°-20°	231.8	3.3
20°-30°	344.8	4.9
30°-40°	408.4	5.8
40°-50°	422.2	6.0
50°-60°	389.0	5.5
60°-70°	314.4	4.4
70°-80°	210.6	3.0
80°-90°	112.6	1.6
90°-100°	167.1	2.4
100°-110°	357.7	5.0
110°-120°	559.6	7.9
120°-130°	713.8	10.1
130°-140°	788.1	11.1
140°-150°	766.5	10.8
150°-160°	642.6	9.1
160°-170°	427.1	6.0
170°-180°	149.5	2.1
0°-30°	658.3	9.3
0°-40°	1066.7	15.1
0°-60°	1877.9	26.5
0°-90°	2515.5	35.5
90°-120°	1084.4	15.3
90°-150°	3352.8	47.3
90°-180°	4572.0	64.5
0°-180°	7087.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	864	864	864	864	864	
5°	864	862	856	862	862	82
15°	825	825	820	824	821	232
25°	749	751	747	750	746	345
35°	649	654	652	654	654	406
45°	534	543	548	553	555	412
55°	411	424	438	447	450	367
65°	283	302	323	335	339	280
75°	156	178	205	221	226	165
85°	47	75	104	122	130	50
90°	15	52	89	114	124	13
95°	91	116	156	183	192	94
105°	288	308	340	364	374	307
115°	535	547	570	584	588	529
125°	777	784	802	812	816	695
135°	1008	1014	1021	1032	1032	776
145°	1219	1223	1227	1231	1231	762
155°	1394	1394	1396	1400	1394	642
165°	1516	1514	1515	1519	1512	428
175°	1576	1572	1571	1578	1570	150
180°	1580	1580	1580	1580	1580	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	863.6	863.6	863.6	863.6	863.6	863.6	863.6	863.6	863.6	863.6	863.6
2.5°	865.7	865.4	865.1	864.8	864.5	863.8	862.7	861.7	860.6	859.6	860.6
5°	863.6	863.3	862.9	862.5	862.2	861.3	860.0	858.7	857.4	856.1	857.5
7.5°	856.1	855.9	855.7	855.6	855.4	854.7	853.4	852.0	850.6	849.3	850.6
10°	849.3	849.3	849.3	849.3	849.3	848.6	847.0	845.5	844.0	842.5	843.8
12.5°	839.8	839.9	840.1	840.2	840.4	839.8	838.7	837.5	836.3	835.0	836.1
15°	824.8	824.9	825.1	825.2	825.5	824.9	823.6	822.3	820.9	819.6	820.8
17.5°	805.1	805.4	805.8	806.2	806.6	806.1	804.8	803.5	802.2	800.9	801.7
20°	790.8	791.2	791.6	792.0	792.4	791.9	790.6	789.3	787.9	786.6	787.2
22.5°	774.6	775.3	775.9	776.7	777.3	776.9	775.4	774.0	772.5	771.0	771.8
25°	749.3	749.9	750.5	751.1	751.6	751.3	750.2	749.1	748.0	746.8	747.5
27.5°	721.2	722.1	722.9	723.7	724.6	724.3	723.1	721.8	720.5	719.3	719.7
30°	700.3	701.4	702.5	703.6	704.7	704.7	703.6	702.5	701.4	700.3	700.7
32.5°	681.3	682.2	683.2	684.2	685.2	685.3	684.4	683.6	682.8	682.0	682.3
35°	648.6	650.0	651.3	652.6	653.9	654.3	653.7	653.1	652.6	652.0	652.6
37.5°	615.9	617.1	618.3	619.5	620.8	621.3	621.0	620.9	620.7	620.5	621.3
40°	593.5	595.1	596.6	598.1	599.6	600.2	600.1	599.9	599.7	599.5	600.2
42.5°	569.2	571.1	573.1	575.0	577.0	578.2	578.6	579.0	579.4	579.8	580.7
45°	534.3	536.4	538.4	540.5	542.6	544.0	545.0	545.9	546.9	547.8	549.2
47.5°	498.6	500.5	502.4	504.3	506.2	508.0	509.6	511.3	512.8	514.5	516.4
50°	474.2	476.2	478.3	480.4	482.4	484.5	486.6	488.7	490.7	492.8	494.9
52.5°	448.4	450.9	453.5	456.0	458.5	461.1	463.6	466.1	468.6	471.2	473.4
55°	410.7	413.7	416.7	419.7	422.7	425.7	428.8	431.8	434.7	437.7	439.9
57.5°	372.0	375.7	379.3	382.9	386.5	390.0	393.5	397.0	400.4	403.9	406.3
60°	346.3	350.1	353.8	357.6	361.3	365.2	368.9	372.7	376.4	380.2	383.0
62.5°	321.2	325.0	328.8	332.6	336.3	340.2	344.3	348.4	352.4	356.4	359.6
65°	282.8	287.1	291.5	295.8	300.1	304.5	309.1	313.6	318.1	322.6	325.5
67.5°	246.5	250.8	254.9	259.1	263.3	267.7	272.2	276.9	281.4	286.0	289.4
70°	220.1	224.5	228.8	233.2	237.5	242.1	247.0	251.8	256.7	261.6	265.2
72.5°	194.4	198.9	203.3	207.8	212.3	217.2	222.6	228.0	233.3	238.6	242.5
75°	155.8	160.7	165.6	170.5	175.4	180.8	186.9	192.9	198.9	204.9	208.6
77.5°	118.7	124.3	130.0	135.7	141.3	147.0	152.8	158.6	164.4	170.2	174.3
80°	95.7	101.3	107.0	112.6	118.3	124.3	130.7	137.1	143.5	149.9	154.0
82.5°	74.7	80.6	86.6	92.5	98.5	104.7	111.3	117.8	124.3	130.9	134.9
85°	46.6	52.7	59.0	65.2	71.4	77.8	84.4	91.0	97.6	104.1	108.3
87.5°	26.7	33.1	39.5	46.1	52.5	59.1	65.9	72.6	79.5	86.3	90.8
90°	14.8	23.0	31.2	39.4	47.6	55.8	64.2	72.5	80.8	89.1	94.8
92.5°	42.0	49.1	56.2	63.3	70.4	78.4	87.2	96.1	105.0	114.0	119.9
95°	90.9	96.4	101.8	107.2	112.7	119.9	129.1	138.2	147.3	156.5	162.6
97.5°	142.8	147.4	152.1	156.6	161.3	168.5	178.5	188.4	198.4	208.3	214.1
100°	181.5	185.4	189.4	193.3	197.3	204.0	213.6	223.1	232.8	242.3	248.7
102.5°	223.1	227.8	232.6	237.3	242.1	248.3	255.9	263.6	271.3	279.0	285.4
105°	288.0	292.4	296.7	301.1	305.5	311.3	318.6	325.9	333.1	340.5	345.8
107.5°	359.7	363.7	367.6	371.5	375.4	380.7	387.4	394.1	400.8	407.5	412.0
110°	409.2	412.9	416.5	420.1	423.7	428.6	434.7	440.8	446.9	453.0	457.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	460.4	462.9	465.5	467.9	470.4	474.8	480.9	487.1	493.3	499.5	503.2
115°	535.0	537.4	539.9	542.3	544.7	548.6	554.1	559.5	564.9	570.4	573.5
117.5°	609.9	611.3	612.6	614.0	615.4	618.6	623.7	628.8	634.0	639.1	642.5
120°	657.1	659.1	661.0	662.9	664.9	668.1	672.7	677.4	681.9	686.6	689.7
122.5°	707.6	708.4	709.1	709.9	710.6	713.5	718.4	723.3	728.1	733.0	735.9
125°	776.8	778.3	779.7	781.1	782.6	785.4	789.4	793.4	797.4	801.5	804.0
127.5°	849.7	850.4	851.3	852.0	852.7	854.8	858.2	861.6	865.0	868.5	871.0
130°	894.0	895.2	896.3	897.6	898.7	900.9	904.1	907.3	910.4	913.6	916.0
132.5°	937.6	939.8	942.0	944.2	946.4	948.4	950.4	952.4	954.2	956.2	958.5
135°	1007.5	1008.9	1010.4	1011.9	1013.3	1014.8	1016.4	1018.0	1019.6	1021.2	1023.6
137.5°	1073.3	1074.6	1076.1	1077.6	1079.0	1080.4	1081.6	1082.8	1084.0	1085.2	1087.9
140°	1114.8	1116.2	1117.6	1119.0	1120.3	1121.5	1122.5	1123.6	1124.5	1125.5	1128.1
142.5°	1157.2	1158.1	1159.2	1160.2	1161.1	1162.2	1163.3	1164.3	1165.4	1166.5	1168.6
145°	1219.4	1220.3	1221.2	1222.1	1223.0	1223.8	1224.7	1225.5	1226.3	1227.1	1228.1
147.5°	1276.1	1276.7	1277.2	1277.9	1278.5	1279.1	1279.8	1280.4	1281.1	1281.7	1282.7
150°	1314.4	1314.2	1313.9	1313.6	1313.4	1313.8	1314.8	1316.0	1317.0	1318.2	1318.2
152.5°	1345.9	1346.3	1346.7	1347.0	1347.4	1347.9	1348.3	1348.7	1349.2	1349.6	1350.3
155°	1394.4	1394.4	1394.4	1394.4	1394.4	1394.5	1394.8	1395.1	1395.3	1395.6	1396.7
157.5°	1437.6	1437.0	1436.5	1435.8	1435.3	1435.1	1435.3	1435.7	1435.9	1436.1	1437.3
160°	1463.2	1462.4	1461.6	1460.8	1460.0	1459.7	1460.0	1460.2	1460.5	1460.8	1461.8
162.5°	1485.9	1485.2	1484.7	1484.1	1483.4	1483.2	1483.2	1483.3	1483.4	1483.4	1484.7
165°	1516.1	1515.6	1515.0	1514.5	1513.9	1513.8	1514.1	1514.3	1514.6	1514.9	1516.0
167.5°	1541.6	1540.6	1539.5	1538.4	1537.3	1536.8	1536.8	1536.8	1536.8	1536.8	1538.4
170°	1555.4	1554.4	1553.2	1552.2	1551.1	1550.5	1550.5	1550.5	1550.5	1550.5	1552.2
172.5°	1565.3	1564.2	1563.1	1562.0	1560.9	1560.4	1560.4	1560.4	1560.4	1560.4	1562.0
175°	1576.4	1575.2	1574.2	1573.0	1572.0	1571.4	1571.4	1571.4	1571.4	1571.4	1573.0
177.5°	1582.0	1581.1	1580.3	1579.4	1578.5	1577.9	1577.8	1577.5	1577.3	1577.1	1578.4
180°	1580.1	1580.1	1580.1	1580.1	1580.1	1580.1	1580.1	1580.1	1580.1	1580.1	1580.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	863.6	863.6	863.6	863.6	863.6	863.6	863.6	863.6
2.5°	861.7	862.7	863.8	864.3	864.1	864.0	863.8	863.6
5°	859.1	860.5	862.1	862.7	862.5	862.3	862.2	862.0
7.5°	851.9	853.2	854.5	855.1	854.9	854.8	854.5	854.4
10°	845.1	846.4	847.7	848.3	848.2	848.0	847.7	847.6
12.5°	837.1	838.1	839.1	839.4	838.9	838.4	837.9	837.4
15°	821.9	823.0	824.2	824.3	823.6	822.8	822.1	821.3
17.5°	802.6	803.5	804.3	804.5	804.0	803.6	803.2	802.7
20°	787.7	788.3	788.9	789.1	789.1	789.1	789.1	789.1
22.5°	772.5	773.1	773.9	774.0	773.6	773.1	772.7	772.3
25°	748.4	749.1	749.8	749.7	748.8	747.9	746.9	746.0
27.5°	720.2	720.8	721.3	721.5	721.1	720.7	720.4	720.1
30°	701.0	701.4	701.7	701.9	701.6	701.5	701.3	701.1
32.5°	682.7	683.1	683.5	683.5	683.4	683.2	683.0	682.8
35°	653.1	653.7	654.3	654.5	654.5	654.5	654.5	654.5
37.5°	622.0	622.7	623.5	623.9	623.8	623.7	623.6	623.5
40°	601.0	601.8	602.5	603.1	603.4	603.8	604.2	604.5
42.5°	581.6	582.5	583.4	583.9	584.0	584.1	584.2	584.2
45°	550.5	551.8	553.1	553.8	554.1	554.2	554.4	554.6
47.5°	518.3	520.2	522.1	523.3	523.7	524.2	524.6	525.0
50°	496.9	499.0	501.1	502.4	503.0	503.5	504.1	504.7
52.5°	475.6	477.8	480.0	481.4	481.8	482.2	482.6	483.0
55°	441.9	444.0	446.1	447.4	448.2	449.0	449.7	450.5
57.5°	408.6	411.0	413.4	414.8	415.4	416.0	416.5	417.1
60°	385.8	388.7	391.5	393.1	393.7	394.3	394.8	395.4
62.5°	362.7	365.8	369.0	370.9	371.6	372.3	373.0	373.7
65°	328.2	331.1	333.9	335.7	336.5	337.2	337.9	338.7
67.5°	292.9	296.3	299.7	301.9	302.9	303.9	304.8	305.8
70°	268.8	272.4	276.0	278.3	279.4	280.5	281.7	282.8
72.5°	246.4	250.2	254.1	256.5	257.3	258.1	258.9	259.8
75°	212.5	216.2	220.0	222.3	223.2	224.2	225.1	226.1
77.5°	178.5	182.6	186.8	189.2	190.0	190.7	191.4	192.2
80°	158.2	162.3	166.4	168.8	169.7	170.4	171.1	171.9
82.5°	138.8	142.8	146.8	149.5	150.9	152.2	153.6	155.0
85°	112.4	116.6	120.7	123.5	125.1	126.5	128.1	129.6
87.5°	95.5	100.0	104.6	107.7	109.2	110.6	112.1	113.6
90°	100.5	106.2	111.9	115.8	118.0	120.1	122.2	124.3
92.5°	125.9	131.9	137.9	141.8	143.7	145.6	147.6	149.4
95°	168.6	174.6	180.7	184.7	186.5	188.4	190.2	192.1
97.5°	219.8	225.6	231.4	235.1	236.6	238.2	239.9	241.5
100°	255.1	261.5	268.0	272.0	273.7	275.3	277.0	278.7
102.5°	291.9	298.4	304.8	309.1	311.0	312.8	314.7	316.7
105°	351.2	356.7	362.1	365.8	367.9	370.1	372.3	374.4
107.5°	416.5	421.1	425.7	428.4	429.6	430.7	431.8	432.9
110°	461.7	466.1	470.5	473.3	474.3	475.3	476.4	477.4





TEST NUMBER: P333427-930

CATALOG NUMBER: S125DIW-S850D1560U930-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	507.0	510.9	514.6	517.0	517.8	518.6	519.4	520.2
115°	576.6	579.7	582.8	584.8	585.6	586.5	587.3	588.2
117.5°	646.0	649.3	652.7	654.5	654.8	654.9	655.1	655.3
120°	692.9	696.1	699.4	701.0	701.0	701.0	701.1	701.1
122.5°	738.7	741.5	744.4	745.9	746.2	746.4	746.7	746.9
125°	806.4	808.9	811.4	812.9	813.6	814.2	814.9	815.6
127.5°	873.4	876.0	878.5	880.0	880.5	881.1	881.7	882.2
130°	918.4	920.7	923.1	924.5	924.8	925.2	925.6	926.0
132.5°	960.9	963.3	965.6	966.8	966.8	966.9	966.9	966.9
135°	1026.1	1028.5	1030.9	1032.2	1032.0	1031.8	1031.7	1031.5
137.5°	1090.4	1092.9	1095.5	1096.4	1095.8	1095.2	1094.6	1094.0
140°	1130.8	1133.4	1136.0	1137.0	1136.4	1135.8	1135.1	1134.6
142.5°	1170.7	1172.8	1174.8	1175.7	1175.0	1174.4	1173.8	1173.1
145°	1229.1	1230.0	1230.9	1231.3	1231.3	1231.2	1231.2	1231.1
147.5°	1283.7	1284.6	1285.6	1285.3	1283.8	1282.2	1280.8	1279.2
150°	1318.2	1318.2	1318.2	1317.9	1317.6	1317.3	1316.9	1316.5
152.5°	1351.0	1351.6	1352.3	1352.1	1351.1	1350.2	1349.2	1348.3
155°	1397.7	1398.9	1400.0	1399.9	1398.5	1397.1	1395.7	1394.4
157.5°	1438.4	1439.5	1440.6	1440.2	1438.4	1436.6	1434.8	1433.0
160°	1463.0	1464.0	1465.2	1465.0	1463.6	1462.2	1460.9	1459.5
162.5°	1486.0	1487.4	1488.7	1488.5	1486.9	1485.3	1483.8	1482.1
165°	1517.0	1518.2	1519.2	1519.0	1517.4	1515.7	1514.1	1512.4
167.5°	1540.0	1541.6	1543.3	1543.3	1541.6	1539.9	1538.2	1536.5
170°	1553.8	1555.4	1557.1	1557.0	1555.0	1553.1	1551.2	1549.3
172.5°	1563.7	1565.3	1566.9	1566.9	1565.2	1563.5	1561.8	1560.2
175°	1574.8	1576.4	1578.0	1577.8	1576.0	1574.0	1572.1	1570.2
177.5°	1579.7	1581.0	1582.3	1582.3	1580.7	1579.2	1577.6	1576.1
180°	1580.1	1580.1	1580.1	1580.1	1580.1	1580.1	1580.1	1580.1

(END OF REPORT)