

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: P333427-830

Luminaire Tested: **S125DIW-S850D1560U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333427-830  
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-S850D1560U830-4F0-1E-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: 8193.7 lumens  
Efficiency: N/A  
Efficacy: 120.3 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

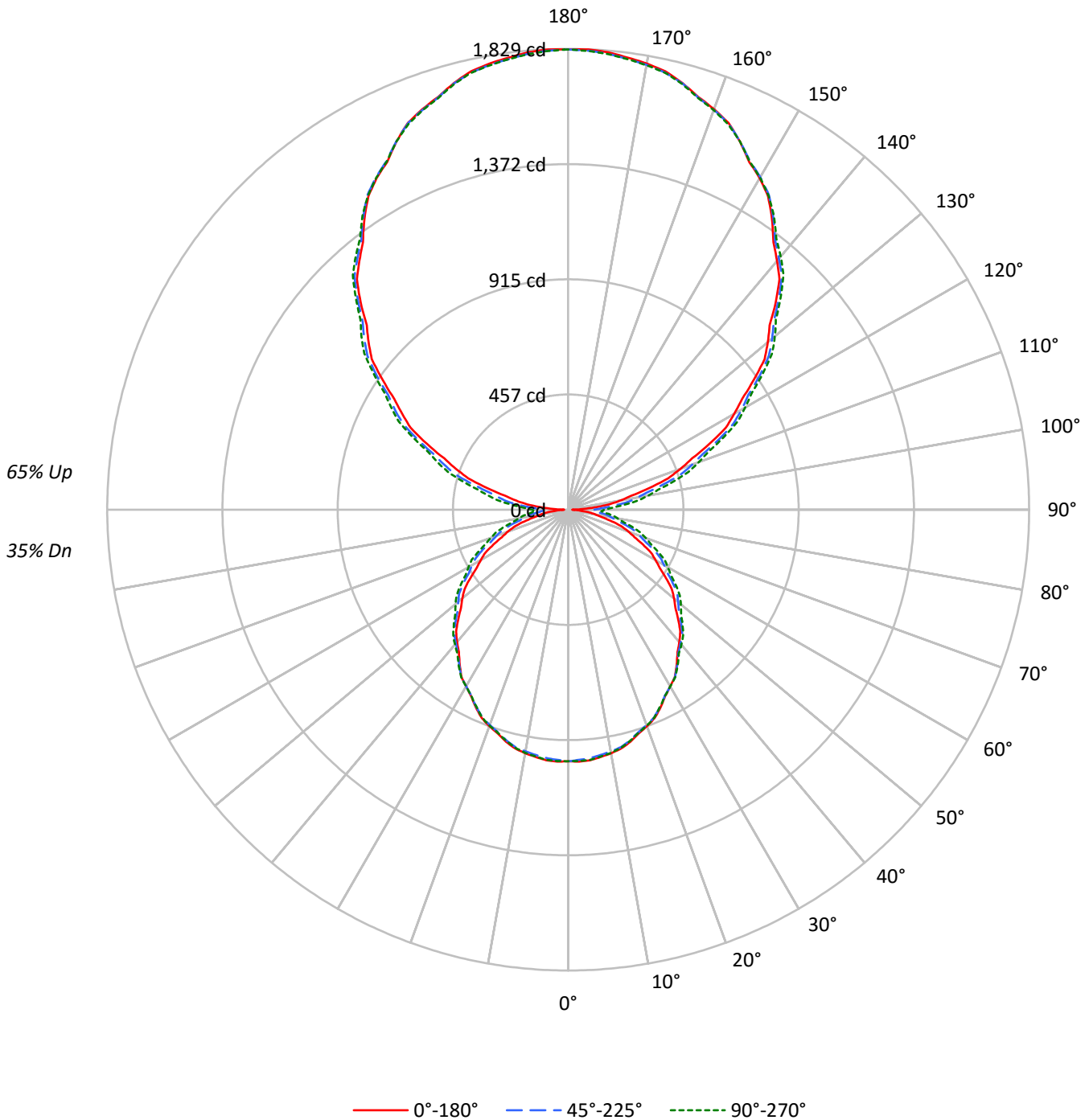
Input Watts (W): 68.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	6448	6448	6448
5°	6461	6330	6350
10°	6415	6216	6207
15°	6340	6081	6026
20°	6237	5914	5845
25°	6114	5735	5621
30°	5965	5538	5419
35°	5827	5357	5233
40°	5686	5166	5046
45°	5526	5003	4880
50°	5375	4826	4733
55°	5192	4659	4561
60°	4992	4468	4385
65°	4783	4270	4187
70°	4546	3997	3985
75°	4170	3735	3735
80°	3682	3416	3463
85°	3220	3204	3378



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.4	1.2
10°-20°	268.0	3.3
20°-30°	398.6	4.9
30°-40°	472.1	5.8
40°-50°	488.1	6.0
50°-60°	449.7	5.5
60°-70°	363.5	4.4
70°-80°	243.4	3.0
80°-90°	130.2	1.6
90°-100°	193.2	2.4
100°-110°	413.5	5.0
110°-120°	646.9	7.9
120°-130°	825.2	10.1
130°-140°	911.1	11.1
140°-150°	886.2	10.8
150°-160°	742.8	9.1
160°-170°	493.8	6.0
170°-180°	172.8	2.1
0°-30°	761.0	9.3
0°-40°	1233.2	15.1
0°-60°	2171.0	26.5
0°-90°	2908.2	35.5
90°-120°	1253.6	15.3
90°-150°	3876.1	47.3
90°-180°	5285.0	64.5
0°-180°	8193.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	998	998	998	998	998	
5°	998	996	990	997	997	95
15°	954	954	948	953	950	268
25°	866	869	863	867	862	399
35°	750	756	754	757	757	469
45°	618	628	633	640	641	477
55°	475	490	506	516	521	424
65°	327	349	373	387	392	324
75°	180	206	237	256	261	191
85°	54	86	120	141	150	57
90°	17	60	103	132	144	16
95°	105	134	181	211	222	109
105°	333	357	394	421	433	355
115°	618	632	659	675	680	612
125°	898	906	927	939	943	804
135°	1165	1172	1180	1193	1192	897
145°	1410	1414	1419	1423	1423	881
155°	1612	1612	1613	1618	1612	742
165°	1753	1750	1751	1756	1748	494
175°	1822	1817	1817	1824	1815	173
180°	1827	1827	1827	1827	1827	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4
2.5°	1000.8	1000.5	1000.1	999.8	999.4	998.6	997.4	996.2	994.9	993.7	994.9
5°	998.4	998.1	997.6	997.1	996.7	995.7	994.2	992.7	991.2	989.7	991.4
7.5°	989.7	989.5	989.3	989.1	988.9	988.1	986.6	985.0	983.4	981.8	983.4
10°	981.8	981.8	981.8	981.8	981.8	981.0	979.2	977.5	975.7	974.0	975.5
12.5°	970.8	971.0	971.2	971.4	971.6	970.9	969.6	968.2	966.8	965.4	966.6
15°	953.5	953.7	953.9	954.0	954.3	953.7	952.2	950.6	949.0	947.5	948.9
17.5°	930.8	931.1	931.6	932.0	932.5	931.9	930.4	928.9	927.4	925.9	926.8
20°	914.3	914.7	915.1	915.6	916.1	915.5	914.0	912.5	910.9	909.4	910.0
22.5°	895.5	896.3	897.0	897.9	898.6	898.1	896.5	894.8	893.1	891.4	892.2
25°	866.3	867.0	867.6	868.3	868.9	868.6	867.3	866.0	864.7	863.4	864.2
27.5°	833.8	834.8	835.8	836.7	837.6	837.4	835.9	834.4	832.9	831.5	832.1
30°	809.5	810.9	812.2	813.4	814.7	814.7	813.4	812.2	810.9	809.5	810.0
32.5°	787.6	788.7	789.9	791.0	792.1	792.2	791.3	790.3	789.4	788.4	788.8
35°	749.8	751.4	752.9	754.4	755.9	756.4	755.7	755.1	754.4	753.8	754.4
37.5°	712.0	713.4	714.8	716.2	717.7	718.2	717.9	717.7	717.6	717.4	718.2
40°	686.2	688.0	689.7	691.4	693.1	693.9	693.7	693.5	693.2	693.1	693.9
42.5°	658.0	660.3	662.5	664.8	667.0	668.5	668.9	669.4	669.9	670.3	671.4
45°	617.6	620.1	622.5	624.8	627.3	629.0	630.1	631.1	632.3	633.3	634.9
47.5°	576.4	578.6	580.8	583.1	585.2	587.3	589.2	591.1	592.9	594.7	597.0
50°	548.2	550.5	553.0	555.3	557.7	560.2	562.5	565.0	567.3	569.7	572.1
52.5°	518.4	521.3	524.2	527.2	530.1	533.0	535.9	538.9	541.8	544.7	547.2
55°	474.8	478.2	481.7	485.2	488.7	492.2	495.7	499.2	502.6	506.1	508.5
57.5°	430.1	434.3	438.5	442.6	446.9	450.9	455.0	458.9	462.9	466.9	469.7
60°	400.4	404.7	409.1	413.4	417.7	422.2	426.5	430.8	435.2	439.5	442.8
62.5°	371.4	375.7	380.1	384.5	388.8	393.3	398.0	402.7	407.4	412.1	415.8
65°	327.0	332.0	337.0	342.0	346.9	352.0	357.3	362.5	367.8	373.0	376.3
67.5°	285.0	289.9	294.7	299.5	304.3	309.4	314.7	320.1	325.4	330.6	334.6
70°	254.5	259.5	264.5	269.6	274.6	279.8	285.5	291.2	296.8	302.5	306.6
72.5°	224.8	229.9	235.1	240.3	245.4	251.1	257.3	263.5	269.7	275.9	280.3
75°	180.1	185.8	191.4	197.1	202.7	209.1	216.0	223.0	229.9	236.9	241.2
77.5°	137.2	143.7	150.3	156.8	163.3	169.9	176.6	183.3	190.0	196.8	201.5
80°	110.7	117.2	123.7	130.2	136.8	143.6	151.1	158.4	165.9	173.2	178.0
82.5°	86.3	93.2	100.1	107.0	113.9	121.0	128.7	136.2	143.7	151.4	156.0
85°	53.8	61.0	68.2	75.4	82.6	89.9	97.6	105.2	112.8	120.4	125.2
87.5°	30.8	38.3	45.7	53.3	60.7	68.3	76.2	84.0	91.9	99.7	105.0
90°	17.1	26.6	36.1	45.5	55.0	64.6	74.2	83.8	93.4	103.0	109.6
92.5°	48.5	56.7	64.9	73.1	81.3	90.6	100.9	111.1	121.4	131.8	138.6
95°	105.1	111.4	117.7	123.9	130.3	138.6	149.2	159.8	170.3	180.9	187.9
97.5°	165.0	170.4	175.8	181.1	186.4	194.8	206.3	217.8	229.3	240.8	247.5
100°	209.8	214.3	219.0	223.5	228.1	235.8	246.9	258.0	269.1	280.1	287.6
102.5°	257.9	263.3	268.9	274.4	279.8	287.0	295.9	304.7	313.6	322.5	330.0
105°	332.9	338.0	343.0	348.1	353.2	359.9	368.3	376.7	385.1	393.6	399.8
107.5°	415.8	420.5	425.0	429.5	434.0	440.2	447.9	455.6	463.4	471.1	476.3
110°	473.1	477.3	481.5	485.7	489.8	495.5	502.6	509.5	516.6	523.7	528.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	532.3	535.2	538.1	540.9	543.8	548.9	556.0	563.2	570.2	577.4	581.7
115°	618.5	621.3	624.2	626.9	629.7	634.2	640.6	646.8	653.1	659.4	663.0
117.5°	705.1	706.7	708.2	709.8	711.4	715.1	721.0	727.0	732.9	738.9	742.8
120°	759.7	762.0	764.2	766.4	768.6	772.4	777.7	783.1	788.3	793.7	797.4
122.5°	818.0	819.0	819.8	820.7	821.5	824.8	830.5	836.1	841.8	847.4	850.7
125°	898.1	899.8	901.4	903.1	904.7	908.0	912.6	917.3	921.9	926.6	929.4
127.5°	982.3	983.2	984.1	985.0	985.8	988.2	992.1	996.1	1000.0	1004.0	1006.9
130°	1033.5	1034.9	1036.2	1037.6	1039.0	1041.5	1045.2	1048.9	1052.5	1056.2	1058.9
132.5°	1083.9	1086.5	1089.0	1091.6	1094.1	1096.5	1098.7	1101.0	1103.2	1105.4	1108.1
135°	1164.8	1166.4	1168.1	1169.8	1171.5	1173.2	1175.1	1176.9	1178.7	1180.5	1183.4
137.5°	1240.8	1242.4	1244.1	1245.8	1247.4	1249.0	1250.4	1251.8	1253.2	1254.6	1257.6
140°	1288.8	1290.4	1292.0	1293.6	1295.1	1296.6	1297.7	1298.9	1300.0	1301.2	1304.2
142.5°	1337.8	1338.9	1340.1	1341.2	1342.4	1343.6	1344.8	1346.0	1347.3	1348.6	1350.9
145°	1409.7	1410.7	1411.7	1412.9	1413.9	1414.9	1415.8	1416.7	1417.7	1418.6	1419.8
147.5°	1475.3	1475.9	1476.6	1477.3	1478.0	1478.8	1479.5	1480.3	1481.0	1481.8	1482.9
150°	1519.6	1519.3	1519.0	1518.6	1518.3	1518.8	1520.0	1521.4	1522.6	1523.9	1523.9
152.5°	1555.9	1556.4	1556.9	1557.3	1557.7	1558.2	1558.8	1559.2	1559.7	1560.3	1561.0
155°	1612.0	1612.0	1612.0	1612.0	1612.0	1612.1	1612.5	1612.8	1613.1	1613.4	1614.7
157.5°	1662.0	1661.3	1660.7	1659.9	1659.3	1659.1	1659.3	1659.7	1660.0	1660.3	1661.6
160°	1691.6	1690.6	1689.7	1688.8	1687.8	1687.5	1687.8	1688.1	1688.5	1688.8	1690.0
162.5°	1717.8	1717.0	1716.4	1715.7	1715.0	1714.7	1714.7	1714.8	1714.9	1714.9	1716.5
165°	1752.8	1752.1	1751.4	1750.9	1750.2	1750.0	1750.4	1750.7	1751.0	1751.3	1752.6
167.5°	1782.3	1781.0	1779.8	1778.5	1777.3	1776.6	1776.6	1776.6	1776.6	1776.6	1778.5
170°	1798.2	1797.0	1795.6	1794.4	1793.2	1792.5	1792.5	1792.5	1792.5	1792.5	1794.4
172.5°	1809.6	1808.4	1807.0	1805.8	1804.5	1803.9	1803.9	1803.9	1803.9	1803.9	1805.8
175°	1822.4	1821.1	1819.9	1818.5	1817.3	1816.7	1816.7	1816.7	1816.7	1816.7	1818.5
177.5°	1828.9	1827.9	1826.9	1825.9	1824.9	1824.2	1824.0	1823.7	1823.4	1823.3	1824.8
180°	1826.6	1826.6	1826.6	1826.6	1826.6	1826.6	1826.6	1826.6	1826.6	1826.6	1826.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4
2.5°	996.2	997.4	998.6	999.2	999.0	998.8	998.6	998.4
5°	993.2	994.9	996.6	997.4	997.1	996.9	996.7	996.6
7.5°	984.9	986.4	987.9	988.5	988.4	988.2	987.9	987.7
10°	977.0	978.5	980.1	980.7	980.5	980.3	980.1	979.9
12.5°	967.7	968.9	970.1	970.3	969.8	969.2	968.7	968.1
15°	950.2	951.5	952.8	953.0	952.2	951.2	950.4	949.5
17.5°	927.8	928.9	929.8	930.1	929.5	929.1	928.5	928.0
20°	910.7	911.3	912.0	912.3	912.3	912.3	912.3	912.3
22.5°	893.1	893.8	894.7	894.8	894.3	893.8	893.2	892.8
25°	865.2	866.0	866.9	866.8	865.6	864.6	863.5	862.4
27.5°	832.6	833.3	833.9	834.1	833.6	833.2	832.8	832.5
30°	810.4	810.9	811.2	811.4	811.2	811.0	810.8	810.5
32.5°	789.3	789.7	790.1	790.2	790.0	789.9	789.6	789.4
35°	755.1	755.7	756.4	756.7	756.7	756.7	756.7	756.7
37.5°	719.1	719.9	720.8	721.2	721.1	721.0	721.0	720.9
40°	694.7	695.7	696.5	697.2	697.6	698.0	698.5	698.9
42.5°	672.4	673.4	674.5	675.0	675.1	675.2	675.3	675.4
45°	636.4	637.9	639.4	640.3	640.6	640.7	640.9	641.2
47.5°	599.2	601.4	603.6	605.0	605.5	606.0	606.4	606.9
50°	574.5	576.9	579.3	580.8	581.5	582.1	582.8	583.4
52.5°	549.8	552.3	554.9	556.5	556.9	557.4	557.9	558.4
55°	510.9	513.3	515.7	517.3	518.1	519.1	519.9	520.8
57.5°	472.4	475.1	477.9	479.6	480.2	480.9	481.5	482.2
60°	446.0	449.3	452.6	454.5	455.2	455.8	456.5	457.1
62.5°	419.3	422.9	426.6	428.8	429.6	430.5	431.2	432.1
65°	379.5	382.8	386.0	388.0	389.0	389.8	390.7	391.5
67.5°	338.6	342.5	346.5	349.0	350.2	351.3	352.4	353.5
70°	310.8	314.9	319.1	321.7	323.0	324.3	325.6	327.0
72.5°	284.8	289.3	293.8	296.5	297.5	298.4	299.4	300.3
75°	245.6	250.0	254.3	257.0	258.1	259.2	260.2	261.4
77.5°	206.3	211.1	215.9	218.8	219.6	220.5	221.3	222.3
80°	182.9	187.7	192.4	195.2	196.1	197.0	197.8	198.7
82.5°	160.5	165.1	169.8	172.9	174.5	176.0	177.6	179.2
85°	130.0	134.8	139.6	142.8	144.6	146.3	148.1	149.8
87.5°	110.4	115.6	120.9	124.5	126.2	127.9	129.6	131.3
90°	116.2	122.7	129.3	133.8	136.4	138.8	141.3	143.7
92.5°	145.5	152.5	159.4	163.9	166.2	168.3	170.6	172.8
95°	194.9	201.9	208.9	213.5	215.7	217.8	219.9	222.1
97.5°	254.1	260.8	267.5	271.7	273.5	275.4	277.3	279.2
100°	294.9	302.4	309.8	314.4	316.4	318.3	320.3	322.2
102.5°	337.4	345.0	352.4	357.3	359.5	361.7	363.8	366.1
105°	406.0	412.4	418.6	422.9	425.4	427.8	430.4	432.8
107.5°	481.5	486.8	492.1	495.3	496.6	497.9	499.2	500.5
110°	533.8	538.9	543.9	547.1	548.3	549.5	550.7	552.0





TEST NUMBER: P333427-830

CATALOG NUMBER: S125DIW-S850D1560U830-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	586.2	590.6	594.9	597.7	598.6	599.6	600.5	601.4
115°	666.6	670.1	673.7	676.1	677.0	678.1	679.0	680.0
117.5°	746.8	750.6	754.6	756.7	757.0	757.1	757.3	757.6
120°	801.1	804.7	808.5	810.4	810.4	810.4	810.5	810.5
122.5°	853.9	857.2	860.5	862.3	862.6	862.9	863.2	863.5
125°	932.3	935.1	938.0	939.8	940.6	941.3	942.1	942.9
127.5°	1009.7	1012.7	1015.6	1017.4	1017.9	1018.6	1019.3	1019.8
130°	1061.7	1064.4	1067.1	1068.7	1069.1	1069.6	1070.1	1070.5
132.5°	1110.9	1113.6	1116.3	1117.7	1117.7	1117.8	1117.8	1117.8
135°	1186.2	1189.0	1191.8	1193.3	1193.1	1192.9	1192.7	1192.5
137.5°	1260.6	1263.5	1266.5	1267.5	1266.9	1266.1	1265.5	1264.7
140°	1307.3	1310.3	1313.3	1314.5	1313.7	1313.1	1312.3	1311.6
142.5°	1353.4	1355.8	1358.2	1359.1	1358.4	1357.6	1357.0	1356.2
145°	1420.9	1421.9	1423.1	1423.5	1423.4	1423.3	1423.3	1423.2
147.5°	1484.0	1485.1	1486.2	1485.9	1484.1	1482.3	1480.6	1478.8
150°	1523.9	1523.9	1523.9	1523.6	1523.2	1522.9	1522.4	1522.0
152.5°	1561.8	1562.5	1563.3	1563.1	1562.0	1560.9	1559.8	1558.8
155°	1615.9	1617.2	1618.4	1618.3	1616.7	1615.1	1613.5	1612.0
157.5°	1662.8	1664.2	1665.4	1665.0	1662.8	1660.8	1658.7	1656.6
160°	1691.3	1692.5	1693.8	1693.7	1692.1	1690.5	1688.9	1687.3
162.5°	1718.0	1719.5	1721.0	1720.8	1719.0	1717.1	1715.3	1713.4
165°	1753.8	1755.1	1756.3	1756.1	1754.2	1752.3	1750.4	1748.4
167.5°	1780.4	1782.3	1784.1	1784.1	1782.2	1780.3	1778.3	1776.3
170°	1796.3	1798.2	1800.1	1800.0	1797.7	1795.5	1793.3	1791.1
172.5°	1807.7	1809.6	1811.5	1811.5	1809.5	1807.5	1805.5	1803.6
175°	1820.5	1822.4	1824.3	1824.1	1821.9	1819.7	1817.5	1815.2
177.5°	1826.3	1827.8	1829.3	1829.2	1827.4	1825.6	1823.8	1822.1
180°	1826.6	1826.6	1826.6	1826.6	1826.6	1826.6	1826.6	1826.6

(END OF REPORT)