

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: P331522-840

Luminaire Tested: **S122DIW-S485D1440U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331522-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D1440U840-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7037.1 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

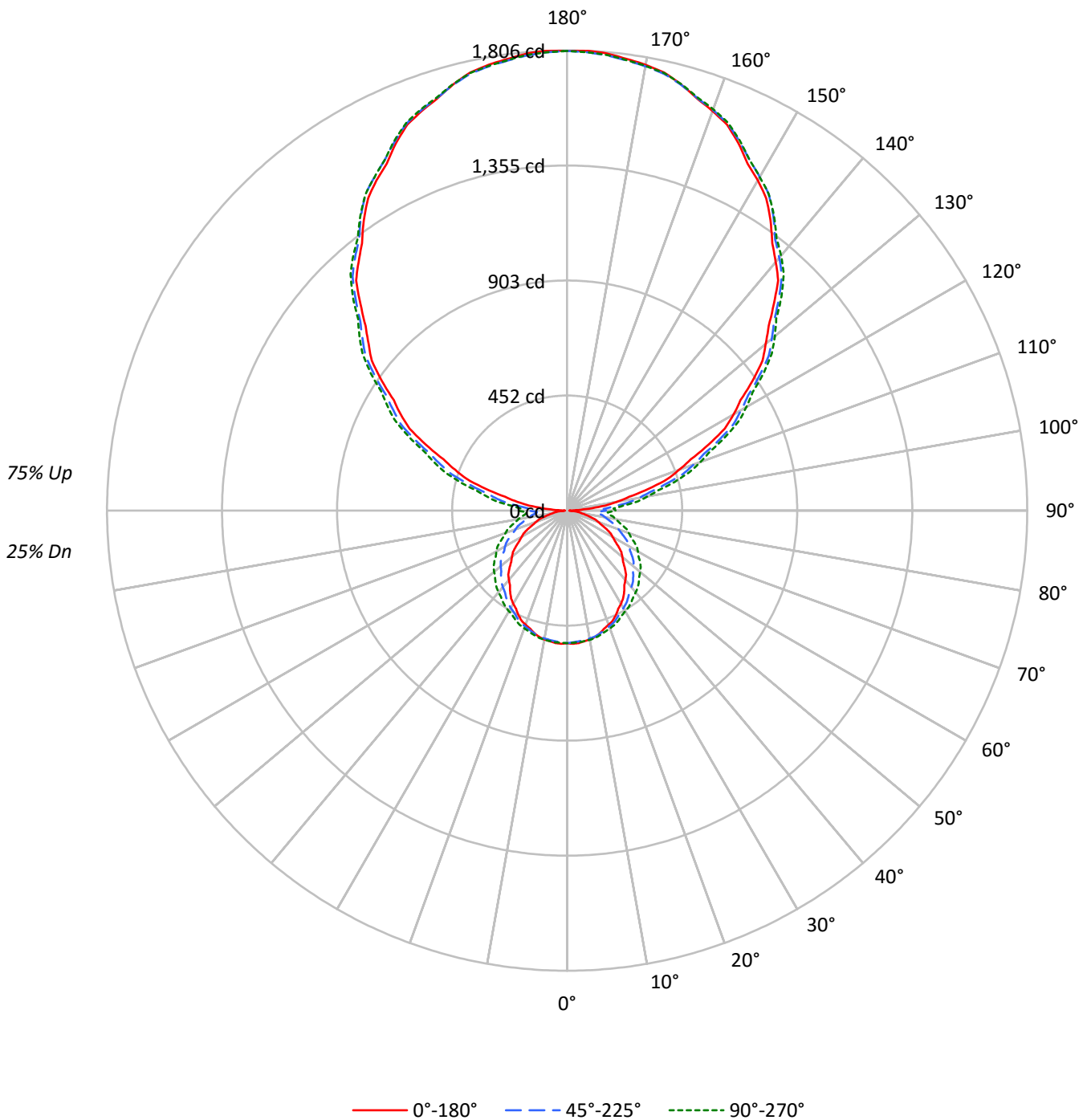
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	90	90	90	90	70	70	70	51	51	51	33	33	33	25
1	91	87	83	79	81	77	74	71	60	57	55	43	42	40	28	27	27	20
2	83	75	69	64	73	67	62	58	52	48	45	37	35	33	24	23	22	16
3	75	66	59	53	67	59	53	48	45	41	37	33	30	28	21	20	18	13
4	69	58	50	44	61	52	45	40	40	35	32	29	26	23	19	17	15	11
5	63	51	43	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9
6	58	46	38	32	51	41	34	29	32	27	23	23	20	17	15	13	12	8
7	53	41	33	28	47	37	30	25	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	33	27	22	26	21	18	19	16	13	13	11	9	6
9	46	34	27	22	41	30	24	20	24	19	16	18	14	12	12	10	8	6
10	43	31	24	19	38	28	22	17	22	17	14	16	13	11	11	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8402	8402	8402
5°	8443	8088	8058
10°	8390	7850	7761
15°	8275	7596	7448
20°	8129	7324	7148
25°	7984	7062	6875
30°	7780	6794	6601
35°	7575	6536	6409
40°	7360	6315	6215
45°	7153	6118	6051
50°	6934	5937	5888
55°	6700	5744	5722
60°	6417	5546	5546
65°	6122	5313	5339
70°	5796	5061	5115
75°	5371	4816	4908
80°	4707	4564	4698
85°	4070	4346	4535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.3	0.7
10°-20°	141.4	2.0
20°-30°	214.3	3.0
30°-40°	261.0	3.7
40°-50°	280.8	4.0
50°-60°	272.7	3.9
60°-70°	238.1	3.4
70°-80°	183.3	2.6
80°-90°	130.2	1.9
90°-100°	199.1	2.8
100°-110°	416.9	5.9
110°-120°	647.8	9.2
120°-130°	820.9	11.7
130°-140°	905.3	12.9
140°-150°	880.0	12.5
150°-160°	736.7	10.5
160°-170°	488.6	6.9
170°-180°	170.8	2.4
0°-30°	405.0	5.8
0°-40°	666.0	9.5
0°-60°	1219.4	17.3
0°-90°	1771.0	25.2
90°-120°	1263.8	18.0
90°-150°	3870.0	55.0
90°-180°	5266.0	74.8
0°-180°	7037.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	522	520	515	519	519	49
15°	498	499	499	506	505	140
25°	452	458	464	473	476	208
35°	390	403	417	433	439	244
45°	320	340	367	389	398	247
55°	245	273	311	338	348	219
65°	167	205	249	279	290	166
75°	93	135	183	214	226	98
85°	27	74	122	153	164	29
90°	9	72	153	179	191	9
95°	85	136	184	212	219	96
105°	331	358	400	428	438	350
115°	612	630	660	680	685	605
125°	888	902	921	936	942	793
135°	1147	1164	1174	1188	1190	886
145°	1392	1402	1411	1417	1415	869
155°	1591	1596	1600	1607	1603	732
165°	1731	1730	1730	1739	1732	488
175°	1801	1797	1793	1803	1795	171
180°	1804	1804	1804	1804	1804	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	523.4	523.0	522.6	522.2	521.8	521.1	520.2	519.3	518.4	517.4	518.1
5°	521.9	521.4	520.9	520.4	519.9	519.2	518.2	517.2	516.1	515.1	516.1
7.5°	517.3	516.8	516.5	516.2	515.9	515.3	514.5	513.8	513.0	512.2	513.4
10°	513.6	513.3	512.9	512.6	512.3	511.9	511.4	510.9	510.4	509.9	511.2
12.5°	507.6	507.7	507.8	507.8	507.9	507.7	507.4	507.0	506.5	506.2	507.6
15°	497.8	498.1	498.5	498.8	499.1	499.3	499.3	499.3	499.3	499.3	500.8
17.5°	485.1	485.8	486.6	487.3	488.0	488.6	489.1	489.6	490.2	490.7	492.2
20°	476.7	477.5	478.4	479.2	480.0	480.8	481.4	482.1	482.8	483.4	485.2
22.5°	467.6	468.6	469.6	470.5	471.5	472.4	473.4	474.3	475.2	476.3	478.1
25°	452.5	453.7	454.8	456.1	457.2	458.6	460.1	461.6	463.1	464.5	466.6
27.5°	434.4	436.4	438.3	440.2	442.0	443.9	445.7	447.5	449.2	451.0	453.5
30°	422.3	424.5	426.7	428.9	431.1	433.2	435.5	437.6	439.8	441.9	444.6
32.5°	409.1	411.5	413.9	416.5	418.9	421.4	423.9	426.6	429.1	431.7	434.7
35°	389.9	392.7	395.7	398.5	401.3	404.3	407.5	410.7	413.8	417.1	420.7
37.5°	369.1	372.4	375.7	379.0	382.2	386.0	390.1	394.2	398.3	402.4	406.6
40°	355.3	358.9	362.6	366.3	370.0	374.1	378.6	383.1	387.7	392.2	396.6
42.5°	341.9	345.7	349.3	353.0	356.7	361.1	366.4	371.5	376.8	381.9	386.7
45°	319.8	324.3	328.8	333.4	337.9	343.1	348.9	354.8	360.7	366.6	371.7
47.5°	297.9	302.9	307.8	312.7	317.6	323.6	330.4	337.3	344.2	351.0	356.5
50°	282.9	288.0	293.3	298.4	303.6	309.9	317.5	325.1	332.6	340.1	345.9
52.5°	268.3	273.8	279.2	284.8	290.2	296.9	304.9	312.8	320.7	328.7	334.5
55°	245.1	251.2	257.2	263.2	269.2	276.6	285.4	294.1	302.8	311.4	317.5
57.5°	222.2	229.0	235.8	242.6	249.4	257.2	266.1	275.0	283.9	292.8	299.3
60°	205.9	213.1	220.4	227.5	234.7	243.1	252.7	262.2	271.8	281.3	287.7
62.5°	191.4	198.8	206.4	213.9	221.4	229.8	239.3	248.9	258.5	268.0	274.8
65°	167.4	175.6	183.9	192.1	200.3	209.3	219.2	229.1	239.0	248.9	255.8
67.5°	145.4	154.0	162.6	171.2	179.8	189.0	199.2	209.3	219.4	229.5	236.5
70°	129.8	138.5	147.1	155.8	164.6	174.1	184.5	194.9	205.3	215.7	222.9
72.5°	115.2	124.2	133.2	142.2	151.2	161.0	171.5	182.0	192.5	203.0	210.2
75°	92.8	102.2	111.5	120.9	130.3	140.4	151.1	161.8	172.6	183.3	190.5
77.5°	71.1	80.9	90.7	100.5	110.4	120.7	131.6	142.5	153.4	164.3	171.5
80°	56.6	66.8	77.1	87.3	97.5	108.1	119.0	129.8	140.7	151.6	158.6
82.5°	44.5	54.6	64.6	74.7	84.8	95.4	106.4	117.4	128.5	139.6	146.5
85°	27.2	37.6	48.0	58.4	68.7	79.3	90.0	100.7	111.5	122.2	129.3
87.5°	15.0	25.9	36.7	47.5	58.3	69.8	82.0	94.2	106.4	118.7	125.3
90°	9.1	22.8	36.7	50.4	64.2	80.2	98.4	116.5	134.7	152.8	158.9
92.5°	34.0	46.0	58.1	70.1	82.1	94.2	106.2	118.4	130.5	142.5	149.3
95°	85.2	96.4	107.8	119.0	130.3	141.3	152.0	162.7	173.4	184.2	190.6
97.5°	149.9	159.9	169.9	179.9	189.9	200.3	211.3	222.2	233.1	244.1	250.2
100°	198.6	207.5	216.4	225.4	234.3	243.9	254.3	264.7	275.1	285.5	291.8
102.5°	249.1	257.0	264.9	272.7	280.5	289.6	300.0	310.4	320.8	331.2	337.6
105°	331.1	337.0	342.8	348.7	354.6	362.2	371.6	381.0	390.4	399.8	406.4
107.5°	414.3	419.7	425.2	430.5	435.9	442.7	451.1	459.4	467.8	476.2	482.0
110°	467.4	472.7	478.2	483.5	488.9	495.6	503.9	512.1	520.3	528.6	533.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	525.8	530.7	535.5	540.4	545.2	551.4	559.0	566.4	574.0	581.6	586.1
115°	612.0	615.8	619.8	623.6	627.5	632.9	639.7	646.6	653.5	660.4	665.0
117.5°	697.1	701.0	704.9	708.8	712.8	717.2	722.4	727.4	732.5	737.6	741.7
120°	754.4	757.7	761.1	764.5	767.9	771.5	775.6	779.5	783.6	787.5	792.2
122.5°	806.7	810.2	813.7	817.3	820.8	824.8	829.1	833.5	838.0	842.3	846.2
125°	887.6	890.6	893.6	896.7	899.8	903.4	907.8	912.1	916.5	920.8	924.3
127.5°	967.0	970.7	974.4	978.1	981.8	985.2	988.3	991.4	994.5	997.6	1000.6
130°	1016.9	1021.2	1025.4	1029.7	1033.9	1037.4	1040.3	1043.1	1045.9	1048.8	1052.2
132.5°	1073.0	1076.4	1079.8	1083.3	1086.7	1089.8	1092.7	1095.5	1098.3	1101.2	1103.6
135°	1147.1	1150.8	1154.6	1158.3	1162.1	1165.1	1167.4	1169.7	1172.2	1174.5	1177.7
137.5°	1226.0	1229.0	1232.0	1235.1	1238.1	1240.4	1242.0	1243.6	1245.3	1246.9	1249.6
140°	1273.5	1276.4	1279.3	1282.1	1285.1	1287.5	1289.5	1291.5	1293.5	1295.6	1298.3
142.5°	1322.2	1325.1	1328.0	1330.9	1333.7	1335.7	1337.0	1338.2	1339.4	1340.7	1343.0
145°	1391.5	1393.9	1396.2	1398.6	1401.0	1403.2	1405.2	1407.2	1409.3	1411.3	1412.6
147.5°	1453.9	1456.7	1459.6	1462.5	1465.3	1467.4	1468.7	1470.1	1471.5	1472.8	1473.7
150°	1496.5	1498.5	1500.7	1502.7	1504.7	1506.3	1507.7	1509.0	1510.5	1511.8	1512.8
152.5°	1534.3	1536.3	1538.3	1540.3	1542.5	1544.3	1545.9	1547.5	1549.1	1550.7	1552.1
155°	1590.9	1592.0	1593.0	1594.0	1595.0	1596.0	1597.0	1598.0	1599.0	1600.0	1601.7
157.5°	1639.3	1640.0	1640.7	1641.4	1642.0	1642.7	1643.4	1644.0	1644.6	1645.2	1647.4
160°	1668.6	1669.3	1669.9	1670.6	1671.3	1671.8	1672.1	1672.4	1672.8	1673.1	1675.2
162.5°	1695.4	1695.6	1695.7	1695.8	1696.0	1696.2	1696.5	1696.9	1697.2	1697.5	1699.8
165°	1731.0	1730.7	1730.3	1730.0	1729.7	1729.5	1729.5	1729.5	1729.5	1729.5	1731.8
167.5°	1760.8	1759.8	1758.8	1757.8	1756.8	1756.3	1756.2	1756.2	1756.1	1756.0	1758.4
170°	1776.7	1775.6	1774.6	1773.6	1772.6	1771.9	1771.6	1771.3	1770.9	1770.6	1772.9
172.5°	1787.7	1786.7	1785.6	1784.6	1783.6	1782.9	1782.6	1782.2	1781.9	1781.5	1783.9
175°	1801.0	1800.0	1799.0	1798.0	1797.0	1796.1	1795.4	1794.7	1794.1	1793.4	1795.8
177.5°	1806.5	1805.7	1804.9	1804.1	1803.3	1802.6	1802.0	1801.5	1801.0	1800.4	1802.0
180°	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	518.8	519.4	520.1	520.3	520.0	519.8	519.5	519.2
5°	517.2	518.2	519.2	519.6	519.4	519.3	519.1	518.9
7.5°	514.6	515.8	517.1	517.6	517.5	517.3	517.1	516.9
10°	512.5	513.8	515.2	515.8	515.6	515.4	515.3	515.1
12.5°	508.9	510.3	511.6	512.2	512.0	511.8	511.7	511.5
15°	502.3	503.8	505.3	505.9	505.8	505.6	505.4	505.3
17.5°	493.8	495.4	497.0	497.8	497.8	497.8	497.8	497.8
20°	487.2	489.0	490.8	491.7	491.7	491.7	491.7	491.7
22.5°	479.9	481.7	483.6	484.6	484.9	485.1	485.4	485.7
25°	468.6	470.6	472.6	473.9	474.4	474.9	475.4	475.9
27.5°	456.2	458.7	461.2	462.6	463.0	463.4	463.7	464.1
30°	447.4	450.0	452.7	454.2	454.7	455.2	455.8	456.3
32.5°	437.9	440.9	444.0	446.1	447.0	447.9	448.8	449.7
35°	424.4	428.2	431.8	434.2	435.5	436.6	437.8	439.0
37.5°	410.6	414.8	418.8	421.4	422.7	423.9	425.2	426.5
40°	400.9	405.3	409.6	412.5	414.0	415.6	417.1	418.6
42.5°	391.4	396.2	400.9	404.1	405.6	407.1	408.6	410.1
45°	377.0	382.1	387.3	390.7	392.4	394.2	395.8	397.5
47.5°	361.8	367.3	372.7	376.4	378.2	380.0	381.9	383.7
50°	351.5	357.2	362.9	366.7	368.6	370.4	372.2	374.1
52.5°	340.3	346.2	352.0	355.9	357.9	359.9	361.8	363.9
55°	323.6	329.6	335.6	339.7	341.9	344.1	346.3	348.4
57.5°	305.8	312.3	318.8	323.2	325.4	327.6	329.8	332.0
60°	294.1	300.4	306.8	311.1	313.5	315.9	318.2	320.5
62.5°	281.6	288.3	295.1	299.6	301.8	304.1	306.3	308.5
65°	262.7	269.5	276.4	280.9	283.1	285.3	287.4	289.6
67.5°	243.5	250.3	257.3	262.0	264.2	266.5	268.8	271.0
70°	230.1	237.3	244.5	249.1	251.2	253.2	255.2	257.2
72.5°	217.2	224.3	231.4	236.1	238.4	240.9	243.3	245.7
75°	197.7	204.9	212.1	216.8	218.9	221.2	223.3	225.5
77.5°	178.6	185.8	193.0	197.7	200.1	202.4	204.8	207.1
80°	165.7	172.7	179.8	184.4	186.8	189.1	191.5	193.8
82.5°	153.6	160.7	167.6	172.3	174.5	176.7	178.9	181.2
85°	136.2	143.3	150.4	155.0	157.3	159.8	162.1	164.4
87.5°	132.1	138.8	145.4	150.0	152.2	154.3	156.5	158.8
90°	164.9	171.0	176.9	181.2	183.5	185.8	188.1	190.6
92.5°	155.9	162.7	169.4	173.8	175.8	177.9	180.0	182.1
95°	196.9	203.3	209.6	213.5	214.8	216.2	217.5	218.8
97.5°	256.5	262.7	268.8	273.0	274.8	276.7	278.6	280.5
100°	297.9	304.1	310.3	314.2	315.7	317.2	318.7	320.2
102.5°	343.9	350.2	356.6	360.5	362.0	363.6	365.1	366.5
105°	412.8	419.4	426.0	430.2	432.0	433.8	435.7	437.6
107.5°	488.0	493.8	499.8	502.8	503.1	503.4	503.7	504.0
110°	539.3	544.6	550.0	553.1	553.9	554.7	555.5	556.4



TEST NUMBER: P331522-840

CATALOG NUMBER: S122DIW-S485D1440U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	590.7	595.2	599.8	602.6	603.7	604.8	605.9	607.0
115°	669.7	674.4	679.0	681.9	682.7	683.5	684.3	685.2
117.5°	745.9	750.0	754.2	756.6	757.3	758.0	758.6	759.3
120°	796.9	801.6	806.3	809.1	809.9	810.7	811.5	812.3
122.5°	849.9	853.6	857.4	859.6	860.5	861.3	862.1	862.9
125°	927.9	931.4	934.8	937.3	938.4	939.6	940.7	941.9
127.5°	1003.5	1006.4	1009.4	1011.1	1011.4	1011.8	1012.2	1012.6
130°	1055.5	1058.8	1062.2	1063.9	1063.8	1063.8	1063.8	1063.8
132.5°	1106.0	1108.4	1110.9	1112.2	1112.4	1112.7	1112.9	1113.2
135°	1180.8	1184.1	1187.2	1188.9	1189.3	1189.6	1189.9	1190.2
137.5°	1252.4	1255.3	1258.1	1259.4	1259.2	1259.0	1258.8	1258.5
140°	1300.9	1303.6	1306.3	1307.5	1307.2	1306.8	1306.5	1306.1
142.5°	1345.4	1347.9	1350.3	1351.3	1350.8	1350.3	1349.9	1349.4
145°	1414.0	1415.3	1416.6	1417.0	1416.5	1416.0	1415.5	1415.0
147.5°	1474.6	1475.4	1476.3	1476.3	1475.4	1474.5	1473.7	1472.8
150°	1513.8	1514.8	1515.8	1515.8	1514.8	1513.8	1512.8	1511.8
152.5°	1553.3	1554.6	1555.9	1555.9	1554.6	1553.3	1552.1	1550.7
155°	1603.5	1605.2	1606.8	1607.2	1606.2	1605.2	1604.2	1603.2
157.5°	1649.7	1652.0	1654.4	1654.7	1653.0	1651.4	1649.8	1648.2
160°	1677.2	1679.2	1681.2	1681.6	1680.2	1678.9	1677.6	1676.2
162.5°	1702.1	1704.5	1706.7	1707.1	1705.5	1703.8	1702.2	1700.5
165°	1734.2	1736.6	1739.0	1739.3	1737.6	1736.0	1734.2	1732.5
167.5°	1760.7	1763.1	1765.4	1765.7	1764.0	1762.2	1760.5	1758.7
170°	1775.3	1777.7	1780.1	1780.2	1778.2	1776.2	1774.1	1772.1
172.5°	1786.2	1788.7	1791.0	1791.2	1789.2	1787.2	1785.1	1783.1
175°	1798.2	1800.5	1802.9	1803.1	1801.0	1799.0	1797.0	1794.9
177.5°	1803.7	1805.3	1807.0	1807.0	1805.3	1803.7	1802.0	1800.4
180°	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1

(END OF REPORT)