

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: P331521-830

Luminaire Tested: **S122DIW-S485D1440U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331521-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D1440U830-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7286.7 lumens
Efficiency: N/A
Efficacy: 120.2 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

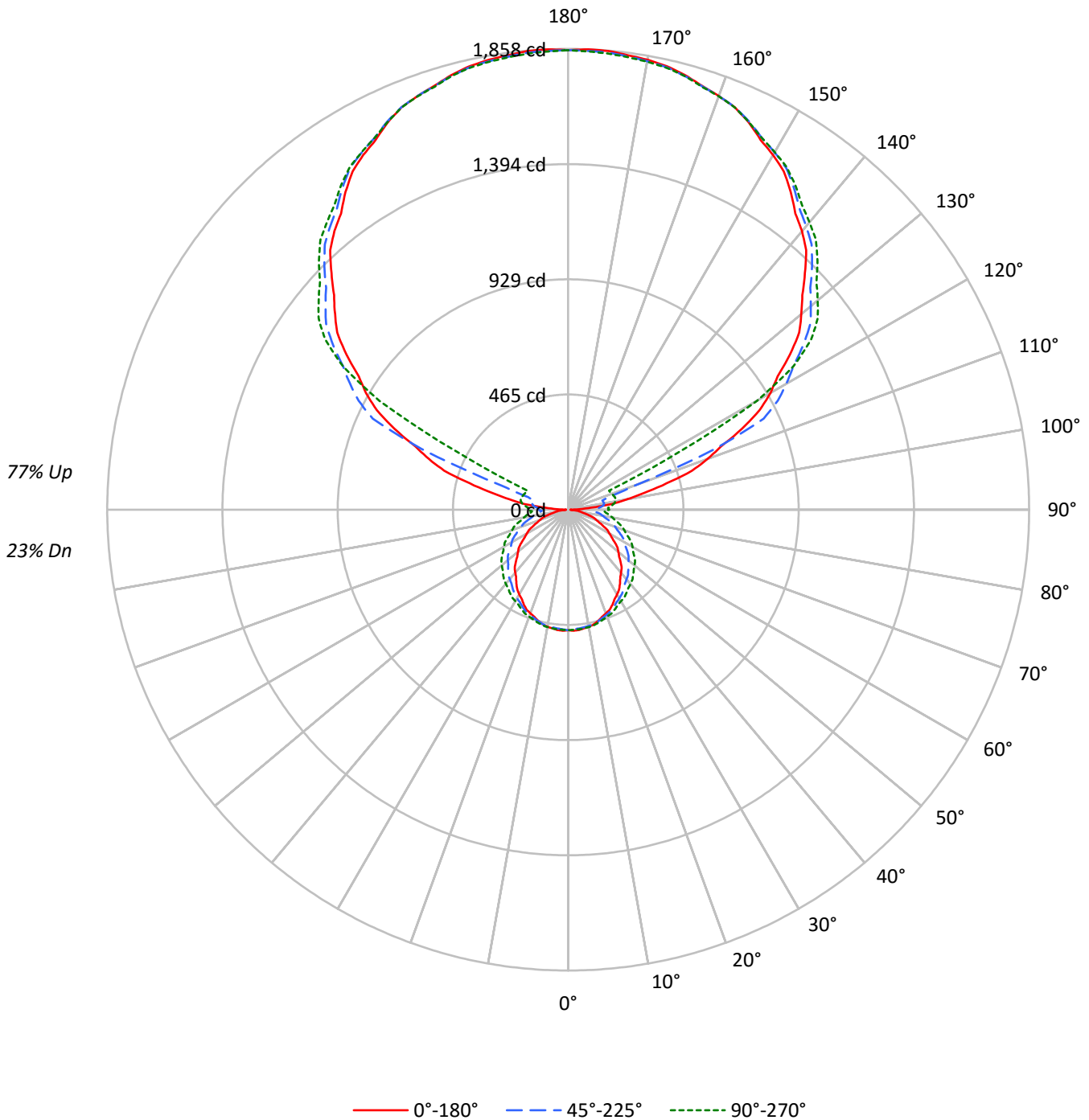
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331521-830

CATALOG NUMBER: S122DIW-S485D1440U830-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331521-830

CATALOG NUMBER: S122DIW-S485D1440U830-4F0-1E-UDD-D

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	89	89	89	89	68	68	68	49	49	49	31	31	31	23
1	91	87	83	79	80	77	73	70	58	56	54	42	40	39	26	25	25	18
2	83	75	69	64	73	67	62	57	51	47	44	36	34	32	23	21	20	14
3	75	66	58	53	66	58	52	47	45	40	37	32	29	27	20	18	17	12
4	68	58	50	44	60	51	45	40	39	35	31	28	25	23	18	16	14	10
5	63	51	43	37	55	46	39	34	35	30	26	25	22	19	16	14	12	8
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11	7
7	53	41	33	28	47	37	30	25	28	23	20	20	17	15	13	11	9	6
8	49	37	30	24	43	33	27	22	26	21	17	18	15	13	12	10	8	6
9	45	34	26	21	40	30	24	19	23	19	15	17	14	11	11	9	8	5
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7842	7842	7842
5°	7880	7549	7520
10°	7831	7327	7244
15°	7723	7090	6952
20°	7587	6836	6671
25°	7453	6592	6417
30°	7262	6342	6160
35°	7069	6100	5981
40°	6869	5895	5801
45°	6677	5709	5648
50°	6471	5541	5495
55°	6254	5363	5341
60°	5990	5177	5178
65°	5716	4959	4983
70°	5407	4723	4775
75°	5013	4495	4582
80°	4391	4260	4385
85°	3800	4054	4232



TEST NUMBER: P331521-830

CATALOG NUMBER: S122DIW-S485D1440U830-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	0.6
10°-20°	132.0	1.8
20°-30°	200.0	2.7
30°-40°	243.6	3.3
40°-50°	262.1	3.6
50°-60°	254.5	3.5
60°-70°	222.2	3.0
70°-80°	171.1	2.3
80°-90°	119.4	1.6
90°-100°	140.9	1.9
100°-110°	284.4	3.9
110°-120°	643.9	8.8
120°-130°	1021.2	14.0
130°-140°	1072.4	14.7
140°-150°	990.0	13.6
150°-160°	794.7	10.9
160°-170°	512.1	7.0
170°-180°	176.3	2.4
0°-30°	378.0	5.2
0°-40°	621.6	8.5
0°-60°	1138.1	15.6
0°-90°	1650.8	22.7
90°-120°	1069.2	14.7
90°-150°	4152.8	57.0
90°-180°	5636.0	77.3
0°-180°	7286.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	487	485	481	485	484	46
15°	465	466	466	472	472	131
25°	422	427	434	442	444	194
35°	364	376	389	404	410	227
45°	298	318	342	363	371	230
55°	229	255	291	315	325	204
65°	156	191	232	260	270	155
75°	87	126	171	200	210	92
85°	25	69	114	142	153	27
90°	8	64	120	153	166	9
95°	93	85	133	165	174	111
105°	411	450	142	180	195	439
115°	774	806	869	298	181	761
125°	1091	1110	1157	1184	1195	973
135°	1349	1371	1390	1417	1421	1042
145°	1564	1564	1586	1598	1596	978
155°	1723	1712	1726	1734	1724	793
165°	1815	1808	1811	1819	1811	513
175°	1857	1848	1850	1858	1846	177
180°	1853	1853	1853	1853	1853	



TEST NUMBER: P331521-830

CATALOG NUMBER: S122DIW-S485D1440U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	488.5	488.1	487.8	487.4	487.0	486.4	485.5	484.7	483.8	482.9	483.5
5°	487.1	486.6	486.2	485.7	485.2	484.6	483.6	482.7	481.7	480.8	481.7
7.5°	482.8	482.4	482.1	481.8	481.5	481.0	480.2	479.6	478.8	478.1	479.2
10°	479.4	479.1	478.7	478.4	478.2	477.8	477.3	476.8	476.4	475.9	477.1
12.5°	473.7	473.8	473.9	473.9	474.0	473.8	473.5	473.2	472.8	472.5	473.7
15°	464.6	464.9	465.2	465.5	465.8	466.0	466.0	466.0	466.0	466.0	467.4
17.5°	452.8	453.5	454.1	454.8	455.4	456.0	456.5	456.9	457.5	458.0	459.4
20°	444.9	445.6	446.5	447.2	448.0	448.7	449.3	450.0	450.6	451.2	452.9
22.5°	436.4	437.3	438.3	439.1	440.1	440.9	441.9	442.7	443.6	444.5	446.2
25°	422.4	423.5	424.5	425.7	426.7	428.0	429.4	430.8	432.3	433.6	435.5
27.5°	405.5	407.3	409.1	410.9	412.6	414.3	415.9	417.6	419.2	420.9	423.3
30°	394.2	396.2	398.2	400.3	402.4	404.4	406.4	408.4	410.5	412.5	415.0
32.5°	381.8	384.1	386.3	388.7	391.0	393.3	395.7	398.1	400.5	402.9	405.8
35°	363.9	366.6	369.3	371.9	374.6	377.4	380.3	383.3	386.3	389.3	392.7
37.5°	344.5	347.6	350.6	353.7	356.8	360.2	364.1	367.9	371.7	375.6	379.5
40°	331.6	335.0	338.5	341.9	345.3	349.1	353.4	357.6	361.8	366.1	370.1
42.5°	319.1	322.6	326.0	329.5	332.9	337.1	342.0	346.8	351.7	356.5	360.9
45°	298.5	302.7	306.9	311.1	315.4	320.2	325.6	331.1	336.7	342.1	346.9
47.5°	278.1	282.7	287.3	291.8	296.4	302.0	308.4	314.8	321.2	327.6	332.7
50°	264.0	268.8	273.7	278.5	283.3	289.3	296.3	303.4	310.5	317.4	322.8
52.5°	250.4	255.5	260.6	265.8	270.9	277.1	284.6	291.9	299.4	306.8	312.2
55°	228.8	234.4	240.1	245.6	251.3	258.2	266.4	274.5	282.6	290.7	296.3
57.5°	207.4	213.8	220.1	226.4	232.8	240.1	248.4	256.7	264.9	273.2	279.4
60°	192.2	198.9	205.7	212.4	219.0	226.9	235.8	244.7	253.6	262.6	268.5
62.5°	178.6	185.6	192.7	199.6	206.6	214.5	223.4	232.3	241.3	250.2	256.5
65°	156.3	163.9	171.6	179.3	186.9	195.4	204.6	213.9	223.1	232.3	238.7
67.5°	135.7	143.7	151.7	159.8	167.8	176.4	186.0	195.4	204.8	214.2	220.7
70°	121.1	129.2	137.3	145.4	153.6	162.5	172.2	181.9	191.6	201.3	208.0
72.5°	107.5	115.9	124.3	132.7	141.1	150.2	160.0	169.8	179.6	189.5	196.1
75°	86.6	95.4	104.1	112.8	121.6	131.0	141.0	151.0	161.1	171.1	177.8
77.5°	66.4	75.5	84.6	93.8	103.0	112.6	122.8	133.0	143.2	153.4	160.0
80°	52.8	62.3	71.9	81.4	91.0	100.9	111.0	121.1	131.3	141.5	148.1
82.5°	41.6	51.0	60.3	69.7	79.2	89.1	99.3	109.6	119.9	130.3	136.8
85°	25.4	35.1	44.8	54.5	64.1	74.0	84.0	94.0	104.1	114.0	120.6
87.5°	14.0	24.0	34.0	44.0	54.0	64.2	74.7	85.2	95.7	106.1	112.8
90°	8.4	20.7	33.1	45.4	57.8	70.1	82.6	94.9	107.4	119.7	127.4
92.5°	33.6	41.7	49.9	58.0	66.2	75.7	86.4	97.3	108.1	118.9	125.8
95°	92.7	90.3	87.8	85.3	82.8	87.4	98.8	110.3	121.8	133.3	140.6
97.5°	177.9	156.7	135.5	114.3	93.2	89.5	103.4	117.2	131.0	144.9	151.8
100°	242.2	207.2	172.1	137.1	102.1	91.5	105.4	119.1	133.0	146.8	155.0
102.5°	312.5	309.1	305.7	302.4	299.0	280.4	246.6	212.7	178.9	145.0	153.7
105°	411.0	424.5	438.0	451.5	465.0	435.1	361.8	288.7	215.5	142.3	151.1
107.5°	524.3	535.2	546.0	556.9	567.7	528.2	438.5	348.7	259.0	169.3	171.2
110°	596.6	606.1	615.5	624.8	634.2	599.6	521.2	442.8	364.4	286.0	261.2



TEST NUMBER: P331521-830

CATALOG NUMBER: S122DIW-S485D1440U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	665.3	673.4	681.6	689.8	698.0	695.0	681.1	667.1	653.1	639.1	535.5
115°	773.6	780.4	787.2	794.0	800.8	811.4	825.9	840.4	854.9	869.3	736.1
117.5°	869.7	876.5	883.3	890.0	896.8	906.1	917.7	929.3	940.9	952.5	923.9
120°	940.5	945.6	950.6	955.7	960.8	969.2	980.8	992.4	1004.1	1015.7	1023.6
122.5°	1000.5	1005.5	1010.4	1015.4	1020.4	1028.7	1040.4	1052.2	1063.8	1075.5	1081.9
125°	1091.3	1095.1	1099.0	1102.9	1106.7	1114.0	1124.6	1135.4	1146.0	1156.7	1163.0
127.5°	1174.1	1178.3	1182.3	1186.5	1190.6	1196.8	1205.1	1213.3	1221.6	1229.9	1236.8
130°	1226.6	1231.2	1235.9	1240.5	1245.1	1250.7	1257.3	1263.8	1270.4	1277.0	1283.9
132.5°	1280.3	1284.1	1288.1	1291.9	1295.8	1300.7	1306.6	1312.3	1318.1	1323.9	1330.4
135°	1349.2	1354.1	1358.8	1363.6	1368.3	1372.8	1377.1	1381.3	1385.5	1389.8	1396.1
137.5°	1419.8	1423.1	1426.3	1429.6	1433.0	1436.5	1440.2	1444.0	1447.7	1451.4	1457.3
140°	1465.9	1468.1	1470.4	1472.5	1474.8	1477.7	1481.3	1484.9	1488.5	1492.0	1497.2
142.5°	1504.5	1506.5	1508.4	1510.4	1512.5	1515.3	1519.2	1523.0	1526.8	1530.6	1535.0
145°	1564.4	1564.1	1563.8	1563.5	1563.2	1565.6	1570.7	1575.7	1580.7	1585.8	1588.8
147.5°	1617.2	1616.1	1615.0	1613.8	1612.7	1614.6	1619.6	1624.7	1629.7	1634.7	1636.3
150°	1651.5	1649.4	1647.4	1645.3	1643.1	1644.5	1649.3	1654.1	1658.8	1663.6	1665.4
152.5°	1680.5	1678.2	1675.8	1673.5	1671.2	1672.3	1676.8	1681.3	1685.8	1690.4	1692.1
155°	1722.6	1719.9	1717.2	1714.5	1711.8	1712.3	1715.9	1719.5	1723.1	1726.5	1728.3
157.5°	1755.6	1753.3	1751.1	1748.8	1746.5	1746.6	1749.1	1751.6	1754.1	1756.6	1758.7
160°	1774.8	1773.0	1771.3	1769.5	1767.7	1767.7	1769.5	1771.3	1773.0	1774.8	1776.6
162.5°	1792.0	1790.3	1788.5	1786.7	1784.9	1784.7	1786.3	1787.8	1789.4	1790.9	1793.0
165°	1815.1	1813.3	1811.5	1809.7	1807.9	1807.5	1808.4	1809.2	1810.2	1811.0	1813.2
167.5°	1832.2	1830.4	1828.6	1826.8	1825.0	1824.6	1825.4	1826.3	1827.1	1828.0	1830.0
170°	1841.9	1840.1	1838.3	1836.5	1834.8	1834.1	1834.8	1835.3	1835.9	1836.5	1838.6
172.5°	1848.3	1846.5	1844.7	1843.0	1841.2	1840.6	1841.2	1841.7	1842.4	1843.0	1845.0
175°	1856.6	1854.5	1852.5	1850.4	1848.3	1847.6	1848.1	1848.7	1849.4	1849.9	1852.0
177.5°	1857.9	1856.3	1854.6	1852.9	1851.2	1850.6	1850.8	1851.1	1851.2	1851.5	1853.2
180°	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6



TEST NUMBER: P331521-830

CATALOG NUMBER: S122DIW-S485D1440U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	484.2	484.7	485.4	485.6	485.3	485.1	484.8	484.6
5°	482.7	483.6	484.6	484.9	484.7	484.7	484.5	484.3
7.5°	480.3	481.5	482.6	483.1	483.0	482.8	482.6	482.5
10°	478.3	479.6	480.9	481.5	481.3	481.1	481.0	480.8
12.5°	474.9	476.3	477.5	478.1	477.9	477.7	477.6	477.4
15°	468.8	470.2	471.6	472.2	472.1	471.9	471.7	471.6
17.5°	460.9	462.4	463.8	464.6	464.6	464.6	464.6	464.6
20°	454.7	456.4	458.1	458.9	458.9	458.9	458.9	458.9
22.5°	447.9	449.6	451.4	452.3	452.6	452.8	453.1	453.4
25°	437.3	439.2	441.1	442.3	442.8	443.3	443.7	444.2
27.5°	425.7	428.1	430.5	431.8	432.2	432.5	432.8	433.2
30°	417.5	420.0	422.5	424.0	424.4	424.9	425.4	425.8
32.5°	408.7	411.5	414.4	416.3	417.2	418.0	418.9	419.7
35°	396.2	399.6	403.0	405.3	406.4	407.5	408.6	409.7
37.5°	383.2	387.1	390.9	393.3	394.5	395.7	396.8	398.0
40°	374.2	378.2	382.3	385.0	386.4	387.9	389.3	390.7
42.5°	365.3	369.8	374.2	377.2	378.5	379.9	381.4	382.8
45°	351.9	356.7	361.5	364.7	366.3	367.9	369.4	371.0
47.5°	337.7	342.8	347.9	351.3	353.0	354.7	356.5	358.2
50°	328.1	333.4	338.7	342.2	344.0	345.7	347.4	349.1
52.5°	317.6	323.1	328.6	332.2	334.0	335.9	337.7	339.6
55°	302.0	307.6	313.2	317.1	319.1	321.1	323.2	325.2
57.5°	285.4	291.4	297.6	301.6	303.7	305.8	307.8	309.9
60°	274.5	280.4	286.3	290.4	292.6	294.8	297.0	299.2
62.5°	262.8	269.1	275.4	279.7	281.7	283.8	285.9	287.9
65°	245.2	251.6	258.0	262.2	264.2	266.3	268.2	270.3
67.5°	227.2	233.7	240.2	244.5	246.6	248.7	250.9	253.0
70°	214.8	221.5	228.2	232.5	234.4	236.3	238.2	240.1
72.5°	202.7	209.3	215.9	220.4	222.5	224.8	227.1	229.3
75°	184.5	191.2	197.9	202.4	204.3	206.4	208.4	210.5
77.5°	166.7	173.4	180.1	184.5	186.7	188.9	191.1	193.3
80°	154.7	161.2	167.8	172.1	174.4	176.5	178.7	180.9
82.5°	143.4	150.0	156.5	160.8	162.9	164.9	167.0	169.1
85°	127.1	133.7	140.3	144.7	146.8	149.1	151.3	153.4
87.5°	119.5	126.2	132.9	137.3	139.4	141.6	143.6	145.8
90°	135.3	143.0	150.7	155.8	158.3	160.8	163.2	165.7
92.5°	132.8	139.7	146.6	151.2	153.4	155.6	157.9	160.0
95°	148.1	155.5	163.0	167.5	169.1	170.6	172.2	173.8
97.5°	158.8	165.8	172.8	177.4	179.6	181.8	184.0	186.2
100°	163.2	171.4	179.5	184.7	187.0	189.4	191.7	194.0
102.5°	162.5	171.3	180.0	185.7	188.2	190.8	193.4	196.0
105°	159.9	168.5	177.3	183.1	186.1	189.0	191.9	194.8
107.5°	173.1	175.0	176.9	179.4	182.3	185.2	188.0	191.0
110°	236.4	211.6	186.8	175.9	178.8	181.7	184.6	187.6



TEST NUMBER: P331521-830

CATALOG NUMBER: S122DIW-S485D1440U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	431.8	328.2	224.5	174.0	176.6	179.4	182.0	184.6
115°	602.9	469.7	336.4	260.0	240.2	220.5	200.8	181.1
117.5°	895.1	866.4	837.6	788.8	719.9	651.0	582.2	513.3
120°	1031.6	1039.5	1047.5	1032.3	993.7	955.3	916.7	878.3
122.5°	1088.4	1094.8	1101.2	1101.2	1094.9	1088.5	1082.2	1075.9
125°	1169.3	1175.6	1181.9	1186.2	1188.5	1190.8	1193.2	1195.4
127.5°	1243.7	1250.7	1257.5	1261.8	1263.4	1264.9	1266.5	1268.0
130°	1291.0	1298.0	1305.0	1309.0	1309.9	1311.0	1311.9	1312.9
132.5°	1336.8	1343.2	1349.6	1353.3	1354.3	1355.3	1356.2	1357.2
135°	1402.3	1408.6	1414.9	1418.3	1419.0	1419.7	1420.3	1421.0
137.5°	1463.0	1468.9	1474.6	1477.5	1477.6	1477.6	1477.7	1477.7
140°	1502.4	1507.6	1512.8	1515.1	1514.6	1514.0	1513.4	1512.9
142.5°	1539.5	1544.0	1548.4	1550.3	1549.6	1549.0	1548.2	1547.6
145°	1591.9	1594.9	1597.9	1599.1	1598.4	1597.7	1596.9	1596.3
147.5°	1638.0	1639.6	1641.3	1641.7	1640.9	1639.9	1639.1	1638.2
150°	1667.2	1669.0	1670.8	1670.8	1669.4	1667.9	1666.4	1664.9
152.5°	1693.9	1695.7	1697.5	1697.4	1695.4	1693.6	1691.6	1689.6
155°	1730.1	1731.9	1733.7	1733.4	1731.1	1728.7	1726.3	1723.9
157.5°	1760.7	1762.6	1764.7	1764.5	1762.3	1759.9	1757.6	1755.3
160°	1778.4	1780.2	1782.0	1781.9	1779.8	1777.6	1775.6	1773.5
162.5°	1795.0	1797.1	1799.0	1798.7	1796.2	1793.7	1791.1	1788.6
165°	1815.2	1817.3	1819.4	1819.4	1817.3	1815.2	1813.2	1811.0
167.5°	1832.1	1834.2	1836.3	1836.0	1833.3	1830.6	1828.0	1825.2
170°	1840.7	1842.8	1844.8	1844.6	1841.9	1839.2	1836.5	1833.8
172.5°	1847.1	1849.2	1851.2	1851.0	1848.3	1845.6	1843.0	1840.2
175°	1854.1	1856.1	1858.2	1857.8	1854.8	1851.8	1848.9	1845.9
177.5°	1854.8	1856.5	1858.2	1857.9	1855.8	1853.7	1851.5	1849.4
180°	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6

(END OF REPORT)