

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: P331848

Luminaire Tested: **S122RDIW-S1005D435U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331848
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: S122RDIW-S1005D435U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4986.3 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

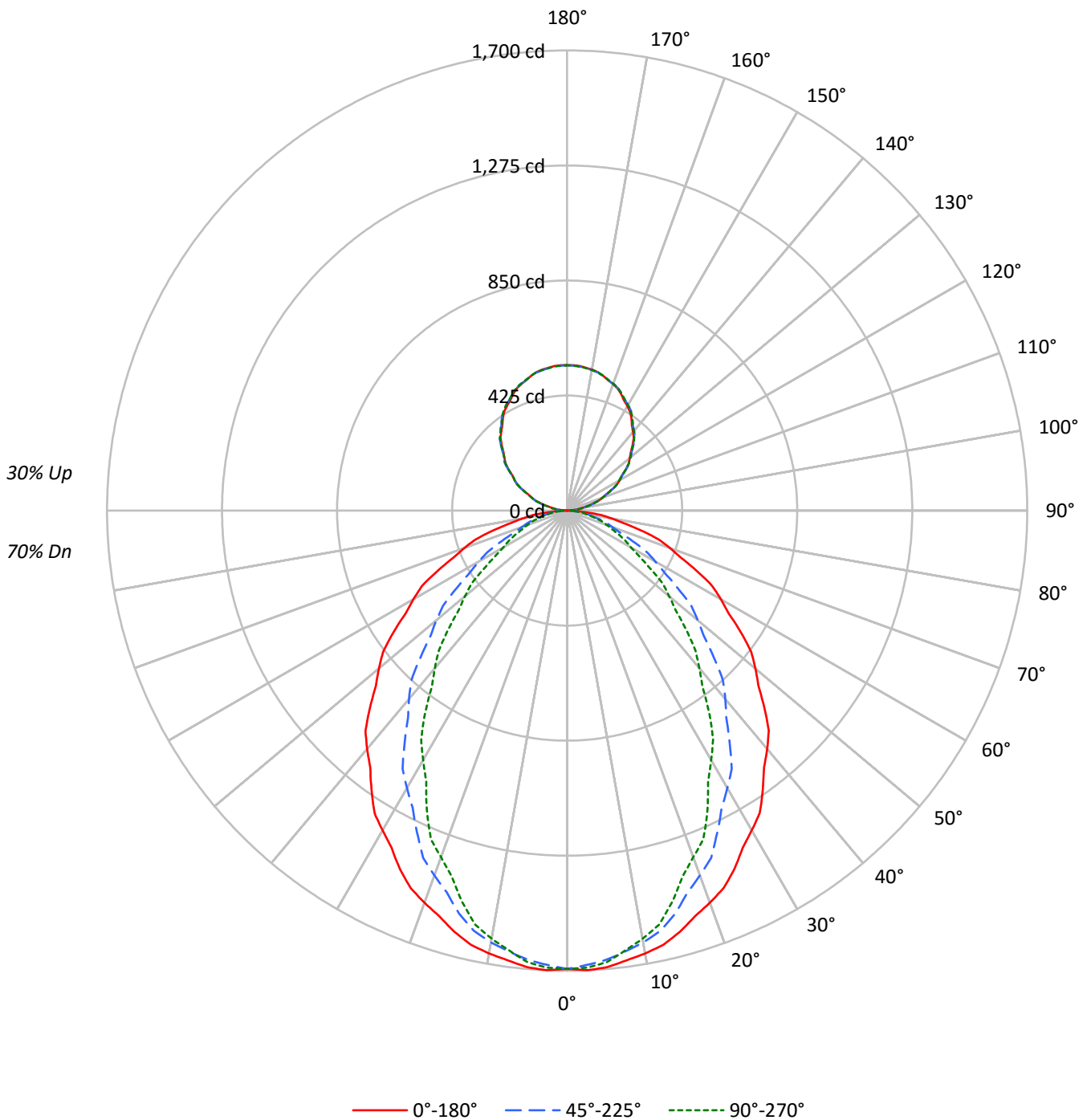
Input Watts (W): 52.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	70
1	103	99	95	92	97	94	90	87	84	81	79	75	73	71	67	65	64	60
2	94	87	81	76	89	83	77	73	74	70	67	67	63	61	60	57	55	52
3	86	77	70	64	82	73	67	62	66	61	57	60	56	52	53	50	48	44
4	80	69	61	55	75	66	58	53	59	54	49	54	49	45	48	45	42	39
5	73	62	54	48	69	59	52	46	54	48	43	49	44	40	44	40	37	34
6	68	56	48	42	64	53	46	41	49	42	38	44	39	35	40	36	33	30
7	63	51	43	37	60	49	41	36	44	38	34	40	35	32	37	33	29	27
8	59	46	39	33	56	44	37	32	41	35	30	37	32	28	34	30	27	24
9	55	43	35	30	52	41	34	29	38	32	27	34	29	26	31	27	24	22
10	51	39	32	27	49	38	31	26	35	29	25	32	27	24	29	25	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27341	27341	27341
5°	27446	27000	27149
10°	27237	26558	26332
15°	26924	25770	25028
20°	26490	24646	23409
25°	26045	23370	21841
30°	25430	22057	19829
35°	24829	20631	18065
40°	24226	19155	16021
45°	23516	17497	14173
50°	22790	15822	12356
55°	22044	14021	10612
60°	21180	12126	8809
65°	20199	10189	8023
70°	19029	8393	7378
75°	17592	7648	6881
80°	15528	6843	6267
85°	12208	5391	5391



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.5	3.2
10°-20°	435.2	8.7
20°-30°	611.2	12.3
30°-40°	666.5	13.4
40°-50°	612.8	12.3
50°-60°	481.3	9.7
60°-70°	313.8	6.3
70°-80°	161.8	3.2
80°-90°	44.1	0.9
90°-100°	34.0	0.7
100°-110°	105.7	2.1
110°-120°	180.6	3.6
120°-130°	237.5	4.8
130°-140°	266.6	5.3
140°-150°	261.4	5.2
150°-160°	219.2	4.4
160°-170°	145.4	2.9
170°-180°	50.8	1.0
0°-30°	1204.9	24.2
0°-40°	1871.4	37.5
0°-60°	2965.4	59.5
0°-90°	3485.1	69.9
90°-120°	320.3	6.4
90°-150°	1085.7	21.8
90°-180°	1501.0	30.1
0°-180°	4986.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1693	1693	1693	1693	1693	
5°	1693	1685	1666	1679	1675	160
15°	1611	1592	1542	1513	1497	454
25°	1462	1410	1312	1251	1226	672
35°	1260	1178	1047	954	916	788
45°	1030	924	766	661	621	795
55°	783	661	498	410	377	700
65°	529	404	267	217	210	524
75°	282	178	123	112	110	298
85°	66	35	29	29	29	78
90°	0	6	16	15	15	4
95°	24	28	29	29	28	27
105°	97	99	100	101	101	103
115°	181	184	183	182	181	179
125°	264	267	266	265	265	236
135°	341	346	347	346	345	263
145°	414	417	420	420	419	259
155°	473	475	476	478	477	218
165°	515	515	515	518	516	145
175°	536	535	534	537	534	51
180°	537	537	537	537	537	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4
2.5°	1699.6	1698.2	1696.8	1695.5	1694.1	1691.9	1688.9	1686.0	1683.0	1680.0	1682.7
5°	1693.4	1691.7	1690.0	1688.3	1686.6	1683.6	1679.1	1674.7	1670.3	1665.9	1668.9
7.5°	1676.0	1673.9	1671.8	1669.6	1667.5	1663.9	1658.7	1653.5	1648.4	1643.2	1644.1
10°	1661.3	1658.9	1656.5	1654.1	1651.7	1647.1	1640.3	1633.5	1626.7	1619.9	1618.9
12.5°	1642.9	1639.9	1637.0	1634.1	1631.2	1625.3	1616.6	1607.9	1599.2	1590.5	1588.6
15°	1610.7	1606.9	1603.2	1599.4	1595.7	1588.0	1576.5	1564.9	1553.3	1541.7	1535.3
17.5°	1571.1	1565.4	1559.7	1554.0	1548.3	1538.0	1523.1	1508.3	1493.4	1478.6	1470.9
20°	1541.7	1534.9	1528.1	1521.3	1514.5	1502.6	1485.5	1468.5	1451.5	1434.4	1425.9
22.5°	1509.8	1502.2	1494.6	1487.0	1479.3	1465.9	1446.7	1427.5	1408.3	1389.1	1378.1
25°	1462.0	1451.1	1440.2	1429.3	1418.4	1401.8	1379.3	1356.8	1334.3	1311.8	1297.9
27.5°	1404.4	1392.6	1380.7	1368.9	1357.0	1338.4	1313.1	1287.7	1262.4	1237.1	1220.8
30°	1364.0	1351.0	1338.1	1325.1	1312.2	1292.1	1264.8	1237.6	1210.4	1183.1	1165.7
32.5°	1324.7	1309.6	1294.5	1279.4	1264.2	1242.8	1215.0	1187.2	1159.4	1131.6	1111.8
35°	1259.7	1242.4	1225.0	1207.6	1190.3	1166.6	1136.6	1106.7	1076.7	1046.7	1025.3
37.5°	1194.8	1175.7	1156.6	1137.5	1118.5	1093.0	1061.0	1029.1	997.1	965.2	941.6
40°	1149.4	1129.0	1108.5	1088.1	1067.7	1040.9	1007.9	974.9	941.8	908.8	884.6
42.5°	1102.8	1081.3	1059.8	1038.2	1016.7	988.9	954.8	920.6	886.5	852.4	827.4
45°	1029.9	1007.0	984.2	961.4	938.6	909.3	873.5	837.8	802.0	766.3	742.1
47.5°	958.7	934.6	910.4	886.2	862.0	831.5	794.6	757.6	720.7	683.8	659.8
50°	907.3	883.1	858.9	834.7	810.5	779.7	742.3	704.8	667.3	629.9	606.4
52.5°	857.0	831.7	806.5	781.2	755.9	725.0	688.3	651.7	615.0	578.4	555.7
55°	783.1	756.6	730.0	703.4	676.9	645.2	608.4	571.6	534.9	498.1	477.6
57.5°	707.4	680.2	652.9	625.7	598.4	567.1	531.8	496.4	461.1	425.7	407.0
60°	655.9	628.7	601.4	574.2	546.9	515.8	480.7	445.6	410.5	375.5	358.1
62.5°	605.7	578.4	551.2	523.9	496.7	466.3	432.9	399.4	366.0	332.6	316.0
65°	528.7	501.1	473.6	446.0	418.4	389.3	358.6	328.0	297.3	266.7	255.1
67.5°	454.5	427.2	399.8	372.4	345.0	317.5	290.0	262.4	234.8	207.2	201.9
70°	403.1	376.5	349.9	323.4	296.8	271.8	248.3	224.8	201.3	177.8	174.4
72.5°	354.0	328.5	303.1	277.6	252.1	229.9	211.1	192.2	173.3	154.5	151.6
75°	282.0	258.1	234.3	210.5	186.6	168.9	157.3	145.8	134.2	122.6	120.2
77.5°	211.2	190.3	169.4	148.5	127.5	114.3	108.7	103.1	97.5	92.0	90.6
80°	167.0	149.7	132.3	114.9	97.6	87.2	83.8	80.4	77.0	73.6	72.2
82.5°	126.6	113.0	99.5	85.9	72.4	64.4	62.1	59.8	57.5	55.2	54.4
85°	65.9	58.7	51.6	44.4	37.3	33.2	32.2	31.2	30.1	29.1	29.1
87.5°	19.7	17.8	15.8	13.9	12.0	11.2	11.7	12.1	12.5	13.0	12.7
90°	0.5	1.7	2.9	4.1	5.3	7.0	9.2	11.4	13.6	15.9	15.7
92.5°	8.1	9.0	9.8	10.7	11.6	12.3	12.8	13.4	13.9	14.4	14.4
95°	23.6	24.6	25.6	26.6	27.6	28.2	28.4	28.6	28.8	29.0	29.0
97.5°	43.0	43.9	44.8	45.7	46.6	47.2	47.6	48.0	48.4	48.7	48.7
100°	57.5	58.3	59.1	60.0	60.8	61.3	61.6	61.9	62.2	62.5	62.5
102.5°	72.8	73.4	74.0	74.7	75.3	75.9	76.2	76.6	77.0	77.4	77.5
105°	97.4	97.7	98.0	98.3	98.6	98.9	99.1	99.3	99.5	99.7	99.9
107.5°	122.2	122.7	123.1	123.6	124.0	124.2	124.2	124.2	124.2	124.2	124.3
110°	138.2	138.8	139.4	140.0	140.6	140.9	140.9	140.9	140.9	140.9	140.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	155.6	156.2	156.8	157.4	158.0	158.3	158.2	158.1	158.0	157.9	157.7
115°	181.2	181.8	182.4	183.0	183.6	183.8	183.6	183.4	183.2	183.0	182.9
117.5°	206.8	207.6	208.4	209.2	210.0	210.1	209.6	209.0	208.4	207.9	207.6
120°	223.8	224.6	225.4	226.2	227.0	227.0	226.2	225.4	224.6	223.8	223.8
122.5°	239.4	240.4	241.3	242.3	243.3	243.5	242.9	242.3	241.8	241.2	241.0
125°	263.7	264.6	265.5	266.4	267.3	267.6	267.3	267.0	266.7	266.4	266.1
127.5°	287.3	288.5	289.6	290.8	291.9	292.3	292.0	291.6	291.2	290.9	290.5
130°	302.2	303.5	304.8	306.1	307.4	308.0	307.8	307.6	307.4	307.2	307.0
132.5°	318.9	319.9	321.0	322.1	323.1	323.7	323.7	323.8	323.8	323.8	323.4
135°	341.2	342.3	343.4	344.5	345.6	346.2	346.4	346.6	346.8	347.0	346.9
137.5°	364.6	365.5	366.4	367.3	368.2	368.8	369.1	369.4	369.6	369.9	369.8
140°	378.8	379.7	380.6	381.5	382.4	383.1	383.6	384.1	384.6	385.1	385.1
142.5°	393.3	394.2	395.1	396.0	396.9	397.5	397.8	398.2	398.5	398.9	399.0
145°	414.1	414.8	415.5	416.2	416.9	417.6	418.2	418.8	419.4	420.0	420.1
147.5°	432.7	433.5	434.4	435.2	436.1	436.7	437.1	437.5	437.9	438.3	438.5
150°	445.4	446.0	446.6	447.2	447.8	448.3	448.7	449.1	449.5	449.9	450.2
152.5°	456.6	457.2	457.8	458.4	459.0	459.6	460.0	460.5	461.0	461.5	461.9
155°	473.4	473.7	474.0	474.4	474.7	475.0	475.3	475.6	475.9	476.2	476.7
157.5°	487.9	488.1	488.3	488.5	488.7	488.8	489.0	489.2	489.4	489.6	490.3
160°	496.6	496.8	497.0	497.2	497.4	497.5	497.6	497.7	497.8	497.9	498.5
162.5°	504.5	504.6	504.6	504.6	504.7	504.8	504.9	505.0	505.1	505.2	505.8
165°	515.1	515.0	514.9	514.8	514.7	514.7	514.7	514.7	514.7	514.7	515.4
167.5°	524.0	523.7	523.4	523.1	522.8	522.6	522.6	522.6	522.6	522.6	523.3
170°	528.7	528.4	528.1	527.8	527.5	527.3	527.2	527.1	527.0	526.9	527.6
172.5°	532.0	531.7	531.4	531.1	530.8	530.6	530.5	530.4	530.3	530.2	530.9
175°	536.0	535.7	535.4	535.1	534.8	534.5	534.3	534.1	533.9	533.7	534.4
177.5°	537.6	537.4	537.1	536.9	536.6	536.4	536.3	536.1	535.9	535.8	536.3
180°	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4
2.5°	1685.4	1688.1	1690.9	1691.9	1691.4	1690.9	1690.3	1689.8
5°	1672.0	1675.1	1678.1	1679.1	1678.1	1677.1	1676.1	1675.1
7.5°	1644.9	1645.8	1646.7	1646.3	1644.5	1642.7	1641.0	1639.2
10°	1617.8	1616.8	1615.8	1614.3	1612.2	1610.2	1608.1	1606.1
12.5°	1586.8	1584.9	1583.1	1580.5	1577.1	1573.7	1570.3	1566.9
15°	1528.8	1522.3	1515.8	1510.9	1507.5	1504.1	1500.7	1497.3
17.5°	1463.2	1455.5	1447.8	1441.0	1435.2	1429.3	1423.4	1417.6
20°	1417.4	1408.9	1400.4	1392.4	1384.9	1377.4	1369.9	1362.4
22.5°	1367.2	1356.2	1345.2	1336.9	1331.4	1325.8	1320.2	1314.6
25°	1283.9	1270.0	1256.0	1246.5	1241.3	1236.2	1231.1	1226.0
27.5°	1204.5	1188.2	1171.9	1159.7	1151.6	1143.5	1135.4	1127.3
30°	1148.4	1131.0	1113.6	1100.4	1091.2	1082.0	1072.8	1063.6
32.5°	1092.0	1072.2	1052.3	1038.1	1029.5	1020.8	1012.1	1003.5
35°	1003.8	982.4	960.9	946.4	938.9	931.4	923.9	916.5
37.5°	917.9	894.3	870.6	854.5	846.0	837.4	828.8	820.2
40°	860.4	836.2	812.1	795.6	786.7	777.8	769.0	760.1
42.5°	802.4	777.4	752.4	735.6	727.0	718.4	709.9	701.3
45°	717.9	693.7	669.5	653.4	645.2	637.0	628.8	620.7
47.5°	635.7	611.7	587.6	571.9	564.5	557.1	549.6	542.2
50°	582.9	559.4	535.9	520.5	513.4	506.2	499.1	491.9
52.5°	533.0	510.3	487.7	473.0	466.4	459.8	453.2	446.6
55°	457.2	436.8	416.3	402.9	396.4	389.9	383.5	377.0
57.5°	388.3	369.5	350.8	338.7	333.3	327.8	322.4	316.9
60°	340.7	323.4	306.0	294.6	289.1	283.7	278.2	272.8
62.5°	299.5	282.9	266.4	256.4	253.2	249.9	246.6	243.4
65°	243.5	231.9	220.3	214.0	213.0	212.0	211.0	210.0
67.5°	196.6	191.3	185.9	182.7	181.7	180.6	179.5	178.4
70°	171.0	167.6	164.2	161.8	160.4	159.0	157.7	156.3
72.5°	148.8	145.9	143.0	141.2	140.4	139.6	138.7	137.9
75°	117.8	115.5	113.1	111.7	111.4	111.0	110.7	110.3
77.5°	89.2	87.9	86.5	85.5	85.0	84.5	83.9	83.4
80°	70.8	69.5	68.1	67.4	67.4	67.4	67.4	67.4
82.5°	53.5	52.7	51.9	51.5	51.5	51.5	51.5	51.5
85°	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
87.5°	12.4	12.0	11.7	11.6	11.6	11.6	11.6	11.7
90°	15.5	15.3	15.1	15.0	15.1	15.2	15.3	15.4
92.5°	14.5	14.5	14.6	14.6	14.6	14.6	14.7	14.7
95°	29.0	29.0	29.0	28.9	28.7	28.5	28.3	28.1
97.5°	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
100°	62.5	62.5	62.5	62.5	62.4	62.3	62.2	62.1
102.5°	77.5	77.6	77.7	77.7	77.6	77.5	77.4	77.3
105°	100.1	100.3	100.5	100.6	100.6	100.6	100.6	100.6
107.5°	124.4	124.5	124.6	124.4	123.9	123.4	123.0	122.5
110°	140.9	140.9	140.9	140.7	140.4	140.1	139.8	139.5



TEST NUMBER: P331848

CATALOG NUMBER: S122RDIW-S1005D435U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	157.5	157.2	157.0	156.7	156.5	156.3	156.1	155.9
115°	182.8	182.7	182.6	182.4	182.1	181.8	181.5	181.2
117.5°	207.4	207.1	206.9	206.6	206.3	206.0	205.7	205.4
120°	223.8	223.8	223.8	223.7	223.4	223.1	222.8	222.5
122.5°	240.7	240.5	240.2	240.0	239.8	239.6	239.3	239.1
125°	265.8	265.5	265.2	265.0	264.9	264.8	264.7	264.6
127.5°	290.1	289.8	289.4	289.1	288.7	288.4	288.1	287.8
130°	306.8	306.6	306.4	306.1	305.7	305.3	304.9	304.5
132.5°	323.0	322.5	322.1	321.7	321.4	321.0	320.7	320.4
135°	346.8	346.7	346.6	346.4	346.1	345.8	345.5	345.2
137.5°	369.7	369.6	369.6	369.3	368.9	368.5	368.1	367.7
140°	385.1	385.1	385.1	384.9	384.5	384.1	383.7	383.3
142.5°	399.0	399.1	399.2	399.0	398.6	398.2	397.8	397.4
145°	420.2	420.3	420.4	420.2	419.8	419.4	419.0	418.6
147.5°	438.7	439.0	439.2	439.1	438.7	438.3	437.9	437.6
150°	450.5	450.8	451.1	451.1	450.8	450.5	450.2	449.9
152.5°	462.2	462.6	463.0	463.0	462.6	462.2	461.9	461.5
155°	477.2	477.7	478.2	478.3	478.0	477.7	477.4	477.1
157.5°	490.9	491.6	492.3	492.4	491.9	491.4	491.0	490.5
160°	499.1	499.7	500.3	500.4	500.0	499.6	499.2	498.8
162.5°	506.5	507.2	507.9	508.0	507.5	507.0	506.5	506.1
165°	516.1	516.8	517.5	517.6	517.1	516.6	516.1	515.6
167.5°	524.0	524.7	525.4	525.5	524.9	524.4	523.9	523.4
170°	528.3	529.0	529.7	529.8	529.2	528.6	528.0	527.4
172.5°	531.6	532.3	533.0	533.0	532.4	531.8	531.2	530.6
175°	535.1	535.8	536.5	536.6	536.0	535.4	534.8	534.2
177.5°	536.8	537.2	537.7	537.7	537.2	536.8	536.3	535.8
180°	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9

(END OF REPORT)