

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: P331847

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331847
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: S122RDIW-S1005D435U835-4F0-1E-UDD-F
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, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5215.5 lumens
Efficiency: N/A
Efficacy: 99.5 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

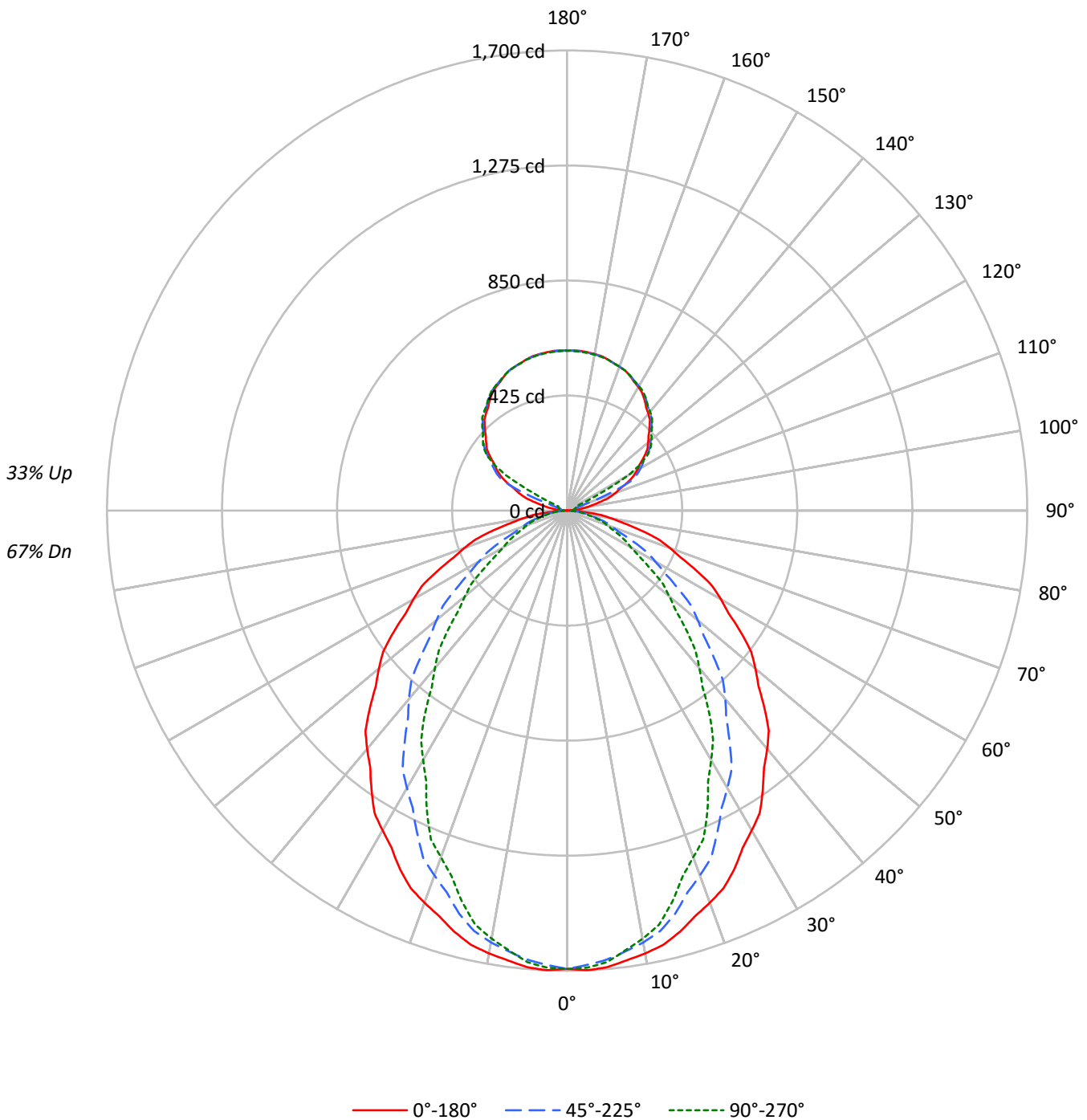
Input Watts (W): 52.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	98	94	91	96	93	89	86	82	80	78	73	71	69	64	63	62	58
2	94	86	80	75	88	82	76	72	73	69	65	65	62	59	57	55	53	49
3	86	77	69	64	81	72	66	61	65	60	56	58	54	51	51	48	46	42
4	79	68	60	54	74	65	58	52	58	53	48	52	48	44	46	43	40	37
5	73	61	53	47	68	58	51	45	52	47	42	47	42	39	42	38	35	33
6	67	55	47	41	63	53	45	40	48	42	37	43	38	34	38	35	31	29
7	62	50	42	37	59	48	41	36	43	37	33	39	34	31	35	31	28	26
8	58	46	38	33	55	44	37	32	40	34	30	36	31	28	33	29	26	23
9	54	42	35	30	51	40	33	29	37	31	27	33	29	25	30	26	23	21
10	51	39	32	27	48	37	31	26	34	28	24	31	26	23	28	24	21	19

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	3.0
10°-20°	435.2	8.3
20°-30°	611.2	11.7
30°-40°	666.5	12.8
40°-50°	612.8	11.7
50°-60°	481.3	9.2
60°-70°	313.8	6.0
70°-80°	161.8	3.1
80°-90°	43.4	0.8
90°-100°	19.7	0.4
100°-110°	72.3	1.4
110°-120°	193.1	3.7
120°-130°	318.8	6.1
130°-140°	339.1	6.5
140°-150°	315.2	6.0
150°-160°	253.4	4.9
160°-170°	163.3	3.1
170°-180°	56.2	1.1
0°-30°	1204.9	23.1
0°-40°	1871.4	35.9
0°-60°	2965.4	56.9
0°-90°	3484.5	66.8
90°-120°	285.1	5.5
90°-150°	1258.2	24.1
90°-180°	1731.0	33.2
0°-180°	5215.5	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	5	8	11	12	4
95°	28	15	17	19	18	34
105°	130	136	26	31	32	139
115°	246	253	264	75	35	242
125°	348	353	361	364	365	310
135°	430	437	441	445	444	332
145°	499	499	506	508	506	312
155°	549	546	550	553	550	253
165°	579	576	577	580	577	163
175°	592	589	590	592	589	56
180°	591	591	591	591	591	



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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	17.7	15.8	13.8	11.8	10.9	11.1	11.2	11.4	11.5	11.3
90°	0.4	1.5	2.5	3.6	4.6	5.5	6.3	7.0	7.8	8.5	9.0
92.5°	8.6	8.5	8.4	8.3	8.3	8.4	8.8	9.2	9.5	9.9	10.2
95°	27.8	24.6	21.5	18.4	15.2	14.0	14.7	15.3	16.0	16.7	17.1
97.5°	55.1	46.3	37.5	28.6	19.8	16.2	17.7	19.2	20.8	22.3	22.7
100°	75.7	62.6	49.6	36.6	23.6	17.9	19.5	21.1	22.7	24.4	25.1
102.5°	98.2	95.5	92.7	90.0	87.2	79.1	65.6	52.1	38.6	25.0	26.0
105°	129.9	132.8	135.6	138.5	141.3	129.8	103.9	77.9	52.0	26.1	27.1
107.5°	166.1	168.4	170.7	173.0	175.3	160.9	129.8	98.7	67.6	36.5	35.4
110°	189.3	191.3	193.3	195.3	197.3	184.6	157.1	129.7	102.2	74.8	65.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	211.2	213.0	214.8	216.5	218.3	215.8	209.0	202.2	195.4	188.7	154.0
115°	245.8	247.4	249.0	250.6	252.2	254.2	256.6	259.0	261.3	263.7	219.7
117.5°	276.6	278.4	280.2	282.0	283.8	285.6	287.2	288.8	290.5	292.1	281.5
120°	299.2	300.6	302.0	303.5	304.9	306.5	308.2	309.9	311.6	313.3	314.4
122.5°	318.3	319.8	321.3	322.8	324.3	326.0	327.9	329.7	331.6	333.5	334.2
125°	347.5	348.7	350.0	351.2	352.4	353.9	355.8	357.6	359.4	361.2	361.8
127.5°	373.9	375.3	376.6	378.0	379.4	380.7	382.1	383.4	384.8	386.1	387.1
130°	390.7	392.2	393.7	395.2	396.7	398.0	399.1	400.1	401.2	402.2	403.2
132.5°	407.8	409.0	410.3	411.6	412.9	414.1	415.1	416.2	417.2	418.3	419.2
135°	430.0	431.5	433.0	434.5	436.1	437.2	438.1	439.0	439.8	440.7	441.6
137.5°	452.5	453.5	454.6	455.7	456.7	457.7	458.7	459.7	460.6	461.6	462.5
140°	467.2	467.9	468.7	469.4	470.2	471.1	472.2	473.2	474.2	475.3	476.1
142.5°	479.5	480.2	480.8	481.5	482.2	483.2	484.3	485.5	486.7	487.9	488.7
145°	498.8	498.7	498.6	498.5	498.4	499.2	500.8	502.4	504.0	505.6	506.3
147.5°	515.6	515.3	514.9	514.6	514.2	514.8	516.4	518.0	519.6	521.2	521.7
150°	526.6	525.9	525.2	524.6	523.9	524.3	525.9	527.4	528.9	530.4	531.0
152.5°	535.8	535.1	534.3	533.6	532.8	533.2	534.6	536.1	537.5	539.0	539.5
155°	549.2	548.4	547.5	546.7	545.8	546.0	547.1	548.2	549.4	550.5	551.1
157.5°	559.7	559.0	558.3	557.6	556.9	556.9	557.7	558.5	559.3	560.1	560.7
160°	565.9	565.3	564.8	564.2	563.6	563.6	564.2	564.8	565.3	565.9	566.5
162.5°	571.4	570.8	570.2	569.7	569.1	569.1	569.5	570.0	570.5	571.0	571.7
165°	578.7	578.2	577.6	577.0	576.4	576.3	576.6	576.9	577.2	577.4	578.1
167.5°	584.2	583.6	583.1	582.5	581.9	581.8	582.0	582.3	582.6	582.8	583.5
170°	587.3	586.7	586.1	585.6	585.0	584.8	585.0	585.2	585.4	585.6	586.2
172.5°	589.3	588.8	588.2	587.6	587.0	586.9	587.0	587.2	587.4	587.6	588.3
175°	592.0	591.3	590.6	590.0	589.3	589.1	589.3	589.5	589.6	589.8	590.5
177.5°	592.4	591.9	591.3	590.8	590.3	590.0	590.1	590.2	590.3	590.3	590.9
180°	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7



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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°	11.2	11.0	10.8	10.7	10.8	10.8	10.9	10.9
90°	9.5	10.0	10.4	10.8	11.0	11.2	11.4	11.5
92.5°	10.4	10.7	10.9	11.1	11.2	11.3	11.4	11.5
95°	17.6	18.1	18.6	18.8	18.7	18.6	18.5	18.4
97.5°	23.1	23.5	23.8	24.1	24.2	24.3	24.4	24.5
100°	25.9	26.6	27.4	27.9	28.1	28.3	28.4	28.6
102.5°	27.0	28.0	29.0	29.6	29.9	30.2	30.4	30.7
105°	28.2	29.2	30.3	31.0	31.3	31.7	32.1	32.5
107.5°	34.4	33.3	32.2	31.9	32.3	32.7	33.0	33.4
110°	55.8	46.3	36.8	32.2	32.6	33.0	33.4	33.8



TEST NUMBER: P331847

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	119.4	84.7	50.1	32.9	33.2	33.5	33.8	34.1
115°	175.8	131.8	87.8	62.4	55.6	48.7	41.9	35.0
117.5°	270.8	260.2	249.5	233.0	210.5	188.0	165.6	143.1
120°	315.6	316.7	317.9	312.0	299.2	286.4	273.5	260.7
122.5°	334.8	335.5	336.2	335.3	332.8	330.3	327.8	325.3
125°	362.5	363.2	363.8	364.3	364.6	364.9	365.2	365.4
127.5°	388.1	389.0	390.0	390.5	390.6	390.6	390.7	390.7
130°	404.3	405.3	406.4	406.9	406.8	406.7	406.6	406.5
132.5°	420.1	420.9	421.8	422.2	422.1	422.0	422.0	421.9
135°	442.6	443.5	444.5	444.8	444.7	444.5	444.3	444.1
137.5°	463.5	464.4	465.3	465.6	465.3	465.0	464.7	464.3
140°	477.0	477.9	478.7	478.9	478.4	477.9	477.5	477.0
142.5°	489.5	490.3	491.1	491.2	490.7	490.3	489.8	489.3
145°	507.0	507.6	508.3	508.4	507.9	507.4	507.0	506.5
147.5°	522.2	522.7	523.2	523.2	522.8	522.4	522.0	521.6
150°	531.6	532.1	532.7	532.8	532.3	531.8	531.3	530.9
152.5°	540.1	540.7	541.3	541.2	540.6	540.0	539.3	538.7
155°	551.7	552.2	552.8	552.7	551.9	551.2	550.4	549.7
157.5°	561.4	562.0	562.7	562.6	561.9	561.1	560.4	559.7
160°	567.0	567.6	568.2	568.1	567.5	566.8	566.1	565.5
162.5°	572.3	573.0	573.6	573.5	572.7	571.9	571.1	570.3
165°	578.8	579.4	580.1	580.1	579.4	578.8	578.1	577.4
167.5°	584.2	584.8	585.5	585.4	584.5	583.7	582.8	582.0
170°	586.9	587.6	588.2	588.1	587.3	586.4	585.6	584.7
172.5°	588.9	589.6	590.3	590.2	589.3	588.5	587.6	586.8
175°	591.2	591.8	592.5	592.4	591.4	590.5	589.5	588.6
177.5°	591.4	591.9	592.5	592.4	591.7	591.0	590.3	589.7
180°	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7

(END OF REPORT)