

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: P331521-935

Luminaire Tested: **S122DIW-S485D1440U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331521-935
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-S485D1440U935-4F0-1E-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: 6656.3 lumens
Efficiency: N/A
Efficacy: 109.8 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

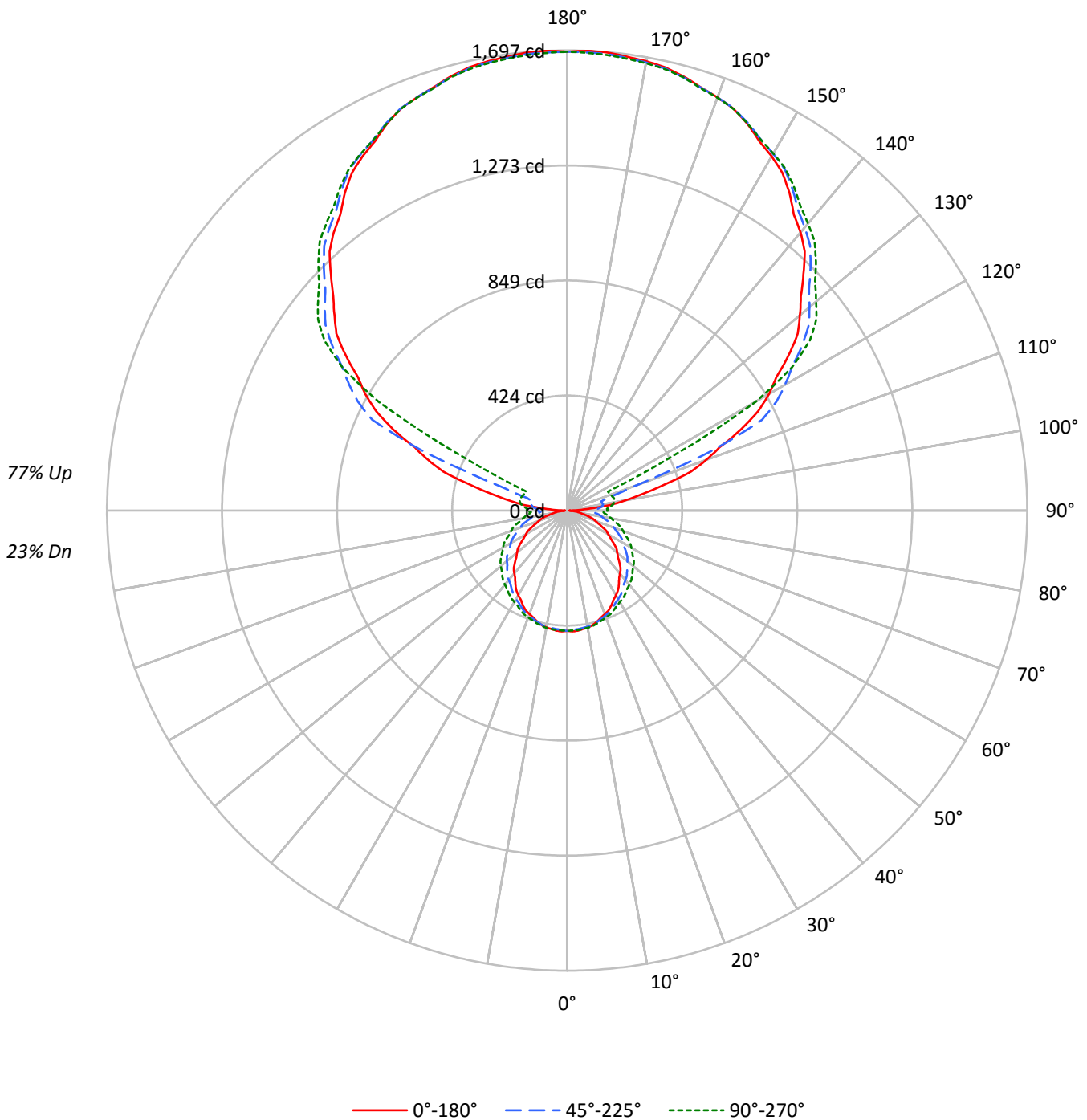
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331521-935

CATALOG NUMBER: S122DIW-S485D1440U935-4F0-1E-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°	7164	7164	7164
5°	7199	6896	6870
10°	7153	6692	6617
15°	7055	6477	6350
20°	6930	6245	6094
25°	6807	6022	5862
30°	6634	5793	5628
35°	6458	5572	5464
40°	6275	5384	5299
45°	6100	5215	5159
50°	5912	5062	5019
55°	5713	4898	4878
60°	5473	4730	4729
65°	5222	4530	4552
70°	4938	4315	4361
75°	4578	4106	4186
80°	4008	3889	4005
85°	3471	3705	3868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	0.6
10°-20°	120.6	1.8
20°-30°	182.7	2.7
30°-40°	222.5	3.3
40°-50°	239.4	3.6
50°-60°	232.5	3.5
60°-70°	203.0	3.0
70°-80°	156.3	2.3
80°-90°	109.0	1.6
90°-100°	128.7	1.9
100°-110°	259.8	3.9
110°-120°	588.2	8.8
120°-130°	932.9	14.0
130°-140°	979.6	14.7
140°-150°	904.3	13.6
150°-160°	726.0	10.9
160°-170°	467.8	7.0
170°-180°	161.0	2.4
0°-30°	345.3	5.2
0°-40°	567.8	8.5
0°-60°	1039.7	15.6
0°-90°	1508.0	22.7
90°-120°	976.7	14.7
90°-150°	3793.5	57.0
90°-180°	5148.0	77.3
0°-180°	6656.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	444	444	444	444	444	
5°	445	443	439	443	442	42
15°	424	426	426	431	431	119
25°	386	390	396	404	406	177
35°	332	343	356	369	374	208
45°	273	290	312	332	339	210
55°	209	233	266	288	297	187
65°	143	175	212	238	247	142
75°	79	115	156	183	192	84
85°	23	63	104	130	140	25
90°	8	58	109	140	151	8
95°	85	78	122	151	159	101
105°	376	411	130	165	178	401
115°	707	736	794	272	165	695
125°	997	1014	1057	1082	1092	889
135°	1232	1252	1270	1294	1298	952
145°	1429	1429	1449	1460	1458	894
155°	1574	1564	1577	1584	1575	725
165°	1658	1651	1654	1662	1654	468
175°	1696	1688	1690	1697	1686	161
180°	1692	1692	1692	1692	1692	



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CATALOG NUMBER: S122DIW-S485D1440U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	446.3	445.9	445.6	445.2	444.9	444.3	443.5	442.7	442.0	441.1	441.7
5°	445.0	444.5	444.1	443.7	443.2	442.6	441.8	440.9	440.1	439.2	440.1
7.5°	441.0	440.7	440.4	440.1	439.9	439.4	438.7	438.1	437.4	436.7	437.7
10°	437.9	437.6	437.3	437.0	436.8	436.4	436.0	435.6	435.1	434.7	435.8
12.5°	432.7	432.8	432.9	432.9	433.0	432.8	432.6	432.2	431.9	431.6	432.7
15°	424.4	424.6	425.0	425.2	425.5	425.7	425.7	425.7	425.7	425.7	427.0
17.5°	413.6	414.2	414.8	415.4	416.0	416.6	417.0	417.4	417.9	418.4	419.7
20°	406.4	407.1	407.9	408.5	409.2	409.9	410.4	411.0	411.6	412.2	413.7
22.5°	398.6	399.5	400.4	401.1	402.0	402.8	403.6	404.4	405.2	406.0	407.6
25°	385.8	386.8	387.8	388.8	389.8	391.0	392.3	393.6	394.9	396.1	397.8
27.5°	370.4	372.0	373.7	375.3	376.9	378.5	380.0	381.5	383.0	384.5	386.7
30°	360.1	362.0	363.8	365.7	367.6	369.4	371.3	373.1	375.0	376.8	379.1
32.5°	348.8	350.9	352.9	355.1	357.1	359.3	361.4	363.7	365.8	368.1	370.7
35°	332.4	334.8	337.3	339.8	342.2	344.7	347.4	350.2	352.8	355.6	358.7
37.5°	314.7	317.5	320.3	323.1	325.9	329.1	332.6	336.0	339.6	343.1	346.6
40°	302.9	306.0	309.2	312.3	315.5	318.9	322.8	326.7	330.5	334.4	338.1
42.5°	291.5	294.7	297.8	301.0	304.1	307.9	312.4	316.8	321.2	325.6	329.7
45°	272.7	276.5	280.3	284.2	288.1	292.5	297.5	302.5	307.5	312.5	316.9
47.5°	254.0	258.2	262.4	266.6	270.8	275.9	281.7	287.6	293.4	299.3	303.9
50°	241.2	245.6	250.0	254.4	258.8	264.2	270.7	277.2	283.6	290.0	294.9
52.5°	228.8	233.4	238.1	242.8	247.5	253.1	259.9	266.7	273.5	280.3	285.2
55°	209.0	214.1	219.3	224.4	229.5	235.8	243.3	250.7	258.1	265.5	270.7
57.5°	189.4	195.3	201.0	206.8	212.7	219.3	226.9	234.5	242.0	249.6	255.2
60°	175.6	181.7	187.9	194.0	200.1	207.2	215.4	223.5	231.7	239.9	245.3
62.5°	163.2	169.5	176.0	182.4	188.7	196.0	204.1	212.2	220.4	228.5	234.3
65°	142.8	149.7	156.8	163.8	170.7	178.5	186.9	195.4	203.8	212.2	218.1
67.5°	124.0	131.3	138.6	145.9	153.3	161.2	169.9	178.5	187.1	195.7	201.6
70°	110.6	118.0	125.4	132.9	140.3	148.4	157.3	166.2	175.0	183.9	190.0
72.5°	98.2	105.9	113.6	121.2	128.9	137.2	146.2	155.2	164.1	173.1	179.2
75°	79.1	87.1	95.1	103.1	111.1	119.7	128.8	137.9	147.1	156.3	162.4
77.5°	60.6	69.0	77.3	85.7	94.1	102.9	112.2	121.5	130.8	140.1	146.2
80°	48.2	56.9	65.7	74.4	83.1	92.1	101.4	110.6	119.9	129.2	135.3
82.5°	38.0	46.6	55.1	63.7	72.3	81.4	90.7	100.1	109.5	119.0	124.9
85°	23.2	32.0	40.9	49.8	58.5	67.6	76.7	85.8	95.1	104.2	110.2
87.5°	12.8	22.0	31.1	40.2	49.3	58.6	68.3	77.8	87.4	96.9	103.1
90°	7.7	18.9	30.2	41.5	52.8	64.1	75.4	86.7	98.1	109.3	116.4
92.5°	30.7	38.1	45.5	53.0	60.4	69.1	79.0	88.9	98.8	108.7	114.9
95°	84.7	82.5	80.2	77.9	75.7	79.8	90.2	100.7	111.2	121.7	128.5
97.5°	162.5	143.1	123.8	104.4	85.2	81.8	94.5	107.0	119.7	132.3	138.7
100°	221.3	189.2	157.2	125.3	93.2	83.6	96.3	108.8	121.5	134.1	141.5
102.5°	285.4	282.3	279.2	276.2	273.1	256.1	225.2	194.3	163.4	132.4	140.4
105°	375.5	387.8	400.1	412.4	424.7	397.4	330.5	263.7	196.8	130.0	138.0
107.5°	479.0	488.9	498.8	508.7	518.6	482.5	400.5	318.6	236.6	154.6	156.4
110°	545.0	553.6	562.2	570.8	579.4	547.8	476.1	404.5	332.9	261.2	238.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	607.8	615.2	622.7	630.2	637.6	634.9	622.2	609.4	596.6	583.8	489.1
115°	706.7	712.9	719.1	725.3	731.5	741.2	754.4	767.7	780.9	794.1	672.4
117.5°	794.4	800.6	806.8	813.0	819.2	827.7	838.3	848.9	859.5	870.1	844.0
120°	859.1	863.8	868.4	873.1	877.7	885.4	896.0	906.5	917.2	927.8	935.0
122.5°	914.0	918.5	923.0	927.6	932.1	939.7	950.4	961.1	971.8	982.5	988.3
125°	996.9	1000.4	1003.9	1007.5	1011.0	1017.6	1027.3	1037.2	1046.9	1056.6	1062.4
127.5°	1072.5	1076.3	1080.0	1083.8	1087.6	1093.3	1100.9	1108.4	1115.9	1123.5	1129.8
130°	1120.5	1124.7	1128.9	1133.2	1137.4	1142.5	1148.5	1154.4	1160.5	1166.5	1172.9
132.5°	1169.5	1173.0	1176.6	1180.2	1183.7	1188.2	1193.5	1198.8	1204.1	1209.4	1215.3
135°	1232.5	1236.9	1241.2	1245.6	1249.9	1254.0	1257.9	1261.8	1265.7	1269.5	1275.3
137.5°	1296.9	1299.9	1303.0	1306.0	1309.1	1312.3	1315.6	1319.1	1322.4	1325.9	1331.2
140°	1339.1	1341.1	1343.2	1345.1	1347.2	1349.9	1353.1	1356.4	1359.7	1363.0	1367.7
142.5°	1374.3	1376.1	1377.9	1379.8	1381.6	1384.2	1387.8	1391.2	1394.7	1398.2	1402.2
145°	1429.1	1428.7	1428.5	1428.2	1428.0	1430.1	1434.8	1439.4	1444.0	1448.6	1451.4
147.5°	1477.3	1476.3	1475.2	1474.2	1473.2	1474.9	1479.5	1484.1	1488.7	1493.2	1494.8
150°	1508.6	1506.8	1504.9	1503.0	1501.0	1502.3	1506.6	1511.0	1515.3	1519.7	1521.3
152.5°	1535.1	1533.0	1530.9	1528.7	1526.6	1527.6	1531.7	1535.9	1540.0	1544.1	1545.8
155°	1573.6	1571.1	1568.7	1566.2	1563.7	1564.2	1567.5	1570.7	1574.0	1577.2	1578.8
157.5°	1603.7	1601.6	1599.6	1597.5	1595.4	1595.5	1597.8	1600.1	1602.3	1604.6	1606.5
160°	1621.3	1619.6	1618.1	1616.4	1614.8	1614.8	1616.4	1618.1	1619.6	1621.3	1622.9
162.5°	1636.9	1635.4	1633.7	1632.1	1630.5	1630.3	1631.8	1633.1	1634.6	1636.0	1637.9
165°	1658.0	1656.4	1654.8	1653.1	1651.5	1651.1	1651.9	1652.7	1653.6	1654.3	1656.3
167.5°	1673.7	1672.1	1670.4	1668.8	1667.2	1666.7	1667.5	1668.3	1669.0	1669.8	1671.7
170°	1682.6	1680.9	1679.3	1677.7	1676.0	1675.4	1676.0	1676.5	1677.1	1677.7	1679.6
172.5°	1688.4	1686.8	1685.1	1683.5	1681.9	1681.4	1681.9	1682.4	1683.0	1683.5	1685.4
175°	1696.0	1694.1	1692.2	1690.3	1688.4	1687.7	1688.2	1688.8	1689.4	1689.9	1691.8
177.5°	1697.2	1695.7	1694.2	1692.6	1691.1	1690.5	1690.7	1690.9	1691.1	1691.3	1692.9
180°	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	442.3	442.8	443.4	443.6	443.3	443.2	442.9	442.6
5°	440.9	441.8	442.6	443.0	442.8	442.7	442.6	442.4
7.5°	438.8	439.8	440.8	441.3	441.2	441.0	440.8	440.7
10°	437.0	438.1	439.3	439.8	439.6	439.5	439.4	439.2
12.5°	433.9	435.1	436.2	436.7	436.5	436.4	436.3	436.1
15°	428.3	429.6	430.8	431.4	431.3	431.1	430.9	430.8
17.5°	421.0	422.4	423.7	424.4	424.4	424.4	424.4	424.4
20°	415.3	416.9	418.4	419.2	419.2	419.2	419.2	419.2
22.5°	409.1	410.7	412.3	413.2	413.5	413.6	413.9	414.1
25°	399.5	401.2	402.9	404.1	404.5	404.9	405.4	405.8
27.5°	388.9	391.1	393.2	394.4	394.8	395.1	395.4	395.7
30°	381.4	383.7	386.0	387.3	387.7	388.1	388.6	389.0
32.5°	373.3	375.9	378.6	380.3	381.1	381.9	382.6	383.4
35°	361.9	365.1	368.2	370.2	371.3	372.2	373.2	374.3
37.5°	350.1	353.6	357.1	359.3	360.4	361.4	362.5	363.6
40°	341.8	345.5	349.2	351.7	353.0	354.3	355.6	356.9
42.5°	333.7	337.8	341.8	344.6	345.8	347.1	348.4	349.7
45°	321.4	325.8	330.2	333.1	334.6	336.0	337.4	338.9
47.5°	308.5	313.1	317.8	320.9	322.4	324.0	325.6	327.2
50°	299.7	304.5	309.4	312.6	314.3	315.8	317.4	318.9
52.5°	290.2	295.2	300.1	303.4	305.1	306.9	308.5	310.2
55°	275.9	281.0	286.1	289.6	291.5	293.3	295.2	297.0
57.5°	260.7	266.2	271.8	275.5	277.4	279.3	281.2	283.1
60°	250.7	256.1	261.6	265.3	267.3	269.3	271.3	273.3
62.5°	240.0	245.8	251.6	255.5	257.4	259.2	261.1	263.0
65°	223.9	229.8	235.7	239.5	241.3	243.2	245.0	246.9
67.5°	207.6	213.4	219.4	223.3	225.2	227.2	229.2	231.1
70°	196.2	202.3	208.4	212.4	214.1	215.9	217.6	219.3
72.5°	185.2	191.2	197.3	201.3	203.3	205.3	207.4	209.5
75°	168.6	174.7	180.8	184.9	186.7	188.6	190.4	192.3
77.5°	152.3	158.4	164.5	168.6	170.6	172.5	174.6	176.6
80°	141.3	147.2	153.3	157.2	159.3	161.3	163.2	165.2
82.5°	131.0	137.0	142.9	146.9	148.8	150.7	152.6	154.5
85°	116.1	122.2	128.2	132.2	134.1	136.2	138.2	140.2
87.5°	109.2	115.3	121.4	125.4	127.3	129.3	131.2	133.2
90°	123.6	130.6	137.7	142.3	144.6	146.9	149.1	151.4
92.5°	121.3	127.6	133.9	138.1	140.1	142.2	144.2	146.2
95°	135.3	142.1	148.9	153.0	154.5	155.8	157.3	158.8
97.5°	145.1	151.4	157.8	162.0	164.0	166.1	168.1	170.0
100°	149.0	156.5	163.9	168.8	170.8	173.0	175.1	177.2
102.5°	148.4	156.4	164.5	169.6	171.9	174.3	176.7	179.0
105°	146.0	153.9	162.0	167.3	170.0	172.6	175.3	178.0
107.5°	158.1	159.9	161.6	163.8	166.5	169.2	171.8	174.4
110°	215.9	193.3	170.7	160.7	163.3	166.0	168.7	171.3



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CATALOG NUMBER: S122DIW-S485D1440U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	394.4	299.8	205.1	158.9	161.4	163.8	166.3	168.7
115°	550.7	429.0	307.3	237.5	219.4	201.4	183.4	165.4
117.5°	817.7	791.4	765.2	720.6	657.6	594.7	531.8	468.9
120°	942.4	949.6	956.9	943.0	907.8	872.6	837.4	802.3
122.5°	994.2	1000.1	1005.9	1005.9	1000.1	994.4	988.6	982.8
125°	1068.2	1073.9	1079.7	1083.6	1085.7	1087.8	1089.9	1092.0
127.5°	1136.1	1142.5	1148.7	1152.6	1154.1	1155.5	1156.9	1158.3
130°	1179.3	1185.7	1192.1	1195.8	1196.6	1197.6	1198.4	1199.3
132.5°	1221.2	1227.0	1232.9	1236.2	1237.2	1238.0	1238.9	1239.8
135°	1281.0	1286.8	1292.4	1295.6	1296.2	1296.8	1297.4	1298.0
137.5°	1336.4	1341.8	1347.0	1349.7	1349.8	1349.8	1349.9	1349.9
140°	1372.4	1377.2	1381.9	1384.1	1383.5	1383.0	1382.5	1382.0
142.5°	1406.4	1410.4	1414.5	1416.2	1415.6	1415.0	1414.3	1413.7
145°	1454.1	1456.9	1459.7	1460.8	1460.1	1459.5	1458.8	1458.2
147.5°	1496.2	1497.8	1499.3	1499.7	1498.9	1498.1	1497.3	1496.5
150°	1522.9	1524.6	1526.2	1526.3	1525.0	1523.6	1522.2	1520.9
152.5°	1547.4	1549.0	1550.7	1550.6	1548.8	1547.0	1545.2	1543.4
155°	1580.5	1582.1	1583.7	1583.5	1581.3	1579.2	1576.9	1574.8
157.5°	1608.3	1610.2	1612.1	1611.9	1609.8	1607.7	1605.5	1603.4
160°	1624.5	1626.2	1627.8	1627.7	1625.8	1623.8	1622.0	1620.1
162.5°	1639.7	1641.6	1643.4	1643.1	1640.8	1638.5	1636.2	1633.8
165°	1658.2	1660.1	1662.0	1662.0	1660.1	1658.2	1656.3	1654.3
167.5°	1673.6	1675.5	1677.4	1677.1	1674.7	1672.2	1669.8	1667.3
170°	1681.4	1683.3	1685.2	1685.0	1682.6	1680.1	1677.7	1675.2
172.5°	1687.3	1689.2	1691.1	1690.8	1688.4	1685.9	1683.5	1681.0
175°	1693.7	1695.6	1697.5	1697.1	1694.4	1691.6	1688.9	1686.2
177.5°	1694.4	1695.9	1697.5	1697.2	1695.2	1693.3	1691.3	1689.4
180°	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3

(END OF REPORT)