

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: P331524

Luminaire Tested: **S122DIW-S485D1440U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331524
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-S485D1440U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH 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: 6978.4 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

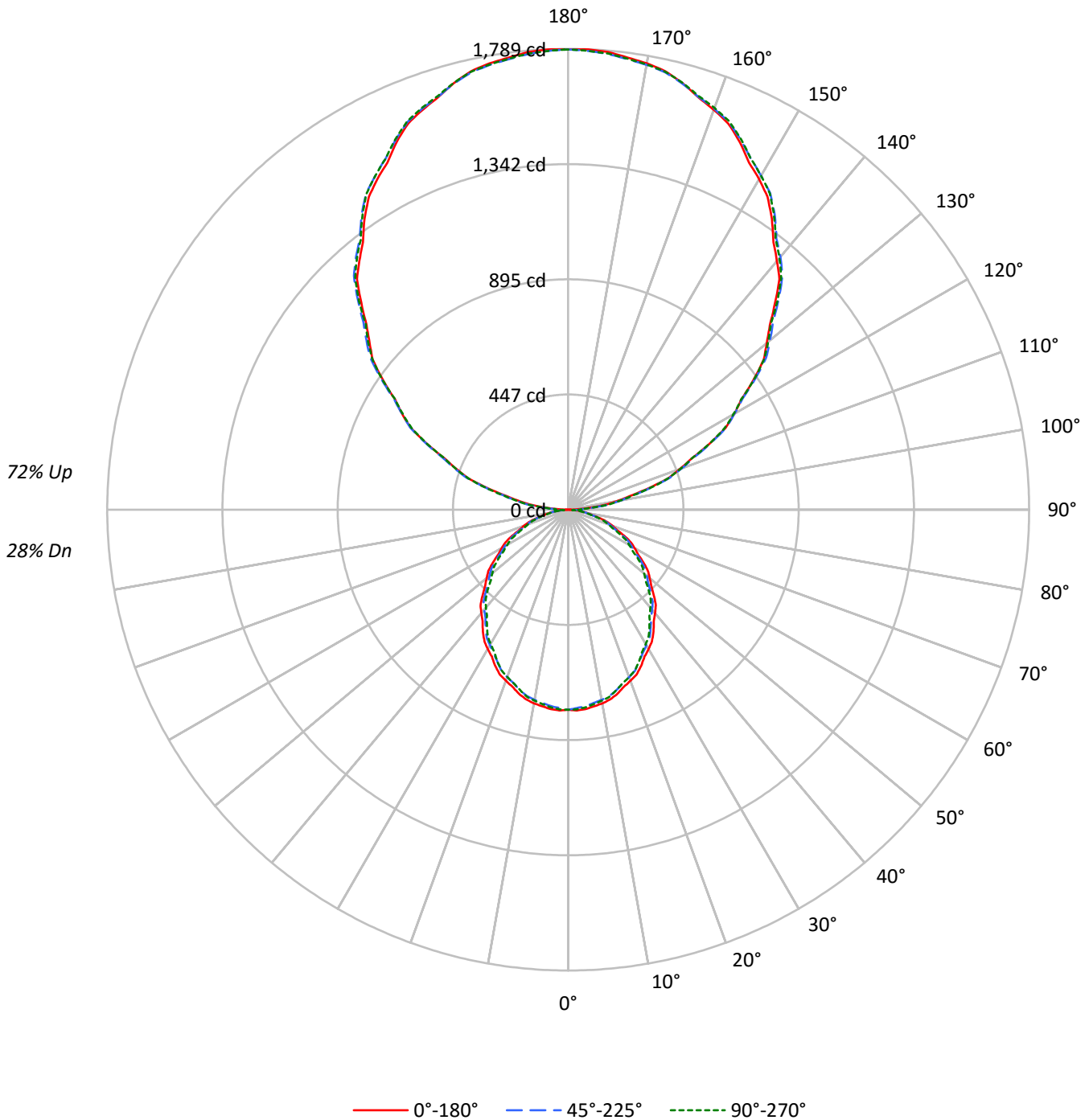
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	93	89	85	82	83	80	76	74	62	60	58	47	45	44	32	31	31	24
2	85	77	72	67	75	69	65	60	55	51	48	41	39	37	28	27	26	20
3	77	68	61	55	69	61	55	50	48	44	40	36	33	31	25	23	22	17
4	70	60	52	47	63	54	48	43	43	38	34	32	29	26	22	20	19	15
5	65	53	46	40	58	48	41	36	38	33	30	29	25	23	20	18	16	13
6	59	48	40	34	53	43	36	31	34	29	26	26	23	20	18	16	14	11
7	55	43	35	30	49	39	32	27	31	26	22	23	20	18	17	14	13	10
8	51	39	31	26	45	35	29	24	28	23	20	21	18	16	15	13	11	9
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12540	12540	12540
5°	12588	12407	12480
10°	12514	12281	12342
15°	12359	12122	12109
20°	12139	11883	11869
25°	11922	11589	11589
30°	11641	11320	11222
35°	11379	10996	10835
40°	11051	10673	10467
45°	10727	10351	10095
50°	10374	10017	9661
55°	10007	9627	9272
60°	9597	9164	8825
65°	9158	8703	8302
70°	8601	8143	7756
75°	7829	7498	7317
80°	6946	6732	6388
85°	5669	5391	4835



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.0	1.0
10°-20°	205.5	2.9
20°-30°	302.1	4.3
30°-40°	350.9	5.0
40°-50°	350.5	5.0
50°-60°	305.6	4.4
60°-70°	226.0	3.2
70°-80°	128.0	1.8
80°-90°	41.5	0.6
90°-100°	113.2	1.6
100°-110°	351.6	5.0
110°-120°	601.0	8.6
120°-130°	790.3	11.3
130°-140°	887.0	12.7
140°-150°	869.7	12.5
150°-160°	729.5	10.5
160°-170°	483.8	6.9
170°-180°	169.1	2.4
0°-30°	580.6	8.3
0°-40°	931.5	13.3
0°-60°	1587.6	22.8
0°-90°	1983.2	28.4
90°-120°	1065.7	15.3
90°-150°	3612.8	51.8
90°-180°	4995.0	71.6
0°-180°	6978.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	777	777	777	777	777	
5°	777	773	766	771	770	74
15°	739	735	725	728	724	208
25°	669	663	650	652	650	308
35°	577	570	558	553	550	360
45°	470	464	453	445	442	362
55°	356	351	342	333	329	318
65°	240	235	228	221	217	237
75°	126	124	120	116	117	134
85°	31	30	29	27	26	35
90°	2	20	53	50	51	6
95°	78	93	96	96	94	90
105°	324	329	332	334	335	342
115°	603	611	609	607	603	596
125°	877	890	886	882	880	784
135°	1135	1151	1155	1153	1149	877
145°	1378	1388	1398	1399	1393	860
155°	1575	1580	1584	1591	1588	725
165°	1714	1713	1713	1722	1716	483
175°	1783	1779	1776	1785	1777	169
180°	1786	1786	1786	1786	1786	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7
2.5°	780.3	779.6	779.0	778.3	777.6	776.6	775.1	773.7	772.2	770.7	772.1
5°	776.7	776.0	775.4	774.7	774.1	772.8	771.0	769.2	767.3	765.5	766.8
7.5°	769.8	768.8	767.8	766.7	765.7	764.3	762.4	760.6	758.7	756.8	758.2
10°	763.3	762.1	760.9	759.8	758.6	757.0	755.0	753.1	751.1	749.1	750.4
12.5°	754.3	753.3	752.2	751.2	750.2	748.7	746.7	744.7	742.7	740.7	741.6
15°	739.4	738.4	737.4	736.4	735.4	733.8	731.6	729.5	727.3	725.2	725.8
17.5°	720.2	719.3	718.3	717.3	716.3	714.7	712.5	710.3	708.1	705.9	706.7
20°	706.5	705.5	704.5	703.5	702.5	700.9	698.5	696.2	693.9	691.6	692.1
22.5°	692.8	691.4	690.0	688.6	687.2	685.4	683.2	681.0	678.8	676.6	676.7
25°	669.2	667.8	666.5	665.2	663.9	661.8	659.0	656.1	653.3	650.5	650.8
27.5°	642.3	641.1	639.9	638.7	637.5	635.8	633.6	631.3	629.1	626.9	626.4
30°	624.4	623.0	621.7	620.4	619.0	617.1	614.6	612.2	609.7	607.2	606.7
32.5°	605.2	604.2	603.1	602.0	601.0	599.1	596.5	593.9	591.3	588.7	587.8
35°	577.3	575.6	574.0	572.3	570.7	568.5	565.9	563.2	560.5	557.9	556.9
37.5°	545.8	544.3	542.9	541.4	539.9	537.9	535.2	532.6	529.9	527.3	526.0
40°	524.3	522.9	521.6	520.3	519.0	517.0	514.3	511.7	509.0	506.4	504.9
42.5°	503.4	502.0	500.7	499.4	498.1	496.1	493.4	490.8	488.1	485.4	483.8
45°	469.8	468.6	467.4	466.3	465.1	463.3	460.8	458.3	455.8	453.3	451.5
47.5°	436.3	435.2	434.1	433.0	431.9	430.1	427.5	424.9	422.3	419.7	417.8
50°	413.0	412.2	411.3	410.5	409.7	408.1	405.8	403.5	401.1	398.8	396.5
52.5°	390.3	389.2	388.1	387.0	385.9	384.3	382.1	379.9	377.7	375.5	373.6
55°	355.5	354.5	353.5	352.5	351.5	350.0	348.0	346.0	344.0	342.0	340.1
57.5°	320.5	319.7	318.9	318.2	317.4	315.9	313.7	311.5	309.3	307.1	305.1
60°	297.2	296.6	295.9	295.2	294.6	293.1	290.8	288.4	286.1	283.8	282.0
62.5°	274.5	273.5	272.4	271.3	270.3	268.9	267.1	265.3	263.5	261.7	260.0
65°	239.7	238.7	237.7	236.7	235.8	234.4	232.8	231.1	229.4	227.8	226.3
67.5°	204.3	203.5	202.7	201.9	201.1	200.0	198.5	197.0	195.5	194.0	192.9
70°	182.2	181.6	180.9	180.2	179.6	178.5	177.0	175.5	174.0	172.5	171.4
72.5°	159.5	158.9	158.2	157.5	156.9	156.1	155.1	154.1	153.2	152.2	151.0
75°	125.5	125.1	124.8	124.5	124.1	123.6	122.7	121.9	121.1	120.2	119.2
77.5°	95.0	94.4	93.9	93.3	92.7	92.3	92.0	91.6	91.3	91.0	90.5
80°	74.7	74.5	74.4	74.2	74.0	73.8	73.4	73.1	72.8	72.4	71.9
82.5°	55.6	55.5	55.5	55.5	55.4	55.3	55.1	54.9	54.7	54.5	53.9
85°	30.6	30.5	30.3	30.1	30.0	29.8	29.6	29.5	29.3	29.1	28.6
87.5°	11.1	11.6	12.1	12.7	13.2	14.1	15.3	16.5	17.7	18.9	18.4
90°	1.5	5.5	9.5	13.6	17.6	23.3	30.7	38.0	45.4	52.8	52.1
92.5°	26.8	29.8	32.7	35.7	38.6	41.0	42.7	44.5	46.2	47.9	48.1
95°	78.4	81.7	85.1	88.4	91.8	93.8	94.5	95.1	95.8	96.5	96.5
97.5°	143.2	146.2	149.1	152.1	155.0	157.1	158.4	159.7	160.9	162.2	162.2
100°	191.5	194.1	196.8	199.5	202.2	204.0	205.0	206.0	207.0	208.0	208.0
102.5°	242.1	244.3	246.4	248.5	250.7	252.4	253.7	254.9	256.2	257.5	257.8
105°	324.1	325.1	326.1	327.1	328.1	329.0	329.7	330.3	331.0	331.7	332.3
107.5°	406.7	408.2	409.7	411.2	412.6	413.4	413.4	413.4	413.4	413.4	413.6
110°	459.8	461.8	463.8	465.8	467.8	468.9	468.9	468.9	468.9	468.9	468.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	517.7	519.7	521.7	523.7	525.7	526.6	526.3	526.1	525.8	525.5	524.7
115°	603.0	605.0	607.0	609.1	611.1	611.7	611.1	610.4	609.7	609.1	608.7
117.5°	688.1	690.7	693.4	696.1	698.8	699.2	697.3	695.4	693.5	691.7	690.9
120°	744.7	747.4	750.1	752.8	755.5	755.5	752.8	750.1	747.4	744.7	744.7
122.5°	796.6	799.8	803.0	806.2	809.5	810.1	808.3	806.4	804.5	802.6	801.8
125°	877.4	880.4	883.4	886.4	889.5	890.5	889.5	888.5	887.5	886.4	885.4
127.5°	956.1	959.9	963.7	967.6	971.4	972.7	971.5	970.3	969.1	967.9	966.6
130°	1005.5	1009.9	1014.3	1018.6	1023.0	1024.8	1024.1	1023.5	1022.8	1022.1	1021.5
132.5°	1061.0	1064.6	1068.1	1071.7	1075.2	1077.1	1077.2	1077.3	1077.5	1077.6	1076.1
135°	1135.2	1138.9	1142.6	1146.2	1149.9	1152.1	1152.8	1153.5	1154.1	1154.8	1154.5
137.5°	1213.3	1216.3	1219.3	1222.3	1225.3	1227.3	1228.2	1229.0	1229.9	1230.8	1230.5
140°	1260.3	1263.3	1266.4	1269.4	1272.4	1274.7	1276.4	1278.1	1279.8	1281.4	1281.4
142.5°	1308.6	1311.6	1314.6	1317.6	1320.6	1322.7	1323.8	1325.0	1326.1	1327.3	1327.5
145°	1377.9	1380.3	1382.6	1384.9	1387.3	1389.5	1391.5	1393.5	1395.5	1397.5	1397.8
147.5°	1439.7	1442.5	1445.3	1448.2	1451.0	1453.1	1454.4	1455.7	1457.1	1458.4	1459.2
150°	1481.9	1483.9	1486.0	1488.0	1490.0	1491.6	1493.0	1494.3	1495.7	1497.0	1498.0
152.5°	1519.3	1521.3	1523.3	1525.3	1527.4	1529.2	1530.8	1532.4	1534.0	1535.6	1536.9
155°	1575.4	1576.4	1577.4	1578.4	1579.4	1580.4	1581.4	1582.4	1583.4	1584.4	1586.1
157.5°	1623.3	1624.0	1624.7	1625.4	1626.0	1626.7	1627.3	1627.9	1628.5	1629.1	1631.3
160°	1652.3	1653.0	1653.6	1654.3	1655.0	1655.5	1655.8	1656.1	1656.5	1656.8	1658.8
162.5°	1678.8	1679.0	1679.1	1679.2	1679.4	1679.6	1679.9	1680.3	1680.6	1680.9	1683.2
165°	1714.1	1713.8	1713.4	1713.1	1712.8	1712.6	1712.6	1712.6	1712.6	1712.6	1714.9
167.5°	1743.6	1742.6	1741.6	1740.6	1739.6	1739.1	1739.0	1739.0	1738.9	1738.8	1741.2
170°	1759.3	1758.3	1757.3	1756.3	1755.3	1754.6	1754.3	1754.0	1753.6	1753.3	1755.6
172.5°	1770.2	1769.2	1768.2	1767.2	1766.2	1765.5	1765.2	1764.8	1764.5	1764.1	1766.5
175°	1783.4	1782.4	1781.4	1780.4	1779.4	1778.6	1777.9	1777.2	1776.6	1775.9	1778.3
177.5°	1788.9	1788.1	1787.3	1786.5	1785.7	1785.0	1784.4	1783.9	1783.4	1782.8	1784.4
180°	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7
2.5°	773.4	774.7	776.0	776.6	776.3	776.0	775.8	775.5
5°	768.2	769.5	770.8	771.3	771.0	770.6	770.3	770.0
7.5°	759.5	760.8	762.2	762.6	762.3	761.9	761.5	761.2
10°	751.7	753.1	754.4	754.8	754.3	753.8	753.3	752.8
12.5°	742.6	743.5	744.4	744.7	744.3	744.0	743.6	743.2
15°	726.5	727.2	727.8	727.7	726.9	726.1	725.3	724.4
17.5°	707.4	708.2	709.0	708.9	708.1	707.4	706.6	705.8
20°	692.6	693.1	693.6	693.5	692.8	692.1	691.5	690.8
22.5°	676.8	676.9	677.0	676.9	676.5	676.1	675.7	675.3
25°	651.2	651.5	651.8	651.8	651.5	651.2	650.8	650.5
27.5°	625.9	625.4	624.9	624.3	623.5	622.7	621.9	621.1
30°	606.2	605.7	605.2	604.6	603.9	603.3	602.6	601.9
32.5°	586.9	586.0	585.1	584.3	583.6	583.0	582.3	581.6
35°	555.9	554.9	553.9	553.0	552.2	551.3	550.5	549.7
37.5°	524.8	523.6	522.4	521.3	520.5	519.7	518.9	518.2
40°	503.4	501.9	500.4	499.3	498.6	498.0	497.3	496.6
42.5°	482.2	480.6	478.9	477.7	476.7	475.8	474.9	473.9
45°	449.7	447.9	446.0	444.8	444.1	443.5	442.8	442.1
47.5°	415.9	413.9	412.0	410.6	409.6	408.7	407.7	406.7
50°	394.2	391.8	389.5	387.9	387.1	386.3	385.4	384.6
52.5°	371.7	369.7	367.8	366.3	365.2	364.1	363.0	361.9
55°	338.1	336.1	334.1	332.7	331.8	331.0	330.2	329.4
57.5°	303.2	301.2	299.3	298.0	297.3	296.7	296.1	295.4
60°	280.1	278.3	276.5	275.3	274.8	274.3	273.8	273.3
62.5°	258.3	256.6	254.9	253.8	253.1	252.5	251.9	251.2
65°	224.8	223.3	221.8	220.6	219.8	219.0	218.2	217.3
67.5°	191.7	190.5	189.4	188.5	187.8	187.1	186.5	185.8
70°	170.2	169.0	167.9	167.0	166.3	165.6	165.0	164.3
72.5°	149.9	148.7	147.6	146.7	146.2	145.6	145.1	144.6
75°	118.2	117.3	116.3	115.9	116.3	116.6	116.9	117.3
77.5°	90.0	89.5	89.0	88.5	88.0	87.6	87.1	86.6
80°	71.4	70.9	70.5	70.0	69.7	69.4	69.0	68.7
82.5°	53.3	52.6	52.0	51.6	51.6	51.5	51.4	51.4
85°	28.1	27.6	27.1	26.8	26.6	26.5	26.3	26.1
87.5°	17.9	17.3	16.8	16.5	16.4	16.4	16.3	16.2
90°	51.4	50.8	50.1	49.9	50.3	50.6	50.9	51.3
92.5°	48.2	48.3	48.5	48.6	48.6	48.7	48.8	48.8
95°	96.5	96.5	96.5	96.1	95.5	94.8	94.1	93.5
97.5°	162.2	162.2	162.2	162.2	162.1	162.0	162.0	161.9
100°	208.0	208.0	208.0	207.9	207.5	207.2	206.9	206.5
102.5°	258.0	258.3	258.6	258.5	258.2	257.9	257.5	257.2
105°	333.0	333.7	334.3	334.7	334.7	334.7	334.7	334.7
107.5°	413.9	414.2	414.4	413.8	412.3	410.7	409.2	407.6
110°	468.9	468.9	468.9	468.3	467.3	466.3	465.3	464.3



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CATALOG NUMBER: S122DIW-S485D1440U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	523.9	523.1	522.3	521.5	520.8	520.1	519.3	518.6
115°	608.4	608.0	607.7	607.0	606.0	605.0	604.0	603.0
117.5°	690.1	689.3	688.5	687.5	686.5	685.5	684.5	683.5
120°	744.7	744.7	744.7	744.2	743.2	742.2	741.2	740.2
122.5°	801.0	800.2	799.4	798.6	797.9	797.2	796.4	795.7
125°	884.4	883.4	882.4	881.8	881.4	881.1	880.8	880.4
127.5°	965.4	964.2	963.0	961.9	960.8	959.7	958.7	957.6
130°	1020.8	1020.1	1019.4	1018.4	1017.1	1015.8	1014.4	1013.1
132.5°	1074.7	1073.2	1071.7	1070.4	1069.4	1068.3	1067.2	1066.1
135°	1154.1	1153.8	1153.5	1152.8	1151.8	1150.8	1149.8	1148.8
137.5°	1230.2	1230.0	1229.7	1228.9	1227.6	1226.2	1224.9	1223.5
140°	1281.4	1281.4	1281.4	1280.8	1279.4	1278.1	1276.7	1275.4
142.5°	1327.8	1328.1	1328.3	1327.8	1326.5	1325.1	1323.8	1322.4
145°	1398.2	1398.5	1398.8	1398.3	1397.0	1395.7	1394.3	1393.0
147.5°	1459.9	1460.6	1461.4	1461.1	1459.8	1458.5	1457.3	1456.0
150°	1499.0	1500.0	1501.0	1501.0	1500.0	1499.0	1498.0	1497.0
152.5°	1538.1	1539.4	1540.7	1540.7	1539.4	1538.1	1536.9	1535.6
155°	1587.8	1589.5	1591.1	1591.5	1590.5	1589.5	1588.5	1587.5
157.5°	1633.6	1635.9	1638.2	1638.5	1636.9	1635.3	1633.7	1632.1
160°	1660.8	1662.8	1664.8	1665.2	1663.8	1662.5	1661.2	1659.8
162.5°	1685.5	1687.8	1690.0	1690.4	1688.8	1687.2	1685.6	1683.9
165°	1717.3	1719.6	1722.0	1722.3	1720.6	1719.0	1717.3	1715.6
167.5°	1743.5	1745.9	1748.2	1748.5	1746.8	1745.0	1743.3	1741.5
170°	1758.0	1760.3	1762.7	1762.8	1760.8	1758.8	1756.8	1754.8
172.5°	1768.8	1771.2	1773.5	1773.7	1771.7	1769.7	1767.7	1765.7
175°	1780.6	1782.9	1785.3	1785.5	1783.4	1781.4	1779.4	1777.4
177.5°	1786.1	1787.7	1789.3	1789.3	1787.7	1786.1	1784.4	1782.8
180°	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5

(END OF REPORT)