

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: P331523-940

Luminaire Tested: **S122DIW-S485D1440U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331523-940
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-S485D1440U940-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6902.7 lumens
Efficiency: N/A
Efficacy: 113.9 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

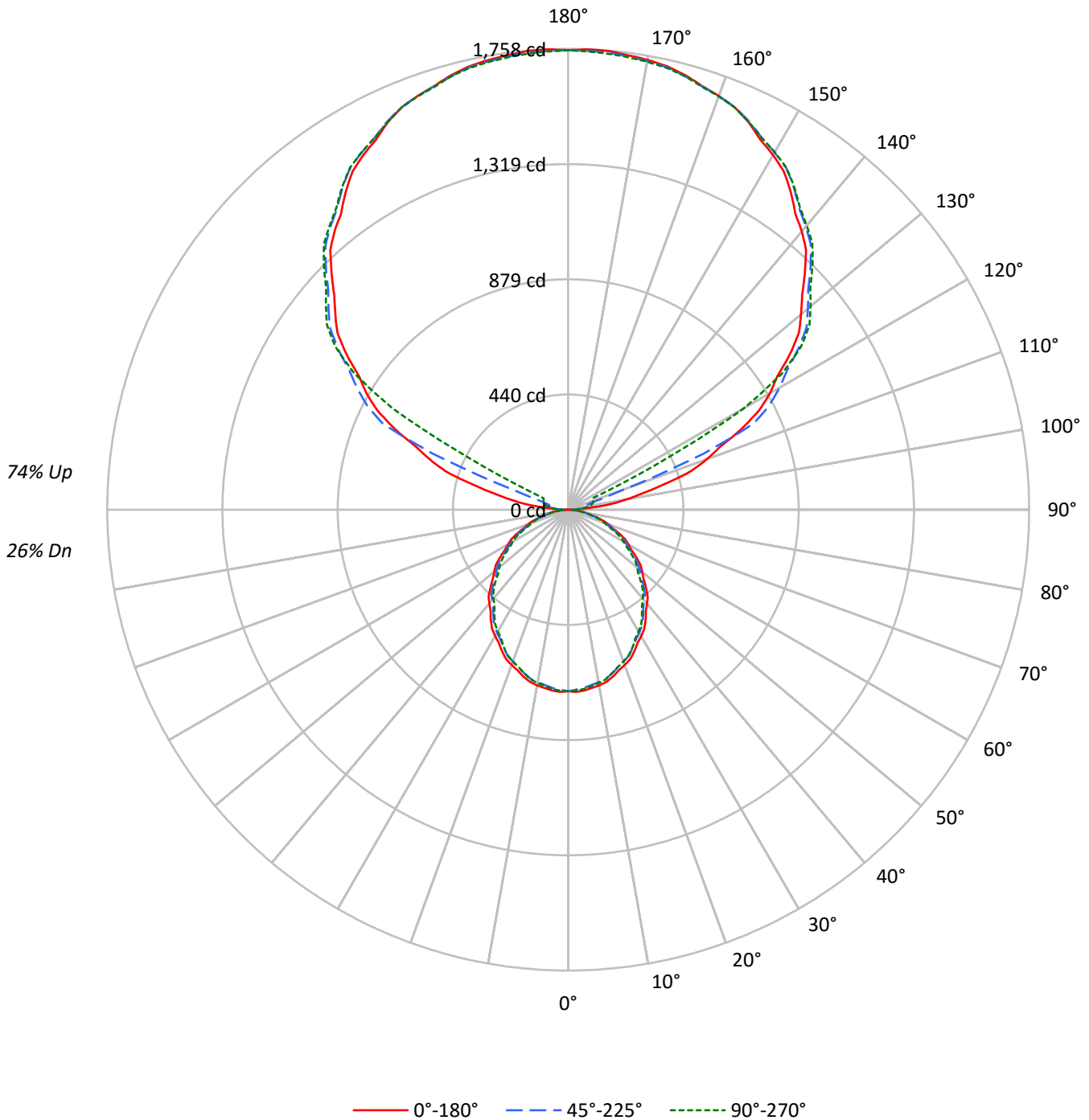
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26
1	92	88	84	81	82	79	76	73	61	59	57	45	43	42	30	29	28	22
2	84	77	71	66	75	69	64	60	53	50	47	39	37	35	26	25	24	18
3	77	68	61	55	68	60	54	50	47	43	40	35	32	30	23	22	20	15
4	70	60	52	46	62	53	47	42	42	37	34	31	28	25	21	19	17	13
5	64	53	45	39	57	48	41	36	37	32	29	28	24	22	19	17	15	11
6	59	47	40	34	52	43	36	31	33	29	25	25	22	19	17	15	13	10
7	54	43	35	30	48	38	32	27	30	25	22	23	19	17	15	13	12	9
8	50	38	31	26	45	35	28	24	27	23	19	21	17	15	14	12	11	8
9	47	35	28	23	42	32	25	21	25	20	17	19	16	13	13	11	9	7
10	44	32	25	20	39	29	23	19	23	18	15	17	14	12	12	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11183	11183	11183
5°	11225	11063	11128
10°	11158	10952	11006
15°	11020	10810	10798
20°	10825	10596	10584
25°	10630	10334	10334
30°	10381	10094	10006
35°	10147	9806	9662
40°	9853	9518	9333
45°	9565	9229	9001
50°	9251	8932	8616
55°	8923	8586	8267
60°	8557	8173	7869
65°	8164	7759	7404
70°	7671	7260	6916
75°	6981	6687	6525
80°	6192	6007	5700
85°	5057	4798	4316



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	0.9
10°-20°	183.3	2.7
20°-30°	269.4	3.9
30°-40°	312.9	4.5
40°-50°	312.5	4.5
50°-60°	272.6	3.9
60°-70°	201.5	2.9
70°-80°	114.1	1.7
80°-90°	35.0	0.5
90°-100°	58.5	0.8
100°-110°	214.4	3.1
110°-120°	573.1	8.3
120°-130°	946.0	13.7
130°-140°	1006.1	14.6
140°-150°	935.1	13.5
150°-160°	751.8	10.9
160°-170°	484.5	7.0
170°-180°	166.8	2.4
0°-30°	517.7	7.5
0°-40°	830.6	12.0
0°-60°	1415.7	20.5
0°-90°	1766.4	25.6
90°-120°	846.0	12.3
90°-150°	3733.2	54.1
90°-180°	5136.0	74.4
0°-180°	6902.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	693	690	683	688	687	66
15°	659	655	647	649	646	186
25°	597	591	580	581	580	274
35°	515	508	498	494	490	321
45°	419	414	404	397	394	323
55°	317	313	305	297	294	283
65°	214	210	203	197	194	211
75°	112	110	107	104	105	120
85°	27	27	26	24	23	31
90°	1	15	25	32	34	5
95°	82	43	50	55	55	101
105°	386	402	77	91	96	412
115°	729	751	782	223	104	718
125°	1031	1048	1072	1080	1084	919
135°	1276	1296	1308	1319	1318	985
145°	1480	1480	1500	1508	1503	925
155°	1630	1620	1633	1640	1631	751
165°	1717	1710	1713	1721	1713	485
175°	1756	1748	1750	1758	1746	167
180°	1753	1753	1753	1753	1753	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	695.8	695.2	694.6	694.0	693.4	692.5	691.2	689.9	688.6	687.2	688.5
5°	692.6	692.0	691.4	690.8	690.3	689.1	687.5	685.9	684.2	682.6	683.8
7.5°	686.4	685.5	684.7	683.7	682.8	681.5	679.8	678.2	676.5	674.8	676.1
10°	680.6	679.6	678.5	677.5	676.5	675.0	673.2	671.5	669.8	668.0	669.1
12.5°	672.6	671.7	670.7	669.9	669.0	667.6	665.8	664.1	662.3	660.5	661.3
15°	659.3	658.4	657.5	656.7	655.8	654.3	652.4	650.5	648.5	646.7	647.2
17.5°	642.2	641.4	640.5	639.6	638.7	637.3	635.3	633.4	631.4	629.5	630.2
20°	630.0	629.1	628.2	627.3	626.4	625.0	622.9	620.8	618.8	616.7	617.2
22.5°	617.8	616.5	615.3	614.0	612.8	611.2	609.2	607.3	605.3	603.3	603.4
25°	596.7	595.5	594.3	593.2	592.0	590.1	587.6	585.1	582.6	580.1	580.3
27.5°	572.7	571.7	570.6	569.5	568.5	566.9	565.0	562.9	561.0	559.0	558.6
30°	556.8	555.5	554.4	553.2	552.0	550.3	548.0	545.9	543.7	541.4	541.0
32.5°	539.7	538.8	537.8	536.8	535.9	534.2	531.9	529.6	527.3	525.0	524.1
35°	514.8	513.3	511.8	510.3	508.9	506.9	504.6	502.2	499.8	497.5	496.6
37.5°	486.7	485.4	484.1	482.8	481.4	479.7	477.2	474.9	472.5	470.2	469.0
40°	467.5	466.3	465.1	464.0	462.8	461.0	458.6	456.3	453.9	451.6	450.2
42.5°	448.9	447.6	446.5	445.3	444.2	442.4	440.0	437.7	435.2	432.8	431.4
45°	418.9	417.9	416.8	415.8	414.7	413.1	410.9	408.7	406.4	404.2	402.6
47.5°	389.1	388.1	387.1	386.1	385.1	383.5	381.2	378.9	376.6	374.3	372.6
50°	368.3	367.6	366.8	366.0	365.3	363.9	361.9	359.8	357.7	355.6	353.6
52.5°	348.0	347.1	346.1	345.1	344.1	342.7	340.7	338.8	336.8	334.8	333.1
55°	317.0	316.1	315.2	314.3	313.4	312.1	310.3	308.5	306.7	305.0	303.3
57.5°	285.8	285.1	284.4	283.7	283.0	281.7	279.7	277.8	275.8	273.8	272.1
60°	265.0	264.5	263.9	263.2	262.7	261.4	259.3	257.2	255.1	253.1	251.5
62.5°	244.8	243.9	242.9	241.9	241.0	239.8	238.2	236.6	235.0	233.4	231.8
65°	213.7	212.9	212.0	211.1	210.3	209.0	207.6	206.1	204.6	203.1	201.8
67.5°	182.2	181.5	180.7	180.0	179.3	178.3	177.0	175.7	174.3	173.0	172.0
70°	162.5	161.9	161.3	160.7	160.2	159.2	157.8	156.5	155.2	153.8	152.8
72.5°	142.2	141.7	141.1	140.4	139.9	139.2	138.3	137.4	136.6	135.7	134.6
75°	111.9	111.6	111.3	111.0	110.7	110.2	109.4	108.7	108.0	107.2	106.3
77.5°	84.7	84.2	83.7	83.2	82.7	82.3	82.0	81.7	81.4	81.1	80.7
80°	66.6	66.4	66.3	66.2	66.0	65.8	65.5	65.2	64.9	64.6	64.1
82.5°	49.6	49.5	49.5	49.5	49.4	49.3	49.1	49.0	48.8	48.6	48.1
85°	27.3	27.2	27.0	26.8	26.8	26.6	26.4	26.3	26.1	25.9	25.5
87.5°	9.8	10.3	10.6	11.0	11.4	11.7	11.9	12.1	12.3	12.6	12.5
90°	1.2	4.4	7.5	10.6	13.6	16.3	18.6	20.9	23.1	25.3	26.8
92.5°	25.6	25.3	25.1	24.8	24.5	24.9	26.0	27.2	28.3	29.4	30.1
95°	82.4	73.1	63.8	54.6	45.2	41.6	43.5	45.5	47.5	49.5	50.8
97.5°	163.6	137.4	111.2	85.0	58.8	48.0	52.5	57.1	61.6	66.2	67.3
100°	224.4	185.8	147.2	108.6	70.0	53.1	57.9	62.7	67.5	72.3	74.5
102.5°	291.4	283.3	275.1	266.9	258.8	234.6	194.6	154.4	114.4	74.3	77.2
105°	385.6	394.0	402.4	410.9	419.4	385.1	308.2	231.2	154.3	77.4	80.4
107.5°	492.8	499.6	506.5	513.3	520.1	477.4	385.1	292.8	200.5	108.3	105.1
110°	561.9	567.8	573.6	579.6	585.5	547.7	466.3	384.9	303.4	221.9	193.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	626.8	632.0	637.2	642.5	647.7	640.2	620.2	600.0	579.9	559.8	457.0
115°	729.2	734.1	738.8	743.6	748.4	754.3	761.3	768.4	775.4	782.5	652.0
117.5°	820.8	826.2	831.5	836.9	842.2	847.3	852.1	857.0	861.8	866.7	835.2
120°	887.8	892.0	896.2	900.4	904.6	909.3	914.4	919.4	924.5	929.6	933.0
122.5°	944.6	949.0	953.5	958.0	962.4	967.4	972.9	978.4	983.9	989.4	991.5
125°	1031.1	1034.7	1038.4	1042.1	1045.7	1050.3	1055.6	1061.0	1066.3	1071.7	1073.6
127.5°	1109.5	1113.5	1117.6	1121.6	1125.7	1129.7	1133.7	1137.7	1141.7	1145.8	1148.6
130°	1159.1	1163.7	1168.1	1172.7	1177.2	1181.0	1184.1	1187.2	1190.3	1193.4	1196.5
132.5°	1209.9	1213.7	1217.5	1221.4	1225.2	1228.7	1231.8	1234.8	1238.0	1241.1	1243.8
135°	1275.9	1280.3	1284.9	1289.3	1293.9	1297.4	1299.9	1302.4	1305.0	1307.5	1310.4
137.5°	1342.6	1345.7	1348.9	1352.0	1355.1	1358.2	1361.0	1364.0	1366.8	1369.7	1372.4
140°	1386.2	1388.4	1390.7	1392.9	1395.2	1397.8	1401.0	1404.1	1407.2	1410.2	1412.8
142.5°	1422.7	1424.7	1426.7	1428.8	1430.8	1433.6	1437.2	1440.7	1444.2	1447.8	1450.1
145°	1480.1	1479.7	1479.4	1479.2	1478.9	1481.1	1485.9	1490.8	1495.5	1500.3	1502.3
147.5°	1530.0	1528.9	1527.9	1526.8	1525.7	1527.5	1532.2	1537.0	1541.8	1546.5	1547.9
150°	1562.5	1560.5	1558.5	1556.6	1554.5	1555.9	1560.3	1564.9	1569.3	1573.9	1575.6
152.5°	1589.8	1587.7	1585.5	1583.2	1581.1	1582.1	1586.4	1590.6	1594.9	1599.2	1600.9
155°	1629.7	1627.1	1624.6	1622.0	1619.5	1620.0	1623.4	1626.7	1630.1	1633.4	1635.1
157.5°	1660.9	1658.8	1656.6	1654.5	1652.3	1652.4	1654.7	1657.2	1659.5	1661.9	1663.8
160°	1679.1	1677.4	1675.8	1674.1	1672.4	1672.4	1674.1	1675.8	1677.4	1679.1	1680.8
162.5°	1695.3	1693.7	1692.0	1690.3	1688.6	1688.5	1690.0	1691.4	1692.9	1694.3	1696.3
165°	1717.2	1715.5	1713.8	1712.1	1710.4	1710.0	1710.8	1711.6	1712.5	1713.3	1715.4
167.5°	1733.4	1731.7	1730.0	1728.3	1726.6	1726.2	1727.0	1727.8	1728.6	1729.4	1731.3
170°	1742.6	1740.9	1739.2	1737.5	1735.8	1735.2	1735.8	1736.3	1736.9	1737.5	1739.5
172.5°	1748.6	1747.0	1745.3	1743.6	1741.9	1741.3	1741.9	1742.4	1743.0	1743.6	1745.5
175°	1756.5	1754.5	1752.6	1750.6	1748.6	1747.9	1748.5	1749.0	1749.6	1750.2	1752.1
177.5°	1757.7	1756.2	1754.6	1753.0	1751.4	1750.8	1751.0	1751.2	1751.4	1751.7	1753.3
180°	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	689.6	690.8	692.0	692.5	692.2	692.0	691.8	691.5
5°	685.0	686.2	687.3	687.8	687.5	687.2	686.9	686.6
7.5°	677.3	678.4	679.7	680.0	679.8	679.4	679.0	678.8
10°	670.3	671.5	672.7	673.1	672.6	672.2	671.7	671.3
12.5°	662.2	663.0	663.8	664.1	663.7	663.4	663.1	662.7
15°	647.8	648.5	649.0	648.9	648.2	647.5	646.8	646.0
17.5°	630.8	631.5	632.2	632.1	631.4	630.8	630.1	629.4
20°	617.6	618.0	618.5	618.4	617.8	617.2	616.6	616.0
22.5°	603.5	603.6	603.7	603.6	603.2	602.9	602.5	602.2
25°	580.7	580.9	581.2	581.2	580.9	580.7	580.3	580.1
27.5°	558.1	557.7	557.2	556.7	556.0	555.3	554.6	553.8
30°	540.6	540.1	539.7	539.1	538.5	538.0	537.3	536.7
32.5°	523.3	522.5	521.7	521.0	520.4	519.9	519.2	518.6
35°	495.7	494.8	493.9	493.1	492.4	491.6	490.9	490.2
37.5°	468.0	466.9	465.8	464.8	464.1	463.4	462.7	462.1
40°	448.9	447.5	446.2	445.2	444.6	444.1	443.4	442.8
42.5°	430.0	428.6	427.0	426.0	425.1	424.3	423.5	422.6
45°	401.0	399.4	397.7	396.6	396.0	395.5	394.8	394.2
47.5°	370.9	369.1	367.4	366.1	365.2	364.4	363.6	362.7
50°	351.5	349.4	347.3	345.9	345.2	344.5	343.7	343.0
52.5°	331.4	329.7	328.0	326.6	325.7	324.7	323.7	322.7
55°	301.5	299.7	297.9	296.7	295.9	295.2	294.4	293.7
57.5°	270.4	268.6	266.9	265.7	265.1	264.6	264.0	263.4
60°	249.8	248.2	246.6	245.5	245.0	244.6	244.2	243.7
62.5°	230.3	228.8	227.3	226.3	225.7	225.2	224.6	224.0
65°	200.5	199.1	197.8	196.7	196.0	195.3	194.6	193.8
67.5°	170.9	169.9	168.9	168.1	167.5	166.8	166.3	165.7
70°	151.8	150.7	149.7	148.9	148.3	147.7	147.1	146.5
72.5°	133.7	132.6	131.6	130.8	130.4	129.8	129.4	128.9
75°	105.4	104.6	103.7	103.3	103.7	104.0	104.2	104.6
77.5°	80.3	79.8	79.4	78.9	78.5	78.1	77.7	77.2
80°	63.7	63.2	62.9	62.4	62.2	61.9	61.5	61.3
82.5°	47.5	46.9	46.4	46.0	46.0	45.9	45.8	45.8
85°	25.1	24.6	24.2	23.9	23.7	23.6	23.5	23.3
87.5°	12.4	12.3	12.2	12.2	12.2	12.2	12.2	12.2
90°	28.2	29.6	31.0	32.0	32.5	33.1	33.7	34.2
92.5°	30.9	31.7	32.4	32.9	33.3	33.5	33.9	34.2
95°	52.3	53.7	55.1	55.6	55.4	55.1	54.8	54.6
97.5°	68.5	69.6	70.7	71.4	71.8	72.1	72.5	72.8
100°	76.8	79.1	81.3	82.8	83.3	83.8	84.4	85.0
102.5°	80.2	83.1	86.1	87.9	88.7	89.4	90.2	91.0
105°	83.6	86.7	89.8	91.8	93.0	94.2	95.2	96.4
107.5°	102.0	98.8	95.7	94.7	95.8	96.9	98.1	99.2
110°	165.6	137.4	109.2	95.7	96.8	97.9	99.1	100.2



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CATALOG NUMBER: S122DIW-S485D1440U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	354.2	251.4	148.6	97.6	98.5	99.4	100.3	101.2
115°	521.6	391.0	260.6	185.1	164.9	144.5	124.3	104.0
117.5°	803.6	772.0	740.5	691.3	624.6	557.9	491.2	424.6
120°	936.4	939.8	943.2	925.8	887.8	849.7	811.6	773.6
122.5°	993.5	995.6	997.6	994.9	987.5	980.2	972.8	965.4
125°	1075.6	1077.5	1079.5	1080.9	1081.8	1082.6	1083.5	1084.3
127.5°	1151.5	1154.3	1157.2	1158.8	1158.9	1159.0	1159.2	1159.4
130°	1199.6	1202.7	1205.8	1207.2	1206.9	1206.7	1206.4	1206.0
132.5°	1246.3	1249.0	1251.7	1252.9	1252.6	1252.3	1252.1	1251.7
135°	1313.1	1316.0	1318.8	1319.9	1319.4	1318.8	1318.2	1317.7
137.5°	1375.2	1378.0	1380.7	1381.6	1380.6	1379.7	1378.8	1377.8
140°	1415.3	1417.9	1420.4	1420.9	1419.6	1418.2	1416.8	1415.3
142.5°	1452.4	1454.7	1457.1	1457.5	1456.1	1454.6	1453.3	1451.9
145°	1504.2	1506.2	1508.2	1508.5	1507.1	1505.7	1504.2	1502.9
147.5°	1549.4	1550.9	1552.4	1552.5	1551.3	1550.2	1548.9	1547.7
150°	1577.3	1579.0	1580.6	1580.7	1579.4	1578.0	1576.5	1575.1
152.5°	1602.6	1604.3	1606.0	1605.9	1604.0	1602.2	1600.4	1598.5
155°	1636.8	1638.5	1640.2	1639.9	1637.7	1635.5	1633.2	1630.9
157.5°	1665.7	1667.6	1669.6	1669.4	1667.2	1665.0	1662.8	1660.6
160°	1682.5	1684.2	1685.9	1685.8	1683.8	1681.8	1679.8	1677.8
162.5°	1698.2	1700.1	1702.0	1701.7	1699.3	1696.9	1694.5	1692.1
165°	1717.3	1719.3	1721.3	1721.3	1719.3	1717.3	1715.4	1713.3
167.5°	1733.3	1735.3	1737.2	1737.0	1734.5	1731.9	1729.4	1726.8
170°	1741.4	1743.4	1745.3	1745.1	1742.6	1740.0	1737.5	1734.9
172.5°	1747.5	1749.4	1751.4	1751.1	1748.6	1746.1	1743.6	1741.0
175°	1754.1	1756.0	1758.0	1757.7	1754.8	1751.9	1749.2	1746.3
177.5°	1754.8	1756.4	1758.0	1757.7	1755.7	1753.7	1751.7	1749.6
180°	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7

(END OF REPORT)