

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: P331523-930

Luminaire Tested: **S122DIW-S485D1440U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331523-930
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-S485D1440U930-4F0-1E-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: 6311.2 lumens
Efficiency: N/A
Efficacy: 104.1 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

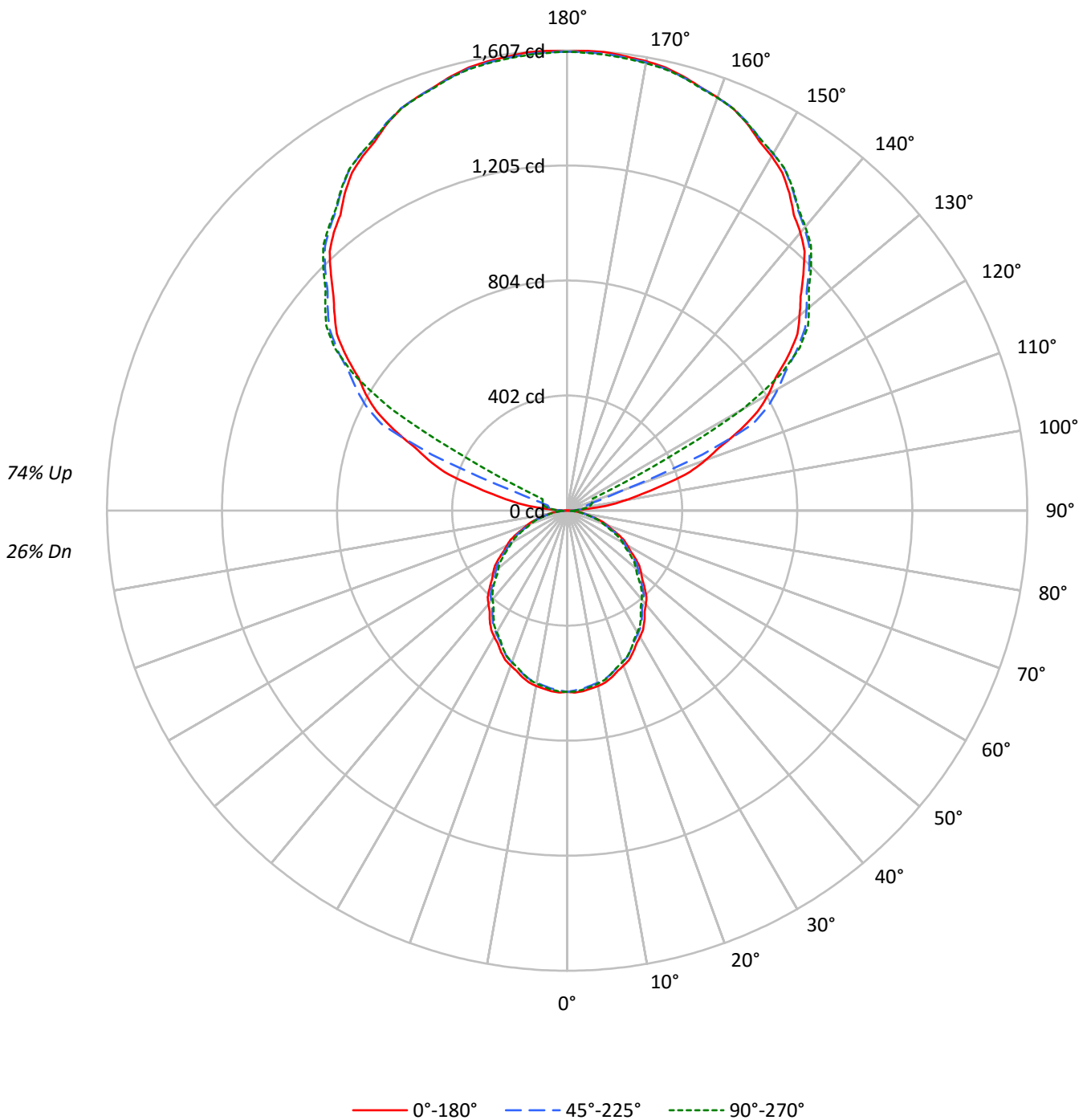
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	10224	10224	10224
5°	10263	10115	10175
10°	10203	10012	10063
15°	10076	9884	9872
20°	9897	9689	9677
25°	9720	9449	9449
30°	9491	9229	9148
35°	9278	8966	8834
40°	9010	8703	8534
45°	8745	8439	8229
50°	8457	8166	7877
55°	8158	7848	7561
60°	7824	7472	7195
65°	7465	7095	6770
70°	7010	6637	6326
75°	6382	6114	5964
80°	5662	5486	5207
85°	4613	4390	3946



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	0.9
10°-20°	167.6	2.7
20°-30°	246.3	3.9
30°-40°	286.1	4.5
40°-50°	285.8	4.5
50°-60°	249.2	3.9
60°-70°	184.3	2.9
70°-80°	104.4	1.7
80°-90°	32.0	0.5
90°-100°	53.5	0.8
100°-110°	196.0	3.1
110°-120°	524.0	8.3
120°-130°	865.0	13.7
130°-140°	919.9	14.6
140°-150°	855.0	13.5
150°-160°	687.4	10.9
160°-170°	443.0	7.0
170°-180°	152.5	2.4
0°-30°	473.4	7.5
0°-40°	759.4	12.0
0°-60°	1294.4	20.5
0°-90°	1615.0	25.6
90°-120°	773.5	12.3
90°-150°	3413.3	54.1
90°-180°	4696.0	74.4
0°-180°	6311.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	633	631	624	629	628	60
15°	603	599	591	593	591	170
25°	546	540	530	531	530	251
35°	471	464	455	451	448	294
45°	383	378	370	363	360	295
55°	290	286	279	272	269	259
65°	195	192	186	180	177	193
75°	102	101	98	95	96	109
85°	25	24	24	22	21	29
90°	1	14	23	29	31	5
95°	75	40	45	51	50	92
105°	352	368	71	83	88	377
115°	667	687	715	204	95	656
125°	943	958	980	988	991	840
135°	1166	1185	1196	1206	1205	901
145°	1353	1353	1372	1379	1374	846
155°	1490	1481	1494	1500	1491	686
165°	1570	1564	1566	1574	1566	443
175°	1606	1598	1600	1607	1597	153
180°	1602	1602	1602	1602	1602	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	636.2	635.6	635.1	634.5	634.0	633.2	631.9	630.8	629.6	628.4	629.5
5°	633.2	632.7	632.2	631.6	631.1	630.1	628.6	627.1	625.6	624.1	625.2
7.5°	627.6	626.8	626.0	625.1	624.3	623.1	621.6	620.1	618.6	617.0	618.2
10°	622.3	621.3	620.4	619.5	618.5	617.2	615.6	614.0	612.4	610.7	611.8
12.5°	615.0	614.2	613.3	612.5	611.6	610.4	608.8	607.2	605.5	603.9	604.6
15°	602.8	602.0	601.2	600.4	599.6	598.3	596.5	594.8	593.0	591.3	591.7
17.5°	587.2	586.4	585.6	584.8	584.0	582.7	580.9	579.1	577.3	575.5	576.2
20°	576.0	575.2	574.4	573.6	572.7	571.4	569.5	567.6	565.7	563.9	564.3
22.5°	564.8	563.7	562.6	561.4	560.3	558.8	557.0	555.2	553.4	551.6	551.7
25°	545.6	544.5	543.4	542.3	541.3	539.6	537.3	534.9	532.6	530.4	530.6
27.5°	523.7	522.7	521.7	520.7	519.8	518.4	516.6	514.7	512.9	511.1	510.7
30°	509.1	507.9	506.9	505.8	504.7	503.1	501.1	499.1	497.1	495.0	494.6
32.5°	493.4	492.6	491.7	490.8	490.0	488.4	486.3	484.2	482.1	480.0	479.2
35°	470.7	469.3	468.0	466.6	465.3	463.5	461.4	459.2	457.0	454.9	454.0
37.5°	445.0	443.8	442.6	441.4	440.2	438.5	436.3	434.2	432.0	429.9	428.8
40°	427.5	426.3	425.3	424.2	423.1	421.5	419.3	417.2	415.0	412.9	411.6
42.5°	410.4	409.3	408.2	407.2	406.1	404.5	402.3	400.1	397.9	395.7	394.4
45°	383.0	382.0	381.1	380.2	379.2	377.7	375.7	373.7	371.6	369.6	368.1
47.5°	355.7	354.8	353.9	353.0	352.1	350.7	348.5	346.4	344.3	342.2	340.6
50°	336.7	336.1	335.3	334.7	334.0	332.7	330.8	329.0	327.0	325.1	323.3
52.5°	318.2	317.3	316.4	315.5	314.6	313.3	311.5	309.7	307.9	306.1	304.6
55°	289.8	289.0	288.2	287.4	286.6	285.4	283.7	282.1	280.5	278.8	277.3
57.5°	261.3	260.7	260.0	259.4	258.8	257.6	255.8	254.0	252.2	250.4	248.7
60°	242.3	241.8	241.2	240.7	240.2	239.0	237.1	235.1	233.3	231.4	229.9
62.5°	223.8	223.0	222.1	221.2	220.4	219.2	217.8	216.3	214.8	213.4	212.0
65°	195.4	194.6	193.8	193.0	192.2	191.1	189.8	188.4	187.0	185.7	184.5
67.5°	166.6	165.9	165.3	164.6	164.0	163.1	161.8	160.6	159.4	158.2	157.3
70°	148.5	148.1	147.5	146.9	146.4	145.5	144.3	143.1	141.9	140.6	139.7
72.5°	130.0	129.6	129.0	128.4	127.9	127.3	126.5	125.6	124.9	124.1	123.1
75°	102.3	102.0	101.7	101.5	101.2	100.8	100.0	99.4	98.7	98.0	97.2
77.5°	77.5	77.0	76.6	76.1	75.6	75.3	75.0	74.7	74.4	74.2	73.8
80°	60.9	60.7	60.7	60.5	60.3	60.2	59.8	59.6	59.4	59.0	58.6
82.5°	45.3	45.2	45.2	45.2	45.2	45.1	44.9	44.8	44.6	44.4	43.9
85°	24.9	24.9	24.7	24.5	24.5	24.3	24.1	24.1	23.9	23.7	23.3
87.5°	9.0	9.4	9.7	10.0	10.4	10.7	10.8	11.1	11.3	11.5	11.4
90°	1.1	4.0	6.8	9.7	12.5	14.9	17.0	19.1	21.1	23.2	24.5
92.5°	23.4	23.2	22.9	22.7	22.4	22.7	23.8	24.9	25.8	26.9	27.6
95°	75.3	66.9	58.4	49.9	41.3	38.0	39.8	41.6	43.5	45.2	46.5
97.5°	149.6	125.6	101.7	77.7	53.7	43.9	48.0	52.2	56.3	60.5	61.6
100°	205.2	169.9	134.6	99.3	64.0	48.6	52.9	57.3	61.7	66.1	68.2
102.5°	266.4	259.0	251.5	244.0	236.6	214.5	177.9	141.2	104.6	67.9	70.6
105°	352.5	360.2	367.9	375.7	383.4	352.1	281.8	211.4	141.0	70.8	73.5
107.5°	450.6	456.8	463.1	469.3	475.6	436.5	352.1	267.7	183.4	99.1	96.1
110°	513.7	519.1	524.5	529.9	535.3	500.8	426.3	351.9	277.4	202.9	177.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	573.1	577.8	582.6	587.4	592.2	585.4	567.0	548.6	530.2	511.8	417.8
115°	666.8	671.2	675.5	679.9	684.3	689.7	696.1	702.5	709.0	715.4	596.1
117.5°	750.5	755.4	760.3	765.2	770.1	774.7	779.1	783.6	788.0	792.5	763.6
120°	811.7	815.5	819.4	823.3	827.1	831.4	836.0	840.7	845.3	849.9	853.0
122.5°	863.6	867.7	871.8	875.9	880.0	884.5	889.5	894.5	899.6	904.7	906.5
125°	942.7	946.1	949.4	952.8	956.1	960.3	965.2	970.0	974.9	979.8	981.6
127.5°	1014.4	1018.1	1021.8	1025.5	1029.2	1032.9	1036.6	1040.2	1043.9	1047.6	1050.2
130°	1059.8	1064.0	1068.0	1072.2	1076.4	1079.8	1082.6	1085.5	1088.3	1091.1	1094.0
132.5°	1106.2	1109.7	1113.2	1116.7	1120.2	1123.4	1126.3	1129.0	1131.9	1134.7	1137.2
135°	1166.5	1170.6	1174.8	1178.8	1183.0	1186.2	1188.5	1190.8	1193.2	1195.5	1198.1
137.5°	1227.5	1230.4	1233.3	1236.2	1239.0	1241.8	1244.4	1247.1	1249.7	1252.3	1254.8
140°	1267.4	1269.4	1271.5	1273.6	1275.6	1278.1	1280.9	1283.8	1286.6	1289.4	1291.8
142.5°	1300.8	1302.6	1304.5	1306.4	1308.2	1310.8	1314.0	1317.3	1320.5	1323.7	1325.8
145°	1353.2	1352.9	1352.7	1352.4	1352.2	1354.2	1358.6	1363.0	1367.3	1371.7	1373.5
147.5°	1398.9	1397.9	1396.9	1396.0	1395.0	1396.6	1400.9	1405.3	1409.7	1414.0	1415.3
150°	1428.6	1426.8	1425.0	1423.2	1421.3	1422.5	1426.6	1430.8	1434.8	1439.0	1440.6
152.5°	1453.6	1451.6	1449.6	1447.6	1445.6	1446.5	1450.4	1454.3	1458.2	1462.2	1463.7
155°	1490.0	1487.7	1485.4	1483.0	1480.7	1481.2	1484.3	1487.4	1490.4	1493.5	1495.0
157.5°	1518.6	1516.6	1514.7	1512.7	1510.7	1510.8	1513.0	1515.2	1517.3	1519.5	1521.3
160°	1535.2	1533.7	1532.2	1530.6	1529.1	1529.1	1530.6	1532.2	1533.7	1535.2	1536.8
162.5°	1550.0	1548.6	1547.0	1545.5	1543.9	1543.8	1545.2	1546.5	1547.8	1549.2	1550.9
165°	1570.0	1568.5	1566.9	1565.4	1563.8	1563.5	1564.2	1565.0	1565.8	1566.5	1568.4
167.5°	1584.9	1583.3	1581.8	1580.2	1578.7	1578.3	1579.0	1579.7	1580.5	1581.2	1583.0
170°	1593.3	1591.7	1590.2	1588.6	1587.1	1586.5	1587.1	1587.6	1588.0	1588.6	1590.4
172.5°	1598.8	1597.3	1595.7	1594.2	1592.6	1592.1	1592.6	1593.1	1593.7	1594.2	1595.9
175°	1606.0	1604.2	1602.4	1600.6	1598.8	1598.1	1598.6	1599.1	1599.7	1600.2	1602.0
177.5°	1607.1	1605.7	1604.3	1602.8	1601.3	1600.8	1600.9	1601.2	1601.3	1601.6	1603.0
180°	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	630.6	631.6	632.7	633.2	632.9	632.7	632.5	632.3
5°	626.3	627.4	628.4	628.8	628.6	628.3	628.0	627.8
7.5°	619.2	620.3	621.4	621.7	621.5	621.2	620.9	620.6
10°	612.9	614.0	615.1	615.4	615.0	614.6	614.2	613.8
12.5°	605.4	606.2	606.9	607.2	606.8	606.6	606.3	605.9
15°	592.3	592.9	593.4	593.3	592.6	592.0	591.3	590.6
17.5°	576.7	577.4	578.0	578.0	577.3	576.7	576.1	575.4
20°	564.7	565.1	565.5	565.4	564.8	564.3	563.8	563.2
22.5°	551.8	551.9	552.0	551.9	551.5	551.2	550.9	550.6
25°	530.9	531.2	531.4	531.4	531.2	530.9	530.6	530.4
27.5°	510.3	509.9	509.5	509.0	508.3	507.7	507.0	506.4
30°	494.2	493.8	493.4	492.9	492.4	491.9	491.3	490.7
32.5°	478.5	477.8	477.0	476.4	475.8	475.3	474.7	474.2
35°	453.2	452.4	451.6	450.9	450.2	449.5	448.8	448.2
37.5°	427.9	426.9	425.9	425.0	424.4	423.7	423.1	422.5
40°	410.4	409.2	408.0	407.1	406.5	406.0	405.4	404.9
42.5°	393.1	391.8	390.4	389.5	388.7	387.9	387.2	386.4
45°	366.6	365.2	363.6	362.6	362.1	361.6	361.0	360.4
47.5°	339.1	337.5	335.9	334.8	333.9	333.2	332.4	331.6
50°	321.4	319.4	317.6	316.3	315.6	315.0	314.2	313.6
52.5°	303.0	301.4	299.9	298.6	297.7	296.9	296.0	295.1
55°	275.7	274.0	272.4	271.3	270.5	269.9	269.2	268.6
57.5°	247.2	245.6	244.0	243.0	242.4	241.9	241.4	240.8
60°	228.4	226.9	225.4	224.5	224.0	223.6	223.2	222.8
62.5°	210.6	209.2	207.8	206.9	206.4	205.9	205.4	204.8
65°	183.3	182.1	180.8	179.9	179.2	178.6	177.9	177.2
67.5°	156.3	155.3	154.4	153.7	153.1	152.5	152.1	151.5
70°	138.8	137.8	136.9	136.2	135.6	135.0	134.5	134.0
72.5°	122.2	121.2	120.3	119.6	119.2	118.7	118.3	117.9
75°	96.4	95.6	94.8	94.5	94.8	95.1	95.3	95.6
77.5°	73.4	73.0	72.6	72.2	71.7	71.4	71.0	70.6
80°	58.2	57.8	57.5	57.1	56.8	56.6	56.3	56.0
82.5°	43.5	42.9	42.4	42.1	42.1	42.0	41.9	41.9
85°	22.9	22.5	22.1	21.9	21.7	21.6	21.4	21.3
87.5°	11.3	11.3	11.2	11.2	11.2	11.2	11.2	11.2
90°	25.8	27.1	28.4	29.3	29.8	30.2	30.8	31.3
92.5°	28.2	28.9	29.6	30.1	30.4	30.7	31.0	31.3
95°	47.8	49.1	50.4	50.9	50.6	50.4	50.1	49.9
97.5°	62.6	63.6	64.7	65.3	65.6	66.0	66.3	66.5
100°	70.2	72.3	74.4	75.7	76.1	76.6	77.2	77.7
102.5°	73.3	76.0	78.7	80.4	81.1	81.8	82.5	83.2
105°	76.4	79.2	82.1	84.0	85.0	86.1	87.1	88.1
107.5°	93.3	90.3	87.5	86.6	87.6	88.6	89.7	90.7
110°	151.4	125.6	99.9	87.5	88.5	89.5	90.6	91.6



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CATALOG NUMBER: S122DIW-S485D1440U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	323.8	229.8	135.8	89.2	90.1	90.9	91.7	92.5
115°	476.9	357.5	238.2	169.3	150.7	132.2	113.7	95.1
117.5°	734.7	705.9	677.0	632.1	571.1	510.1	449.1	388.2
120°	856.1	859.2	862.3	846.4	811.7	776.9	742.1	707.4
122.5°	908.4	910.3	912.1	909.6	902.9	896.2	889.4	882.6
125°	983.4	985.2	987.0	988.3	989.1	989.9	990.7	991.4
127.5°	1052.8	1055.4	1058.0	1059.5	1059.6	1059.7	1059.9	1060.1
130°	1096.8	1099.7	1102.4	1103.8	1103.5	1103.3	1103.0	1102.7
132.5°	1139.5	1142.0	1144.4	1145.5	1145.3	1145.0	1144.8	1144.4
135°	1200.6	1203.2	1205.8	1206.8	1206.3	1205.8	1205.3	1204.8
137.5°	1257.4	1259.9	1262.4	1263.2	1262.3	1261.5	1260.6	1259.7
140°	1294.0	1296.4	1298.7	1299.2	1298.0	1296.7	1295.3	1294.0
142.5°	1328.0	1330.1	1332.2	1332.6	1331.3	1330.0	1328.8	1327.5
145°	1375.3	1377.1	1379.0	1379.2	1377.9	1376.6	1375.3	1374.1
147.5°	1416.7	1418.0	1419.4	1419.4	1418.4	1417.3	1416.2	1415.1
150°	1442.1	1443.7	1445.2	1445.3	1444.1	1442.8	1441.4	1440.1
152.5°	1465.3	1466.8	1468.4	1468.3	1466.6	1464.9	1463.2	1461.5
155°	1496.6	1498.1	1499.7	1499.4	1497.4	1495.3	1493.2	1491.2
157.5°	1523.0	1524.7	1526.5	1526.3	1524.4	1522.3	1520.3	1518.3
160°	1538.3	1539.9	1541.4	1541.3	1539.5	1537.7	1535.9	1534.1
162.5°	1552.7	1554.4	1556.2	1555.9	1553.7	1551.5	1549.3	1547.1
165°	1570.2	1572.0	1573.8	1573.8	1572.0	1570.2	1568.4	1566.5
167.5°	1584.8	1586.6	1588.4	1588.1	1585.8	1583.5	1581.2	1578.8
170°	1592.2	1594.0	1595.8	1595.5	1593.3	1590.9	1588.6	1586.2
172.5°	1597.7	1599.5	1601.3	1601.1	1598.8	1596.4	1594.2	1591.8
175°	1603.8	1605.6	1607.4	1607.0	1604.4	1601.8	1599.3	1596.7
177.5°	1604.4	1605.9	1607.4	1607.1	1605.2	1603.4	1601.6	1599.7
180°	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5

(END OF REPORT)