

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: P331521-930

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331521-930
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-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: 6303.0 lumens
Efficiency: N/A
Efficacy: 104.0 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

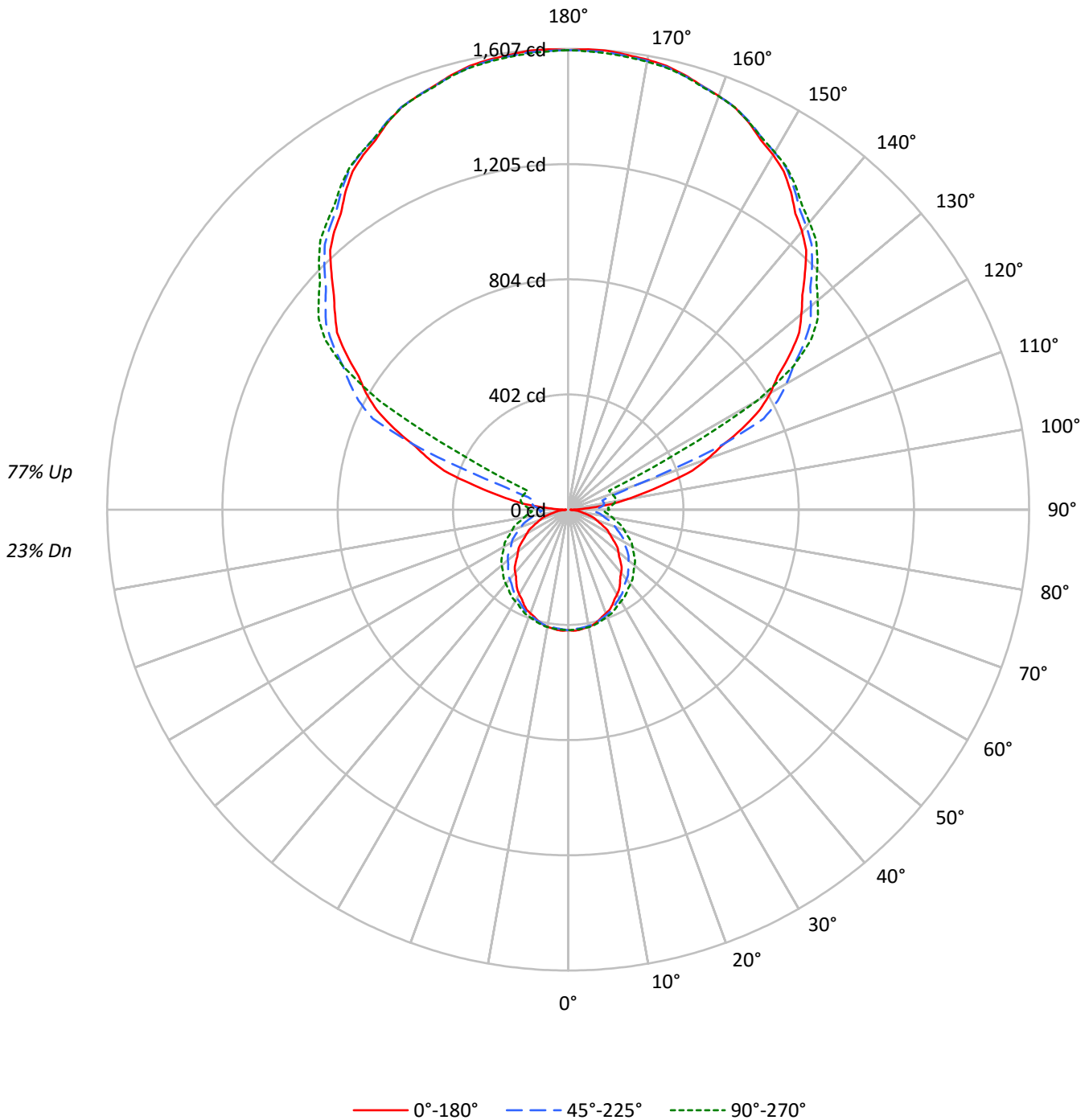
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: S122DIW-S485D1440U930-4F0-1E-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	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°	6783	6783	6783
5°	6816	6530	6505
10°	6774	6337	6266
15°	6681	6133	6014
20°	6562	5913	5771
25°	6445	5701	5552
30°	6282	5486	5330
35°	6116	5276	5174
40°	5941	5099	5017
45°	5775	4940	4885
50°	5598	4794	4753
55°	5410	4638	4620
60°	5180	4477	4479
65°	4944	4290	4310
70°	4679	4085	4131
75°	4335	3888	3964
80°	3800	3685	3794
85°	3277	3510	3661



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.8	0.6
10°-20°	114.2	1.8
20°-30°	173.0	2.7
30°-40°	210.7	3.3
40°-50°	226.7	3.6
50°-60°	220.1	3.5
60°-70°	192.2	3.0
70°-80°	148.0	2.3
80°-90°	103.3	1.6
90°-100°	121.9	1.9
100°-110°	246.0	3.9
110°-120°	557.0	8.8
120°-130°	883.4	14.0
130°-140°	927.6	14.7
140°-150°	856.3	13.6
150°-160°	687.4	10.9
160°-170°	443.0	7.0
170°-180°	152.5	2.4
0°-30°	327.0	5.2
0°-40°	537.7	8.5
0°-60°	984.5	15.6
0°-90°	1428.0	22.7
90°-120°	924.8	14.7
90°-150°	3592.2	57.0
90°-180°	4875.0	77.3
0°-180°	6303.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	420	420	420	420	420	
5°	421	419	416	419	419	40
15°	402	403	403	408	408	113
25°	365	370	375	382	384	168
35°	315	325	337	350	354	197
45°	258	275	296	314	321	199
55°	198	220	251	273	281	177
65°	135	165	201	225	234	134
75°	75	109	148	173	182	79
85°	22	60	99	123	133	24
90°	7	55	104	133	143	8
95°	80	74	115	143	150	96
105°	356	389	123	156	168	380
115°	669	697	752	258	157	659
125°	944	960	1000	1024	1034	842
135°	1167	1186	1202	1225	1229	901
145°	1353	1353	1372	1383	1381	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°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	422.6	422.2	421.9	421.6	421.3	420.7	420.0	419.2	418.5	417.7	418.2
5°	421.3	420.9	420.5	420.1	419.7	419.1	418.3	417.5	416.7	415.9	416.7
7.5°	417.6	417.3	417.0	416.8	416.5	416.0	415.4	414.8	414.2	413.5	414.5
10°	414.7	414.4	414.1	413.8	413.6	413.3	412.9	412.5	412.1	411.6	412.7
12.5°	409.8	409.9	409.9	409.9	410.0	409.9	409.6	409.3	409.0	408.7	409.8
15°	401.9	402.1	402.4	402.7	402.9	403.1	403.1	403.1	403.1	403.1	404.3
17.5°	391.7	392.2	392.8	393.4	394.0	394.4	394.8	395.3	395.7	396.2	397.4
20°	384.8	385.5	386.2	386.9	387.5	388.2	388.7	389.2	389.8	390.3	391.8
22.5°	377.5	378.3	379.1	379.8	380.7	381.4	382.2	382.9	383.7	384.5	386.0
25°	365.3	366.3	367.2	368.2	369.1	370.2	371.5	372.7	373.9	375.0	376.7
27.5°	350.7	352.3	353.8	355.4	356.9	358.4	359.8	361.3	362.6	364.1	366.2
30°	341.0	342.8	344.5	346.3	348.1	349.8	351.6	353.3	355.1	356.8	359.0
32.5°	330.3	332.2	334.2	336.2	338.2	340.2	342.3	344.4	346.4	348.5	351.0
35°	314.8	317.1	319.4	321.7	324.0	326.4	329.0	331.6	334.1	336.7	339.7
37.5°	298.0	300.7	303.3	306.0	308.6	311.6	315.0	318.2	321.6	324.9	328.2
40°	286.8	289.8	292.8	295.7	298.7	302.0	305.7	309.3	313.0	316.7	320.2
42.5°	276.1	279.1	282.0	285.0	288.0	291.6	295.8	299.9	304.2	308.3	312.2
45°	258.2	261.8	265.5	269.1	272.8	277.0	281.7	286.4	291.2	296.0	300.1
47.5°	240.5	244.5	248.5	252.4	256.4	261.2	266.8	272.3	277.9	283.4	287.8
50°	228.4	232.5	236.8	240.9	245.1	250.2	256.3	262.4	268.6	274.6	279.2
52.5°	216.6	221.0	225.4	229.9	234.3	239.7	246.1	252.5	258.9	265.4	270.0
55°	197.9	202.8	207.7	212.5	217.4	223.3	230.4	237.4	244.4	251.4	256.3
57.5°	179.4	184.9	190.4	195.8	201.4	207.7	214.8	222.0	229.2	236.4	241.7
60°	166.2	172.0	177.9	183.7	189.5	196.2	204.0	211.7	219.4	227.1	232.3
62.5°	154.5	160.5	166.6	172.7	178.7	185.6	193.2	201.0	208.7	216.4	221.8
65°	135.2	141.8	148.5	155.1	161.7	169.0	177.0	185.0	193.0	201.0	206.5
67.5°	117.4	124.3	131.3	138.2	145.1	152.6	160.9	169.0	177.2	185.3	190.9
70°	104.8	111.8	118.8	125.8	132.9	140.6	149.0	157.4	165.8	174.1	179.9
72.5°	93.0	100.3	107.5	114.8	122.1	130.0	138.4	146.9	155.4	163.9	169.7
75°	74.9	82.5	90.0	97.6	105.2	113.3	122.0	130.6	139.3	148.0	153.8
77.5°	57.4	65.3	73.2	81.1	89.1	97.4	106.2	115.0	123.8	132.6	138.4
80°	45.7	53.9	62.2	70.4	78.7	87.2	96.0	104.8	113.6	122.4	128.1
82.5°	36.0	44.1	52.2	60.3	68.5	77.0	85.9	94.8	103.7	112.7	118.3
85°	21.9	30.3	38.7	47.1	55.4	64.0	72.6	81.3	90.0	98.7	104.4
87.5°	12.1	20.8	29.4	38.1	46.7	55.5	64.7	73.7	82.8	91.8	97.6
90°	7.3	17.9	28.6	39.3	50.0	60.7	71.4	82.1	92.9	103.5	110.2
92.5°	29.0	36.0	43.1	50.1	57.2	65.5	74.8	84.1	93.5	102.9	108.8
95°	80.2	78.1	76.0	73.8	71.7	75.6	85.4	95.4	105.3	115.3	121.6
97.5°	153.8	135.5	117.2	98.9	80.6	77.5	89.4	101.3	113.3	125.3	131.3
100°	209.5	179.2	148.9	118.6	88.3	79.2	91.2	103.1	115.0	127.0	134.0
102.5°	270.3	267.3	264.4	261.5	258.6	242.6	213.3	184.0	154.7	125.4	133.0
105°	355.6	367.2	378.9	390.5	402.2	376.3	313.0	249.7	186.4	123.1	130.7
107.5°	453.6	462.9	472.3	481.7	491.1	456.9	379.3	301.7	224.0	146.4	148.1
110°	516.1	524.2	532.4	540.5	548.6	518.7	450.9	383.0	315.2	247.4	225.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	575.5	582.5	589.6	596.7	603.7	601.2	589.1	577.1	564.9	552.9	463.2
115°	669.2	675.1	680.9	686.8	692.7	701.9	714.4	726.9	739.5	752.0	636.7
117.5°	752.3	758.1	764.0	769.9	775.8	783.7	793.8	803.9	813.9	823.9	799.2
120°	813.5	817.9	822.3	826.7	831.1	838.4	848.4	858.4	868.5	878.6	885.4
122.5°	865.4	869.8	874.0	878.3	882.6	889.8	899.9	910.1	920.2	930.3	935.9
125°	944.0	947.3	950.6	954.0	957.3	963.6	972.8	982.1	991.3	1000.5	1006.0
127.5°	1015.6	1019.2	1022.7	1026.3	1029.9	1035.3	1042.4	1049.5	1056.7	1063.9	1069.8
130°	1061.0	1065.0	1069.0	1073.0	1077.0	1081.8	1087.5	1093.2	1098.9	1104.6	1110.6
132.5°	1107.4	1110.8	1114.2	1117.5	1120.9	1125.1	1130.2	1135.1	1140.2	1145.2	1150.8
135°	1167.1	1171.3	1175.3	1179.5	1183.6	1187.5	1191.2	1194.8	1198.5	1202.2	1207.6
137.5°	1228.1	1230.9	1233.8	1236.6	1239.6	1242.6	1245.8	1249.0	1252.2	1255.5	1260.5
140°	1268.0	1269.9	1271.9	1273.7	1275.7	1278.2	1281.3	1284.4	1287.5	1290.6	1295.1
142.5°	1301.4	1303.1	1304.8	1306.5	1308.3	1310.8	1314.1	1317.4	1320.7	1324.0	1327.8
145°	1353.2	1352.9	1352.7	1352.4	1352.2	1354.2	1358.6	1363.0	1367.3	1371.7	1374.4
147.5°	1398.9	1397.9	1396.9	1396.0	1395.0	1396.6	1400.9	1405.3	1409.7	1414.0	1415.4
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°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	418.8	419.3	419.9	420.0	419.8	419.6	419.4	419.1
5°	417.5	418.3	419.1	419.5	419.3	419.2	419.1	418.9
7.5°	415.5	416.5	417.4	417.8	417.8	417.6	417.4	417.4
10°	413.8	414.8	416.0	416.5	416.3	416.1	416.0	415.9
12.5°	410.8	412.0	413.0	413.5	413.4	413.2	413.1	412.9
15°	405.5	406.8	408.0	408.5	408.4	408.2	408.1	408.0
17.5°	398.7	400.0	401.2	401.9	401.9	401.9	401.9	401.9
20°	393.3	394.8	396.2	397.0	397.0	397.0	397.0	397.0
22.5°	387.4	388.9	390.4	391.3	391.5	391.7	391.9	392.2
25°	378.3	379.9	381.6	382.6	383.0	383.4	383.8	384.3
27.5°	368.3	370.3	372.3	373.5	373.8	374.1	374.4	374.7
30°	361.2	363.3	365.5	366.7	367.1	367.5	367.9	368.4
32.5°	353.5	356.0	358.5	360.1	360.9	361.6	362.3	363.1
35°	342.7	345.7	348.6	350.6	351.6	352.5	353.4	354.4
37.5°	331.5	334.8	338.1	340.2	341.3	342.3	343.2	344.3
40°	323.7	327.2	330.7	333.0	334.3	335.5	336.7	337.9
42.5°	316.0	319.8	323.7	326.3	327.4	328.6	329.9	331.1
45°	304.4	308.5	312.7	315.4	316.8	318.2	319.5	320.9
47.5°	292.1	296.5	300.9	303.9	305.3	306.8	308.3	309.8
50°	283.8	288.4	293.0	296.0	297.6	299.1	300.5	302.0
52.5°	274.8	279.5	284.2	287.3	288.9	290.6	292.1	293.8
55°	261.2	266.1	270.9	274.3	276.1	277.8	279.6	281.3
57.5°	246.9	252.1	257.4	260.9	262.7	264.5	266.3	268.1
60°	237.4	242.6	247.7	251.2	253.1	255.0	256.9	258.8
62.5°	227.3	232.8	238.2	241.9	243.7	245.5	247.3	249.1
65°	212.1	217.6	223.1	226.8	228.5	230.3	232.0	233.8
67.5°	196.6	202.1	207.7	211.5	213.3	215.2	217.0	218.8
70°	185.8	191.6	197.4	201.1	202.8	204.4	206.0	207.7
72.5°	175.4	181.1	186.8	190.6	192.5	194.4	196.4	198.4
75°	159.6	165.4	171.2	175.0	176.8	178.6	180.3	182.1
77.5°	144.2	150.0	155.8	159.6	161.5	163.4	165.3	167.2
80°	133.8	139.4	145.1	148.9	150.8	152.7	154.6	156.5
82.5°	124.0	129.7	135.3	139.1	140.9	142.7	144.5	146.3
85°	110.0	115.7	121.4	125.1	127.0	129.0	130.9	132.7
87.5°	103.4	109.2	115.0	118.8	120.6	122.5	124.3	126.1
90°	117.0	123.7	130.4	134.8	136.9	139.1	141.2	143.3
92.5°	114.9	120.8	126.8	130.8	132.6	134.6	136.6	138.4
95°	128.1	134.5	141.0	144.9	146.3	147.6	149.0	150.3
97.5°	137.4	143.4	149.4	153.4	155.3	157.3	159.1	161.0
100°	141.1	148.2	155.2	159.8	161.8	163.8	165.8	167.8
102.5°	140.6	148.1	155.7	160.6	162.8	165.0	167.3	169.5
105°	138.3	145.8	153.4	158.4	160.9	163.5	166.0	168.5
107.5°	149.7	151.4	153.0	155.2	157.7	160.2	162.7	165.2
110°	204.5	183.0	161.6	152.1	154.7	157.2	159.7	162.2



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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	373.5	283.9	194.2	150.5	152.8	155.2	157.4	159.7
115°	521.5	406.3	291.0	224.9	207.7	190.7	173.7	156.6
117.5°	774.3	749.4	724.6	682.3	622.7	563.1	503.6	444.0
120°	892.3	899.2	906.1	892.9	859.6	826.3	793.0	759.7
122.5°	941.4	947.0	952.5	952.5	947.1	941.6	936.1	930.7
125°	1011.5	1016.9	1022.4	1026.1	1028.1	1030.0	1032.1	1034.0
127.5°	1075.8	1081.8	1087.8	1091.4	1092.8	1094.1	1095.5	1096.8
130°	1116.7	1122.7	1128.9	1132.3	1133.1	1134.0	1134.8	1135.6
132.5°	1156.3	1161.9	1167.4	1170.6	1171.5	1172.3	1173.1	1173.9
135°	1213.0	1218.5	1223.8	1226.9	1227.4	1228.0	1228.6	1229.1
137.5°	1265.5	1270.6	1275.5	1278.1	1278.1	1278.1	1278.2	1278.2
140°	1299.6	1304.1	1308.6	1310.6	1310.1	1309.6	1309.1	1308.6
142.5°	1331.7	1335.5	1339.4	1341.0	1340.4	1339.9	1339.2	1338.6
145°	1377.0	1379.6	1382.2	1383.2	1382.6	1382.0	1381.4	1380.8
147.5°	1416.8	1418.3	1419.8	1420.1	1419.4	1418.5	1417.8	1417.1
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)