

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: P331516

Luminaire Tested: **S122DIW-S485D1240U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331516
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-S485D1240U835-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6268.5 lumens
Efficiency: N/A
Efficacy: 116.5 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

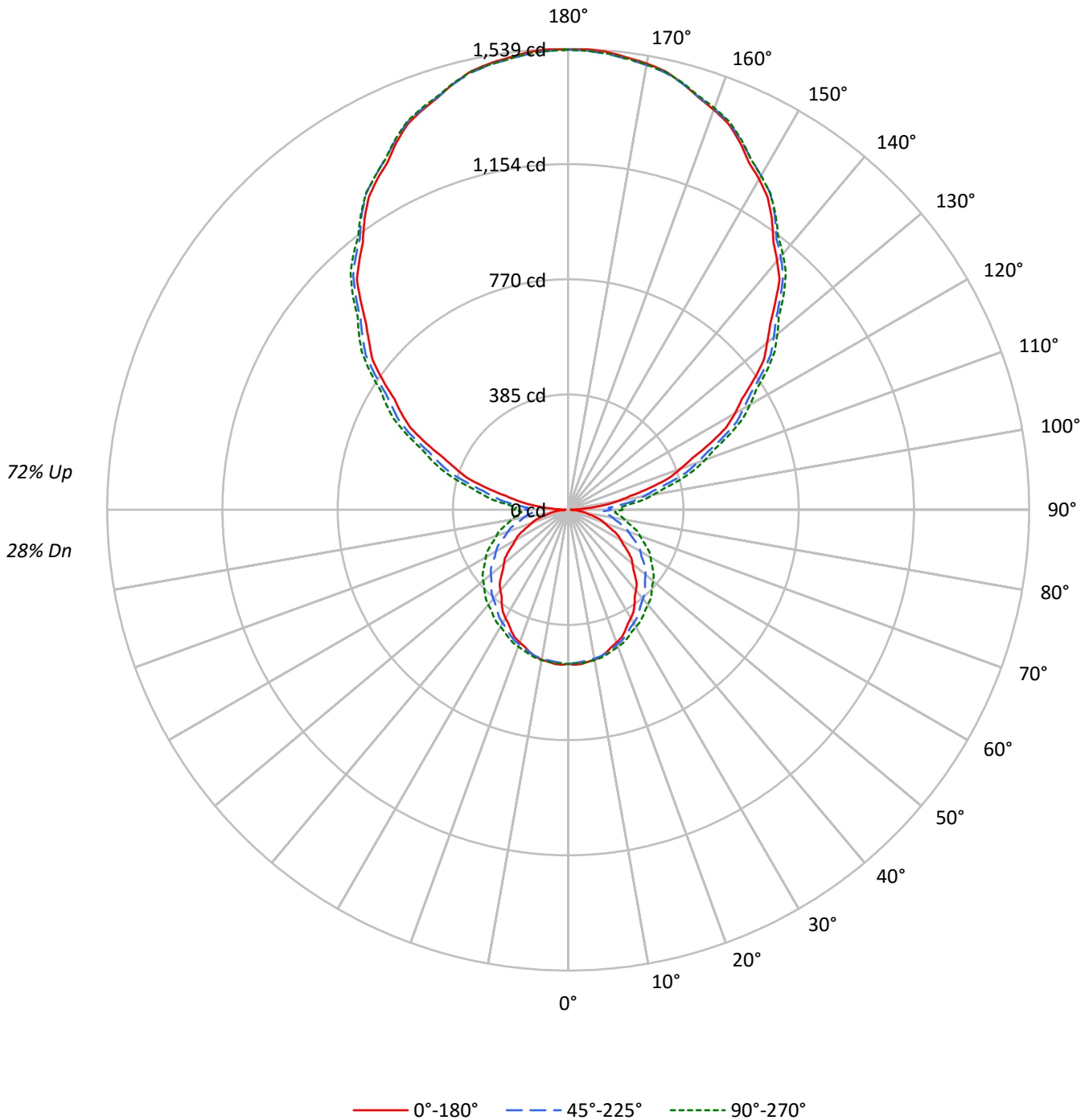
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331516

CATALOG NUMBER: S122DIW-S485D1240U835-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P331516

CATALOG NUMBER: S122DIW-S485D1240U835-4F0-1E-UDD-D1

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	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	92	87	83	80	82	78	75	72	61	59	56	45	43	42	30	29	29	22																				
2	83	76	70	64	74	68	63	58	53	49	46	39	37	34	26	25	23	18																				
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	19	14																				
4	69	58	51	44	61	52	46	40	41	36	32	30	27	24	20	18	17	12																				
5	63	52	44	38	56	46	39	34	36	31	27	27	23	21	18	16	14	10																				
6	58	46	38	32	52	41	35	29	33	27	24	24	21	18	16	14	12	9																				
7	54	41	34	28	48	37	30	26	29	24	21	22	18	16	15	13	11	8																				
8	50	37	30	25	44	34	27	22	27	22	18	20	16	14	14	11	10	7																				
9	46	34	27	22	41	31	24	20	24	19	16	18	15	12	13	10	9	6																				
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8320	8320	8320
5°	8361	8009	7978
10°	8308	7773	7685
15°	8193	7522	7376
20°	8049	7253	7078
25°	7906	6994	6809
30°	7704	6728	6536
35°	7501	6472	6346
40°	7287	6254	6154
45°	7084	6058	5992
50°	6865	5879	5830
55°	6634	5689	5666
60°	6355	5493	5493
65°	6063	5262	5287
70°	5738	5012	5065
75°	5319	4768	4860
80°	4657	4519	4652
85°	4025	4303	4491



TEST NUMBER: P331516

CATALOG NUMBER: S122DIW-S485D1240U835-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	0.8
10°-20°	140.0	2.2
20°-30°	212.2	3.4
30°-40°	258.4	4.1
40°-50°	278.0	4.4
50°-60°	270.0	4.3
60°-70°	235.8	3.8
70°-80°	181.5	2.9
80°-90°	127.9	2.0
90°-100°	181.3	2.9
100°-110°	363.7	5.8
110°-120°	557.4	8.9
120°-130°	702.3	11.2
130°-140°	772.4	12.3
140°-150°	749.7	12.0
150°-160°	627.4	10.0
160°-170°	416.2	6.6
170°-180°	145.5	2.3
0°-30°	401.0	6.4
0°-40°	659.5	10.5
0°-60°	1207.5	19.3
0°-90°	1752.7	28.0
90°-120°	1102.3	17.6
90°-150°	3326.7	53.1
90°-180°	4516.0	72.0
0°-180°	6268.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	515	515	515	515	515	
5°	517	514	510	514	514	49
15°	493	494	494	501	500	139
25°	448	453	460	469	471	206
35°	386	399	413	429	435	241
45°	317	337	363	385	394	244
55°	243	270	308	334	345	217
65°	166	203	246	276	287	165
75°	92	134	182	212	223	97
85°	27	73	121	151	163	29
90°	9	69	144	170	182	9
95°	73	121	169	196	204	82
105°	282	309	350	377	386	299
115°	522	538	569	589	594	516
125°	756	768	788	804	810	676
135°	977	991	1001	1015	1018	755
145°	1185	1194	1202	1207	1206	740
155°	1355	1359	1363	1369	1365	623
165°	1474	1473	1473	1481	1476	416
175°	1534	1530	1527	1536	1529	146
180°	1536	1536	1536	1536	1536	



TEST NUMBER: P331516

CATALOG NUMBER: S122DIW-S485D1240U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	518.3	517.9	517.5	517.1	516.7	516.0	515.1	514.2	513.3	512.3	513.0
5°	516.8	516.3	515.8	515.3	514.8	514.1	513.1	512.1	511.1	510.1	511.1
7.5°	512.2	511.8	511.5	511.2	510.9	510.3	509.5	508.8	508.0	507.2	508.4
10°	508.6	508.3	507.9	507.6	507.3	506.9	506.4	505.9	505.4	504.9	506.2
12.5°	502.6	502.7	502.8	502.8	502.9	502.7	502.4	502.0	501.6	501.3	502.6
15°	492.9	493.2	493.6	493.9	494.2	494.4	494.4	494.4	494.4	494.4	495.9
17.5°	480.4	481.1	481.8	482.5	483.2	483.8	484.3	484.8	485.4	485.9	487.4
20°	472.0	472.8	473.7	474.5	475.3	476.1	476.7	477.4	478.1	478.7	480.5
22.5°	463.0	464.0	465.0	465.9	466.9	467.8	468.8	469.7	470.6	471.6	473.4
25°	448.1	449.3	450.4	451.6	452.7	454.1	455.6	457.1	458.6	460.0	462.0
27.5°	430.2	432.1	434.0	435.9	437.7	439.6	441.3	443.1	444.8	446.6	449.1
30°	418.2	420.4	422.5	424.7	426.9	429.0	431.2	433.3	435.5	437.6	440.3
32.5°	405.1	407.5	409.9	412.4	414.8	417.3	419.8	422.4	424.9	427.5	430.5
35°	386.1	388.9	391.8	394.6	397.4	400.4	403.5	406.7	409.8	413.0	416.6
37.5°	365.5	368.8	372.0	375.3	378.5	382.2	386.3	390.3	394.4	398.5	402.6
40°	351.8	355.4	359.1	362.7	366.4	370.4	374.9	379.4	383.9	388.4	392.7
42.5°	338.6	342.3	345.9	349.6	353.2	357.6	362.8	367.9	373.1	378.2	382.9
45°	316.7	321.1	325.6	330.1	334.6	339.7	345.5	351.3	357.2	363.0	368.1
47.5°	295.0	299.9	304.8	309.6	314.5	320.4	327.2	334.0	340.8	347.6	353.0
50°	280.1	285.2	290.4	295.5	300.6	306.9	314.4	321.9	329.4	336.8	342.5
52.5°	265.7	271.1	276.5	282.0	287.4	294.0	301.9	309.7	317.6	325.5	331.2
55°	242.7	248.7	254.7	260.6	266.6	273.9	282.6	291.2	299.8	308.4	314.4
57.5°	220.0	226.8	233.5	240.2	247.0	254.7	263.5	272.3	281.1	289.9	296.4
60°	203.9	211.0	218.2	225.3	232.4	240.7	250.2	259.6	269.1	278.6	284.9
62.5°	189.5	196.9	204.4	211.8	219.2	227.6	237.0	246.5	256.0	265.4	272.1
65°	165.8	173.9	182.1	190.2	198.3	207.3	217.1	226.9	236.7	246.5	253.3
67.5°	144.0	152.5	161.0	169.5	178.0	187.2	197.3	207.3	217.3	227.3	234.2
70°	128.5	137.1	145.7	154.3	163.0	172.4	182.7	193.0	203.3	213.6	220.7
72.5°	114.1	123.0	131.9	140.8	149.7	159.4	169.8	180.2	190.6	201.0	208.1
75°	91.9	101.2	110.4	119.7	129.0	139.0	149.6	160.2	170.9	181.5	188.6
77.5°	70.4	80.1	89.8	99.5	109.3	119.5	130.3	141.1	151.9	162.7	169.8
80°	56.0	66.1	76.3	86.4	96.5	107.0	117.8	128.5	139.3	150.1	157.1
82.5°	44.1	54.1	64.0	74.0	84.0	94.5	105.4	116.3	127.2	138.2	145.1
85°	26.9	37.2	47.5	57.8	68.0	78.5	89.1	99.7	110.4	121.0	128.0
87.5°	14.9	25.5	36.1	46.6	57.2	68.5	80.4	92.2	104.1	116.0	122.7
90°	8.8	21.8	34.9	48.0	61.1	76.1	93.1	110.0	127.0	144.0	150.0
92.5°	30.0	41.4	52.9	64.4	75.9	87.6	99.3	111.0	122.7	134.4	141.1
95°	73.4	84.1	94.8	105.4	116.1	126.7	137.3	147.8	158.3	168.9	175.2
97.5°	128.4	137.9	147.4	156.8	166.3	176.4	187.0	197.7	208.3	219.0	225.1
100°	169.9	178.3	186.8	195.2	203.7	213.0	223.1	233.3	243.5	253.6	259.8
102.5°	212.9	220.3	227.8	235.2	242.7	251.5	261.6	271.7	281.8	292.0	298.2
105°	282.5	288.2	293.9	299.5	305.2	312.7	321.9	331.1	340.3	349.5	355.9
107.5°	353.4	358.5	363.7	368.8	373.9	380.6	388.8	397.1	405.4	413.6	419.5
110°	398.5	403.5	408.6	413.6	418.7	425.2	433.4	441.5	449.6	457.8	463.1



TEST NUMBER: P331516

CATALOG NUMBER: S122DIW-S485D1240U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	448.3	452.8	457.3	461.8	466.3	472.3	479.8	487.3	494.8	502.3	507.0
115°	521.6	525.2	528.8	532.3	535.9	541.1	548.0	554.9	561.8	568.7	573.3
117.5°	594.0	597.5	601.0	604.5	608.0	612.4	617.7	623.0	628.3	633.6	637.8
120°	642.8	645.8	648.7	651.7	654.7	658.3	662.6	667.0	671.3	675.6	680.3
122.5°	687.4	690.4	693.5	696.5	699.5	703.3	708.0	712.6	717.2	721.8	725.7
125°	756.1	758.7	761.3	763.9	766.5	770.0	774.5	778.9	783.4	787.8	791.4
127.5°	823.8	826.9	830.1	833.2	836.3	839.5	842.7	846.0	849.2	852.5	855.5
130°	866.4	869.9	873.5	877.1	880.7	883.9	886.8	889.7	892.6	895.6	899.0
132.5°	914.1	917.0	919.8	922.7	925.6	928.5	931.3	934.1	936.9	939.7	942.3
135°	977.1	980.3	983.5	986.6	989.8	992.5	994.7	997.0	999.2	1001.4	1004.6
137.5°	1044.3	1046.8	1049.4	1052.0	1054.5	1056.5	1058.0	1059.5	1061.0	1062.5	1065.3
140°	1084.7	1087.2	1089.6	1092.0	1094.5	1096.6	1098.3	1100.1	1101.9	1103.6	1106.3
142.5°	1126.2	1128.7	1131.1	1133.5	1135.9	1137.7	1138.7	1139.8	1140.8	1141.9	1144.2
145°	1185.1	1187.2	1189.2	1191.2	1193.2	1195.1	1196.8	1198.5	1200.3	1202.0	1203.3
147.5°	1238.3	1240.7	1243.1	1245.6	1248.0	1249.8	1250.9	1252.1	1253.2	1254.4	1255.1
150°	1274.6	1276.3	1278.1	1279.8	1281.5	1283.0	1284.1	1285.3	1286.4	1287.6	1288.4
152.5°	1306.8	1308.5	1310.2	1311.9	1313.7	1315.2	1316.6	1318.0	1319.4	1320.8	1321.9
155°	1355.0	1355.9	1356.7	1357.6	1358.5	1359.3	1360.2	1361.0	1361.9	1362.8	1364.2
157.5°	1396.2	1396.8	1397.4	1398.0	1398.5	1399.1	1399.6	1400.1	1400.6	1401.2	1403.1
160°	1421.1	1421.7	1422.3	1422.9	1423.4	1423.9	1424.1	1424.4	1424.7	1425.0	1426.7
162.5°	1443.9	1444.1	1444.2	1444.3	1444.4	1444.6	1444.9	1445.2	1445.5	1445.8	1447.7
165°	1474.3	1474.0	1473.7	1473.4	1473.1	1473.0	1473.0	1473.0	1473.0	1473.0	1475.0
167.5°	1499.7	1498.8	1498.0	1497.1	1496.2	1495.8	1495.7	1495.7	1495.6	1495.5	1497.6
170°	1513.2	1512.3	1511.5	1510.6	1509.7	1509.2	1508.9	1508.6	1508.3	1508.0	1510.0
172.5°	1522.5	1521.7	1520.8	1519.9	1519.1	1518.5	1518.2	1517.9	1517.6	1517.3	1519.4
175°	1533.9	1533.1	1532.2	1531.3	1530.5	1529.8	1529.2	1528.6	1528.0	1527.4	1529.5
177.5°	1538.6	1537.9	1537.2	1536.5	1535.8	1535.3	1534.8	1534.3	1533.9	1533.4	1534.8
180°	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5



TEST NUMBER: P331516

CATALOG NUMBER: S122DIW-S485D1240U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	513.7	514.3	515.0	515.2	514.9	514.7	514.4	514.1
5°	512.1	513.1	514.1	514.5	514.3	514.2	514.0	513.8
7.5°	509.6	510.8	512.0	512.5	512.4	512.2	512.0	511.9
10°	507.5	508.8	510.2	510.8	510.6	510.4	510.3	510.1
12.5°	503.9	505.3	506.6	507.2	507.0	506.8	506.7	506.5
15°	497.4	498.9	500.4	501.0	500.9	500.7	500.5	500.4
17.5°	489.0	490.6	492.1	492.9	492.9	492.9	492.9	492.9
20°	482.4	484.2	486.0	486.9	486.9	486.9	486.9	486.9
22.5°	475.2	477.0	478.9	479.9	480.2	480.4	480.7	481.0
25°	464.0	466.0	468.0	469.3	469.8	470.3	470.8	471.3
27.5°	451.7	454.2	456.7	458.1	458.5	458.9	459.2	459.6
30°	443.0	445.6	448.3	449.8	450.3	450.8	451.3	451.8
32.5°	433.6	436.6	439.7	441.7	442.6	443.5	444.4	445.3
35°	420.3	424.0	427.6	430.0	431.2	432.3	433.5	434.7
37.5°	406.6	410.7	414.7	417.3	418.6	419.8	421.0	422.3
40°	397.0	401.3	405.6	408.5	410.0	411.5	413.0	414.5
42.5°	387.6	392.3	397.0	400.2	401.6	403.1	404.6	406.1
45°	373.3	378.4	383.5	386.9	388.6	390.3	391.9	393.6
47.5°	358.3	363.7	369.1	372.7	374.5	376.3	378.2	380.0
50°	348.1	353.7	359.4	363.1	365.0	366.8	368.6	370.4
52.5°	337.0	342.8	348.6	352.4	354.4	356.4	358.3	360.3
55°	320.4	326.4	332.3	336.4	338.6	340.7	342.9	345.0
57.5°	302.8	309.2	315.7	320.0	322.2	324.4	326.6	328.8
60°	291.2	297.5	303.8	308.1	310.4	312.8	315.1	317.4
62.5°	278.8	285.5	292.2	296.7	298.9	301.1	303.3	305.5
65°	260.1	266.9	273.7	278.2	280.3	282.5	284.6	286.8
67.5°	241.1	247.9	254.8	259.4	261.6	263.9	266.2	268.4
70°	227.9	235.0	242.1	246.7	248.7	250.7	252.7	254.7
72.5°	215.1	222.1	229.1	233.8	236.1	238.5	240.9	243.3
75°	195.8	202.9	210.0	214.7	216.8	219.0	221.1	223.3
77.5°	176.9	184.0	191.1	195.8	198.1	200.4	202.8	205.1
80°	164.1	171.0	178.0	182.6	185.0	187.3	189.6	191.9
82.5°	152.1	159.1	166.0	170.6	172.8	175.0	177.2	179.4
85°	134.9	141.9	148.9	153.5	155.8	158.2	160.5	162.8
87.5°	129.3	136.0	142.6	147.1	149.2	151.4	153.6	155.8
90°	156.1	162.2	168.2	172.4	174.7	176.9	179.2	181.5
92.5°	147.7	154.3	160.9	165.3	167.3	169.4	171.4	173.5
95°	181.5	187.8	194.1	198.0	199.4	200.8	202.2	203.6
97.5°	231.3	237.4	243.5	247.6	249.5	251.4	253.3	255.2
100°	265.9	272.0	278.2	282.0	283.6	285.1	286.6	288.2
102.5°	304.4	310.7	316.9	320.8	322.3	323.9	325.4	327.0
105°	362.3	368.6	375.0	379.1	381.0	382.8	384.6	386.4
107.5°	425.3	431.1	436.9	440.0	440.5	441.0	441.5	442.0
110°	468.4	473.7	479.0	482.2	483.1	484.1	485.0	486.0



TEST NUMBER: P331516

CATALOG NUMBER: S122DIW-S485D1240U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	511.6	516.2	520.8	523.7	524.9	526.1	527.3	528.5
115°	578.0	582.7	587.4	590.2	591.2	592.2	593.1	594.1
117.5°	642.0	646.2	650.5	653.0	653.8	654.7	655.5	656.3
120°	684.9	689.6	694.2	697.0	698.0	699.0	699.9	700.9
122.5°	729.5	733.3	737.1	739.5	740.4	741.4	742.3	743.2
125°	795.1	798.7	802.3	804.7	805.9	807.1	808.3	809.5
127.5°	858.6	861.7	864.8	866.6	867.1	867.7	868.2	868.7
130°	902.4	905.8	909.2	911.0	911.1	911.3	911.5	911.7
132.5°	944.9	947.4	950.0	951.5	951.9	952.3	952.7	953.1
135°	1007.8	1011.0	1014.2	1016.1	1016.5	1017.0	1017.5	1017.9
137.5°	1068.1	1070.9	1073.8	1075.2	1075.1	1075.1	1075.1	1075.1
140°	1109.0	1111.6	1114.3	1115.5	1115.4	1115.2	1115.0	1114.9
142.5°	1146.6	1148.9	1151.3	1152.3	1152.0	1151.7	1151.4	1151.2
145°	1204.6	1205.8	1207.1	1207.6	1207.3	1207.0	1206.6	1206.3
147.5°	1255.9	1256.7	1257.4	1257.5	1256.8	1256.1	1255.4	1254.7
150°	1289.3	1290.2	1291.0	1291.0	1290.2	1289.3	1288.4	1287.6
152.5°	1323.0	1324.0	1325.1	1325.1	1324.0	1323.0	1321.9	1320.8
155°	1365.7	1367.1	1368.5	1368.8	1368.0	1367.1	1366.2	1365.4
157.5°	1405.1	1407.0	1409.0	1409.3	1407.9	1406.5	1405.1	1403.7
160°	1428.5	1430.2	1431.9	1432.2	1431.1	1429.9	1428.8	1427.6
162.5°	1449.7	1451.6	1453.6	1453.9	1452.5	1451.1	1449.7	1448.4
165°	1477.0	1479.0	1481.1	1481.3	1479.9	1478.5	1477.0	1475.6
167.5°	1499.6	1501.6	1503.6	1503.9	1502.4	1500.9	1499.4	1497.9
170°	1512.0	1514.0	1516.1	1516.2	1514.5	1512.8	1511.0	1509.3
172.5°	1521.4	1523.4	1525.4	1525.5	1523.8	1522.1	1520.4	1518.6
175°	1531.5	1533.5	1535.5	1535.7	1533.9	1532.2	1530.5	1528.7
177.5°	1536.2	1537.6	1538.9	1538.9	1537.6	1536.2	1534.8	1533.4
180°	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5

(END OF REPORT)