

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: P331515-940

Luminaire Tested: **S122DIW-S485D1240U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331515-940
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-S485D1240U940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6174.5 lumens
Efficiency: N/A
Efficacy: 114.8 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

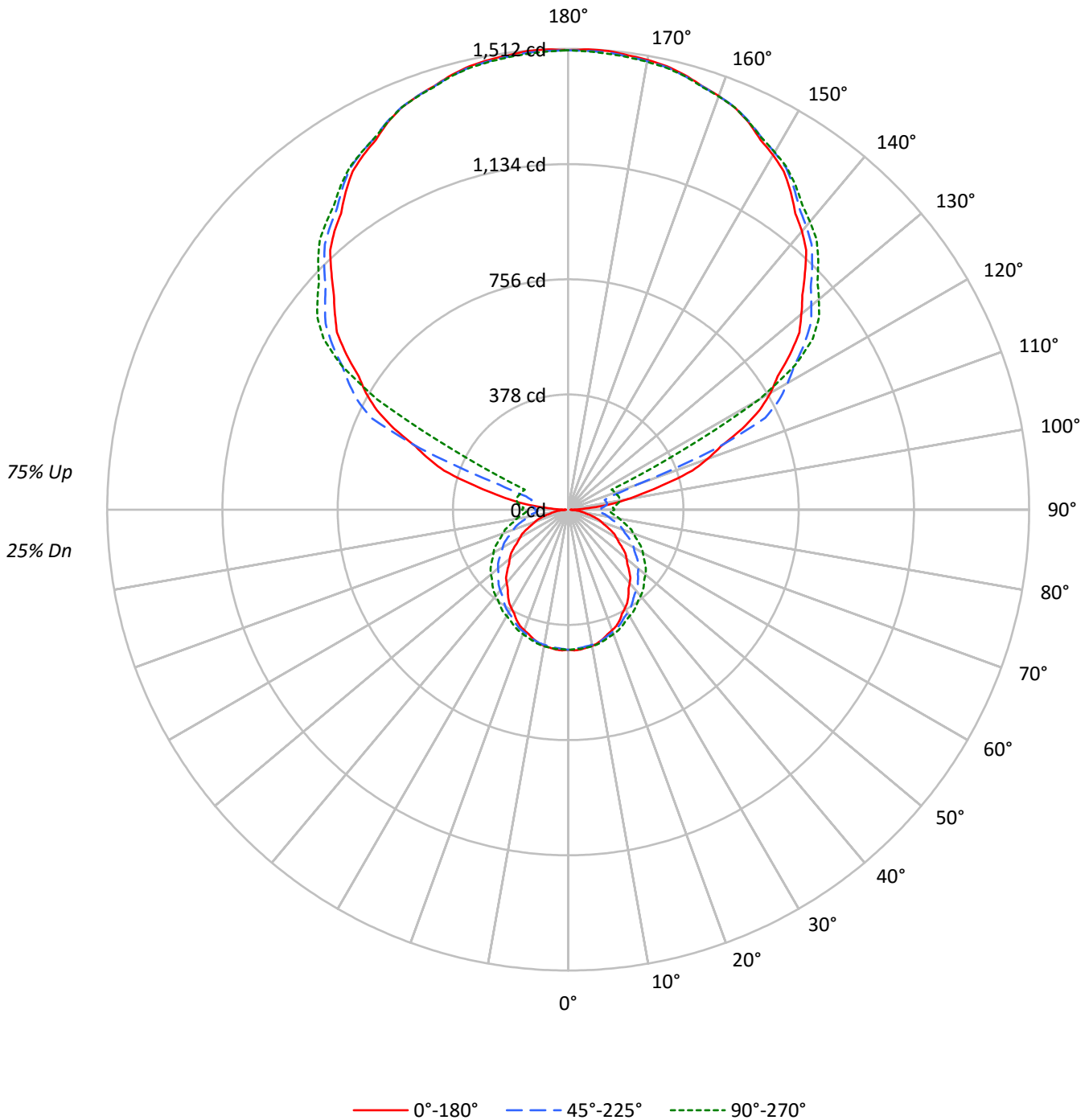
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331515-940

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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	50	30	10	0	
RCR																						
0	101	101	101	101	90	90	90	90	70	70	70	51	51	51	33	33	33	25				
1	91	87	83	79	81	77	74	71	60	57	55	43	42	41	28	27	27	20				
2	83	75	69	64	73	67	62	58	52	48	45	38	35	33	24	23	22	16				
3	75	66	59	53	67	59	53	48	45	41	38	33	30	28	21	20	18	13				
4	69	58	50	44	61	52	45	40	40	35	32	29	26	23	19	17	15	11				
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9				
6	58	46	38	32	51	41	34	29	32	27	23	23	20	17	15	13	12	8				
7	53	41	33	28	47	37	30	25	29	24	20	21	18	15	14	12	10	7				
8	49	37	30	25	44	33	27	22	26	21	18	19	16	13	13	11	9	6				
9	46	34	27	22	41	30	24	20	24	19	16	18	14	12	12	10	8	6				
10	43	31	24	19	38	28	22	17	22	17	14	16	13	11	11	9	7	5				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7419	7419	7419
5°	7455	7143	7115
10°	7408	6931	6854
15°	7306	6708	6577
20°	7177	6468	6312
25°	7050	6237	6072
30°	6870	5999	5829
35°	6689	5771	5659
40°	6498	5576	5488
45°	6317	5402	5343
50°	6123	5242	5199
55°	5916	5073	5052
60°	5666	4897	4897
65°	5405	4692	4714
70°	5117	4470	4516
75°	4741	4251	4334
80°	4149	4028	4148
85°	3591	3837	4006



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	0.7
10°-20°	124.9	2.0
20°-30°	189.2	3.1
30°-40°	230.5	3.7
40°-50°	247.9	4.0
50°-60°	240.8	3.9
60°-70°	210.2	3.4
70°-80°	161.8	2.6
80°-90°	112.3	1.8
90°-100°	125.1	2.0
100°-110°	239.0	3.9
110°-120°	529.0	8.6
120°-130°	833.8	13.5
130°-140°	873.8	14.2
140°-150°	805.8	13.0
150°-160°	646.7	10.5
160°-170°	416.7	6.7
170°-180°	143.4	2.3
0°-30°	357.6	5.8
0°-40°	588.1	9.5
0°-60°	1076.8	17.4
0°-90°	1561.2	25.3
90°-120°	893.2	14.5
90°-150°	3406.5	55.2
90°-180°	4613.0	74.7
0°-180°	6174.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	461	459	455	459	458	44
15°	440	441	441	446	446	124
25°	400	404	410	418	420	184
35°	344	356	368	382	388	215
45°	282	301	324	344	351	218
55°	216	241	275	298	308	193
65°	148	181	220	246	256	147
75°	82	119	162	189	199	87
85°	24	65	108	135	145	26
90°	8	58	110	141	152	8
95°	76	74	119	149	157	91
105°	335	370	124	158	171	358
115°	630	657	713	251	157	620
125°	888	904	944	969	979	792
135°	1098	1115	1132	1156	1160	848
145°	1273	1273	1290	1301	1300	796
155°	1402	1393	1405	1411	1403	646
165°	1477	1471	1474	1480	1474	417
175°	1511	1504	1505	1512	1502	144
180°	1507	1507	1507	1507	1507	



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CATALOG NUMBER: S122DIW-S485D1240U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	462.2	461.8	461.5	461.1	460.7	460.1	459.3	458.5	457.7	456.8	457.4
5°	460.8	460.4	459.9	459.5	459.1	458.4	457.5	456.6	455.8	454.9	455.8
7.5°	456.7	456.4	456.1	455.8	455.6	455.0	454.3	453.7	453.0	452.3	453.3
10°	453.5	453.3	452.9	452.6	452.4	452.0	451.6	451.1	450.7	450.2	451.4
12.5°	448.2	448.3	448.4	448.4	448.4	448.3	448.0	447.6	447.3	447.0	448.2
15°	439.5	439.8	440.1	440.4	440.7	440.9	440.9	440.9	440.9	440.9	442.2
17.5°	428.4	429.0	429.6	430.3	430.9	431.4	431.9	432.3	432.8	433.3	434.6
20°	420.9	421.6	422.4	423.1	423.8	424.5	425.1	425.7	426.3	426.9	428.5
22.5°	412.9	413.8	414.6	415.4	416.3	417.1	418.0	418.8	419.6	420.5	422.1
25°	399.6	400.6	401.6	402.7	403.7	404.9	406.3	407.6	408.9	410.2	412.0
27.5°	383.6	385.3	387.0	388.7	390.3	392.0	393.5	395.1	396.6	398.2	400.5
30°	372.9	374.9	376.7	378.7	380.7	382.5	384.5	386.4	388.3	390.2	392.6
32.5°	361.2	363.4	365.5	367.7	369.9	372.1	374.3	376.7	378.9	381.2	383.9
35°	344.3	346.8	349.4	351.9	354.4	357.0	359.8	362.7	365.4	368.3	371.5
37.5°	325.9	328.9	331.7	334.7	337.5	340.8	344.5	348.0	351.7	355.3	359.0
40°	313.7	316.9	320.2	323.4	326.7	330.3	334.3	338.3	342.3	346.3	350.2
42.5°	301.9	305.2	308.4	311.7	315.0	318.9	323.5	328.1	332.7	337.2	341.4
45°	282.4	286.3	290.3	294.4	298.4	302.9	308.1	313.3	318.5	323.7	328.2
47.5°	263.1	267.4	271.8	276.1	280.4	285.7	291.8	297.8	303.9	310.0	314.8
50°	249.8	254.3	259.0	263.5	268.0	273.7	280.4	287.0	293.7	300.3	305.4
52.5°	236.9	241.7	246.6	251.5	256.3	262.2	269.2	276.2	283.2	290.3	295.3
55°	216.4	221.8	227.1	232.4	237.7	244.2	252.0	259.7	267.3	275.0	280.4
57.5°	196.2	202.2	208.2	214.2	220.3	227.1	235.0	242.8	250.7	258.5	264.3
60°	181.8	188.2	194.6	200.9	207.2	214.6	223.1	231.5	240.0	248.4	254.0
62.5°	169.0	175.6	182.3	188.9	195.5	203.0	211.3	219.8	228.3	236.7	242.6
65°	147.8	155.1	162.4	169.6	176.8	184.9	193.6	202.3	211.1	219.8	225.9
67.5°	128.4	136.0	143.6	151.1	158.7	166.9	175.9	184.9	193.8	202.7	208.8
70°	114.6	122.3	129.9	137.6	145.3	153.7	162.9	172.1	181.3	190.5	196.8
72.5°	101.7	109.7	117.6	125.6	133.5	142.1	151.4	160.7	170.0	179.2	185.6
75°	81.9	90.2	98.4	106.7	115.0	123.9	133.4	142.9	152.4	161.8	168.2
77.5°	62.8	71.4	80.1	88.7	97.5	106.6	116.2	125.8	135.5	145.1	151.4
80°	49.9	58.9	68.0	77.0	86.1	95.4	105.0	114.6	124.2	133.8	140.1
82.5°	39.3	48.2	57.1	66.0	74.9	84.3	94.0	103.7	113.4	123.2	129.4
85°	24.0	33.2	42.4	51.5	60.6	70.0	79.5	88.9	98.4	107.9	114.1
87.5°	13.3	22.6	32.0	41.4	50.6	60.3	70.2	80.0	89.9	99.7	106.0
90°	7.8	19.0	30.2	41.5	52.8	64.1	75.5	86.9	98.4	109.7	116.8
92.5°	28.2	35.9	43.7	51.5	59.1	68.0	78.2	88.3	98.4	108.4	114.9
95°	76.2	75.2	74.1	73.1	72.1	76.9	87.4	98.0	108.5	119.1	126.0
97.5°	145.3	129.0	112.6	96.3	80.0	78.0	90.4	102.9	115.4	127.8	134.2
100°	197.7	170.0	142.2	114.5	86.8	79.1	91.6	104.0	116.4	128.8	136.2
102.5°	254.8	252.8	250.7	248.7	246.6	232.5	206.1	179.6	153.2	126.8	134.6
105°	334.9	346.5	358.0	369.6	381.2	357.8	299.3	240.8	182.3	123.8	131.6
107.5°	427.0	436.4	445.7	455.0	464.3	432.9	361.0	288.9	217.0	145.0	147.2
110°	485.9	493.9	501.9	510.1	518.1	490.7	427.9	365.1	302.3	239.5	220.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	541.7	548.8	555.7	562.8	569.7	568.0	557.6	547.2	536.8	526.4	442.6
115°	629.9	635.6	641.4	647.1	652.8	662.1	674.8	687.5	700.3	713.0	605.2
117.5°	707.9	713.6	719.3	725.0	730.7	738.6	748.9	759.3	769.6	780.0	757.2
120°	765.5	769.8	774.0	778.2	782.5	789.7	800.0	810.3	820.6	830.9	837.9
122.5°	814.4	818.5	822.5	826.6	830.7	837.9	848.2	858.5	868.8	879.1	884.9
125°	888.1	891.3	894.5	897.6	900.7	907.0	916.3	925.7	935.0	944.3	950.0
127.5°	955.6	958.9	962.2	965.5	968.9	974.2	981.5	988.7	996.0	1003.3	1009.4
130°	998.4	1002.0	1005.8	1009.5	1013.3	1018.0	1023.8	1029.6	1035.3	1041.1	1047.3
132.5°	1042.0	1045.1	1048.2	1051.4	1054.5	1058.6	1063.7	1068.8	1073.8	1078.9	1084.6
135°	1098.0	1101.9	1105.7	1109.6	1113.5	1117.3	1121.0	1124.6	1128.3	1131.9	1137.5
137.5°	1155.4	1158.1	1160.7	1163.4	1166.1	1169.0	1172.2	1175.3	1178.4	1181.5	1186.6
140°	1192.9	1194.7	1196.5	1198.3	1200.1	1202.5	1205.4	1208.4	1211.3	1214.3	1218.9
142.5°	1224.3	1225.9	1227.5	1229.1	1230.7	1233.1	1236.2	1239.3	1242.4	1245.5	1249.4
145°	1272.9	1272.7	1272.5	1272.2	1272.0	1273.9	1278.1	1282.2	1286.3	1290.4	1293.0
147.5°	1315.9	1315.0	1314.1	1313.1	1312.2	1313.8	1317.9	1322.0	1326.1	1330.1	1331.5
150°	1343.9	1342.2	1340.5	1338.7	1337.0	1338.2	1342.0	1345.9	1349.8	1353.7	1355.1
152.5°	1367.4	1365.6	1363.6	1361.7	1359.9	1360.8	1364.4	1368.2	1371.8	1375.5	1377.0
155°	1401.7	1399.5	1397.3	1395.1	1392.9	1393.3	1396.2	1399.1	1402.0	1405.0	1406.4
157.5°	1428.5	1426.6	1424.8	1423.0	1421.1	1421.2	1423.3	1425.3	1427.4	1429.4	1431.0
160°	1444.2	1442.8	1441.3	1439.8	1438.4	1438.4	1439.8	1441.3	1442.8	1444.2	1445.6
162.5°	1458.2	1456.7	1455.3	1453.8	1452.3	1452.2	1453.5	1454.7	1456.1	1457.3	1458.9
165°	1476.9	1475.5	1474.0	1472.6	1471.1	1470.8	1471.5	1472.2	1472.9	1473.6	1475.3
167.5°	1490.9	1489.4	1488.0	1486.6	1485.1	1484.7	1485.4	1486.0	1486.7	1487.4	1489.1
170°	1498.8	1497.3	1495.8	1494.4	1492.9	1492.5	1492.9	1493.4	1493.9	1494.4	1496.1
172.5°	1504.0	1502.5	1501.1	1499.6	1498.2	1497.7	1498.2	1498.6	1499.1	1499.6	1501.3
175°	1510.7	1509.0	1507.3	1505.7	1504.0	1503.3	1503.9	1504.3	1504.9	1505.3	1507.0
177.5°	1511.8	1510.5	1509.1	1507.8	1506.4	1505.8	1506.0	1506.2	1506.4	1506.6	1508.0
180°	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	458.1	458.6	459.2	459.4	459.1	459.0	458.7	458.4
5°	456.6	457.5	458.4	458.8	458.6	458.5	458.3	458.2
7.5°	454.4	455.5	456.6	457.0	456.9	456.7	456.6	456.5
10°	452.5	453.7	455.0	455.5	455.3	455.1	455.0	454.9
12.5°	449.3	450.6	451.7	452.3	452.1	451.9	451.8	451.7
15°	443.5	444.9	446.2	446.7	446.7	446.5	446.3	446.2
17.5°	436.0	437.5	438.8	439.5	439.5	439.5	439.5	439.5
20°	430.2	431.8	433.4	434.2	434.2	434.2	434.2	434.2
22.5°	423.7	425.3	427.0	427.9	428.2	428.4	428.6	428.9
25°	413.8	415.5	417.3	418.5	418.9	419.4	419.8	420.3
27.5°	402.8	405.0	407.2	408.5	408.8	409.2	409.5	409.8
30°	395.0	397.3	399.8	401.1	401.5	402.0	402.4	402.9
32.5°	386.6	389.3	392.1	393.9	394.7	395.5	396.3	397.1
35°	374.8	378.1	381.3	383.4	384.5	385.5	386.6	387.6
37.5°	362.6	366.2	369.8	372.1	373.3	374.3	375.4	376.6
40°	354.0	357.8	361.7	364.3	365.6	366.9	368.3	369.6
42.5°	345.6	349.8	354.0	356.9	358.1	359.4	360.8	362.1
45°	332.9	337.4	342.0	345.0	346.5	348.0	349.5	351.0
47.5°	319.5	324.3	329.1	332.3	333.9	335.6	337.2	338.9
50°	310.4	315.4	320.5	323.8	325.5	327.1	328.7	330.3
52.5°	300.5	305.7	310.9	314.2	316.0	317.8	319.5	321.3
55°	285.7	291.1	296.3	300.0	301.9	303.8	305.8	307.6
57.5°	270.0	275.7	281.5	285.3	287.3	289.3	291.2	293.2
60°	259.7	265.3	270.9	274.7	276.8	278.9	281.0	283.0
62.5°	248.6	254.6	260.6	264.6	266.5	268.5	270.5	272.4
65°	231.9	238.0	244.1	248.1	249.9	251.9	253.8	255.7
67.5°	215.0	221.1	227.2	231.3	233.3	235.3	237.4	239.3
70°	203.2	209.6	215.9	220.0	221.8	223.6	225.3	227.1
72.5°	191.8	198.0	204.3	208.5	210.5	212.7	214.8	217.0
75°	174.6	180.9	187.3	191.5	193.3	195.3	197.2	199.1
77.5°	157.7	164.1	170.4	174.6	176.6	178.7	180.8	182.9
80°	146.3	152.5	158.7	162.8	165.0	167.0	169.1	171.1
82.5°	135.6	141.9	148.0	152.1	154.1	156.0	158.0	160.0
85°	120.3	126.5	132.8	136.9	138.9	141.1	143.1	145.2
87.5°	112.3	118.6	124.8	129.0	131.0	133.0	134.9	137.0
90°	123.9	131.1	138.2	142.9	145.2	147.5	149.7	151.9
92.5°	121.3	127.7	134.1	138.4	140.4	142.5	144.6	146.7
95°	132.8	139.6	146.5	150.6	152.2	153.7	155.2	156.8
97.5°	140.7	147.1	153.6	157.8	159.9	161.9	163.9	165.9
100°	143.6	151.1	158.5	163.2	165.3	167.5	169.5	171.7
102.5°	142.6	150.4	158.3	163.4	165.7	168.0	170.3	172.6
105°	139.5	147.3	155.2	160.4	163.0	165.6	168.2	170.8
107.5°	149.5	151.8	154.0	156.4	159.0	161.6	164.3	166.8
110°	200.5	181.0	161.5	153.0	155.6	158.2	160.9	163.5



TEST NUMBER: P331515-940

CATALOG NUMBER: S122DIW-S485D1240U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	359.0	275.3	191.6	151.0	153.4	155.8	158.2	160.6
115°	497.4	389.6	281.8	220.0	204.2	188.3	172.5	156.7
117.5°	734.4	711.7	688.8	649.6	593.7	537.9	482.1	426.2
120°	845.0	852.0	859.1	847.0	815.9	784.9	753.8	722.6
122.5°	890.6	896.4	902.2	902.6	897.7	892.7	887.8	882.8
125°	955.7	961.4	967.1	971.0	973.0	975.1	977.2	979.3
127.5°	1015.6	1021.7	1027.9	1031.6	1033.0	1034.6	1036.0	1037.4
130°	1053.6	1059.7	1066.0	1069.5	1070.5	1071.4	1072.4	1073.3
132.5°	1090.3	1096.0	1101.7	1105.1	1106.0	1107.0	1107.9	1108.8
135°	1143.0	1148.5	1154.1	1157.2	1157.9	1158.6	1159.3	1159.9
137.5°	1191.7	1196.9	1201.9	1204.5	1204.7	1204.9	1205.1	1205.3
140°	1223.4	1228.0	1232.5	1234.6	1234.3	1233.9	1233.6	1233.3
142.5°	1253.3	1257.1	1261.1	1262.8	1262.3	1261.9	1261.4	1261.0
145°	1295.6	1298.2	1300.7	1301.8	1301.4	1300.8	1300.4	1299.9
147.5°	1332.8	1334.3	1335.6	1336.0	1335.3	1334.6	1334.0	1333.4
150°	1356.6	1358.1	1359.5	1359.6	1358.4	1357.2	1355.9	1354.8
152.5°	1378.4	1379.8	1381.3	1381.3	1379.7	1378.0	1376.4	1374.8
155°	1407.8	1409.3	1410.8	1410.5	1408.5	1406.7	1404.7	1402.8
157.5°	1432.7	1434.3	1436.0	1435.8	1434.0	1432.1	1430.2	1428.3
160°	1447.2	1448.6	1450.0	1449.9	1448.2	1446.5	1444.8	1443.1
162.5°	1460.6	1462.2	1463.9	1463.7	1461.6	1459.5	1457.4	1455.4
165°	1477.0	1478.7	1480.4	1480.4	1478.7	1477.0	1475.3	1473.6
167.5°	1490.8	1492.5	1494.2	1494.0	1491.7	1489.6	1487.4	1485.2
170°	1497.8	1499.5	1501.2	1500.9	1498.8	1496.6	1494.4	1492.2
172.5°	1503.0	1504.7	1506.4	1506.2	1504.0	1501.8	1499.6	1497.4
175°	1508.7	1510.4	1512.1	1511.7	1509.3	1506.9	1504.4	1502.0
177.5°	1509.3	1510.6	1512.1	1511.8	1510.1	1508.3	1506.6	1504.9
180°	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4

(END OF REPORT)