

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: P331517-940

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331517-940
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-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6183.5 lumens
Efficiency: N/A
Efficacy: 114.9 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

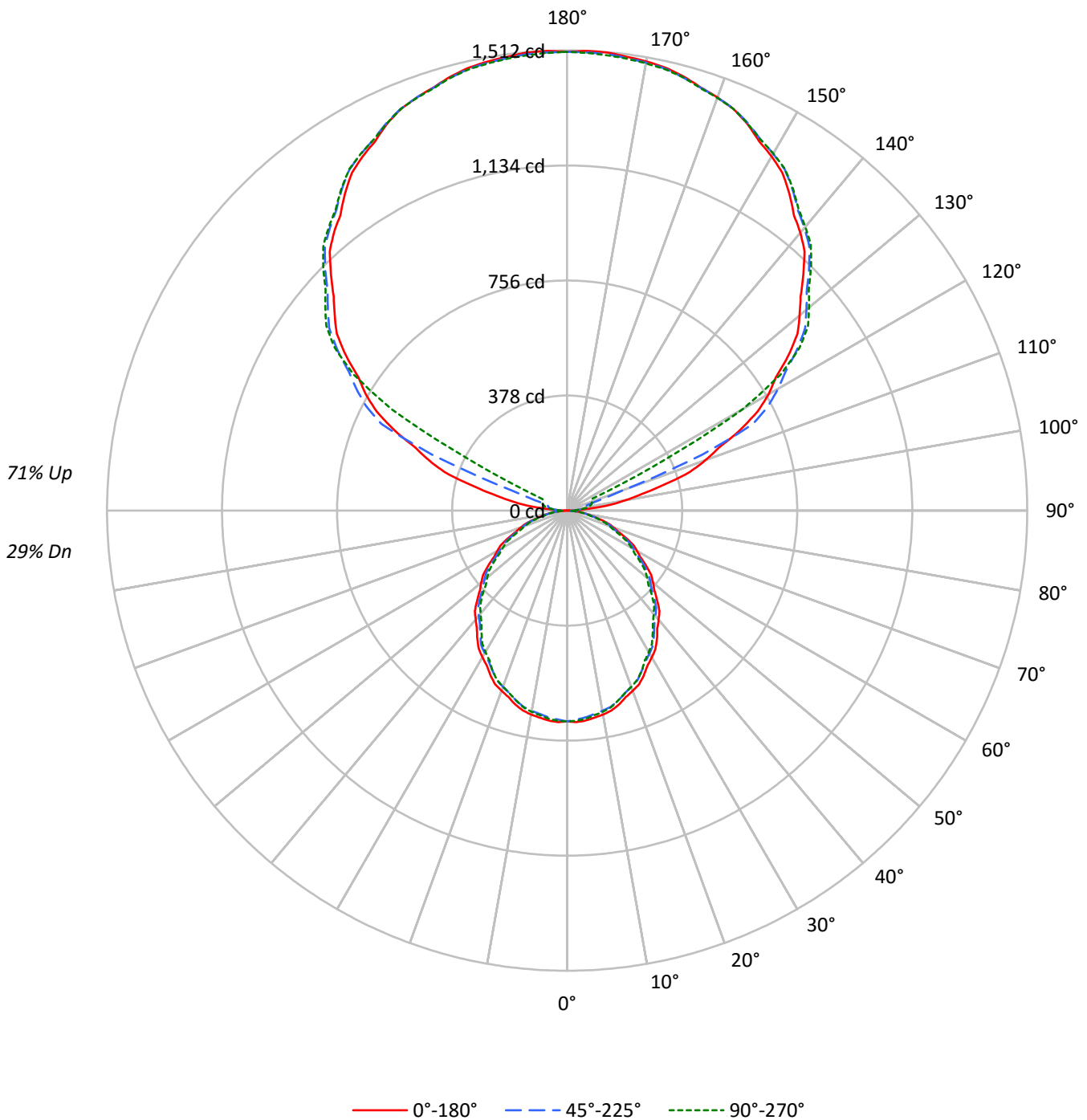
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	29
1	93	89	85	82	83	80	76	74	62	60	58	47	45	44	32	31	31	24
2	85	77	72	67	75	70	65	60	55	51	48	41	39	37	28	27	26	20
3	77	68	61	55	69	61	55	50	48	44	41	36	33	31	25	23	22	17
4	70	60	52	47	63	54	48	43	43	38	34	32	29	27	22	20	19	15
5	65	53	46	40	58	48	41	36	38	33	30	29	26	23	20	18	16	13
6	59	48	40	34	53	43	36	31	34	29	26	26	23	20	18	16	14	11
7	55	43	35	30	49	39	32	27	31	26	22	24	20	18	17	14	13	10
8	51	39	31	26	45	35	29	24	28	23	20	21	18	16	15	13	11	9
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	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	1.1
10°-20°	183.3	3.0
20°-30°	269.4	4.4
30°-40°	312.9	5.1
40°-50°	312.5	5.1
50°-60°	272.6	4.4
60°-70°	201.5	3.3
70°-80°	114.1	1.8
80°-90°	34.4	0.6
90°-100°	50.3	0.8
100°-110°	184.4	3.0
110°-120°	492.9	8.0
120°-130°	813.7	13.2
130°-140°	865.3	14.0
140°-150°	804.3	13.0
150°-160°	646.7	10.5
160°-170°	416.7	6.7
170°-180°	143.4	2.3
0°-30°	517.7	8.4
0°-40°	830.6	13.4
0°-60°	1415.7	22.9
0°-90°	1765.8	28.6
90°-120°	727.6	11.8
90°-150°	3210.9	51.9
90°-180°	4418.0	71.4
0°-180°	6183.5	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	13	22	27	29	5
95°	71	37	42	48	47	87
105°	332	346	66	78	83	354
115°	627	646	673	192	89	617
125°	887	901	922	929	933	790
135°	1097	1114	1125	1135	1133	847
145°	1273	1273	1290	1297	1293	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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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	10.1	10.4	10.7	11.0	11.2	11.3	11.5	11.7	11.9	11.7
90°	1.1	3.7	6.4	9.1	11.8	14.1	16.0	17.9	19.9	21.8	23.0
92.5°	22.0	21.8	21.6	21.3	21.0	21.4	22.4	23.4	24.3	25.3	25.9
95°	70.9	62.9	54.9	46.9	38.9	35.8	37.5	39.1	40.8	42.5	43.8
97.5°	140.7	118.2	95.6	73.1	50.6	41.2	45.1	49.0	53.1	57.0	57.9
100°	193.1	159.9	126.6	93.5	60.3	45.7	49.8	53.9	58.1	62.2	64.1
102.5°	250.7	243.6	236.6	229.6	222.6	201.8	167.3	132.9	98.4	63.9	66.4
105°	331.6	338.9	346.2	353.4	360.7	331.3	265.1	198.9	132.7	66.5	69.2
107.5°	423.9	429.7	435.6	441.5	447.4	410.6	331.3	251.9	172.5	93.2	90.4
110°	483.2	488.3	493.4	498.5	503.5	471.1	401.1	331.0	260.9	190.9	166.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	539.0	543.6	548.0	552.6	557.1	550.7	533.4	516.1	498.8	481.4	393.1
115°	627.2	631.3	635.4	639.5	643.7	648.8	654.9	660.9	667.0	673.1	560.8
117.5°	706.0	710.6	715.2	719.8	724.4	728.8	732.9	737.1	741.3	745.5	718.3
120°	763.6	767.2	770.8	774.5	778.1	782.1	786.5	790.9	795.2	799.5	802.5
122.5°	812.4	816.3	820.1	823.9	827.8	832.1	836.8	841.5	846.3	851.0	852.7
125°	886.8	889.9	893.1	896.3	899.4	903.3	907.9	912.5	917.1	921.8	923.5
127.5°	954.2	957.7	961.2	964.7	968.2	971.7	975.1	978.6	982.0	985.4	987.9
130°	997.0	1000.9	1004.8	1008.6	1012.5	1015.7	1018.4	1021.1	1023.8	1026.4	1029.1
132.5°	1040.6	1043.9	1047.2	1050.5	1053.8	1056.8	1059.4	1062.1	1064.8	1067.5	1069.7
135°	1097.3	1101.2	1105.1	1108.9	1112.9	1115.9	1118.0	1120.3	1122.4	1124.6	1127.0
137.5°	1154.7	1157.4	1160.1	1162.9	1165.6	1168.1	1170.6	1173.1	1175.5	1178.0	1180.4
140°	1192.2	1194.2	1196.1	1198.0	1200.0	1202.3	1205.0	1207.6	1210.3	1213.0	1215.1
142.5°	1223.7	1225.4	1227.2	1228.9	1230.7	1233.1	1236.1	1239.1	1242.2	1245.3	1247.2
145°	1272.9	1272.7	1272.5	1272.2	1272.0	1273.9	1278.1	1282.2	1286.3	1290.4	1292.1
147.5°	1315.9	1315.0	1314.1	1313.1	1312.2	1313.8	1317.9	1322.0	1326.1	1330.1	1331.4
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°	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°	11.6	11.5	11.4	11.3	11.3	11.2	11.2	11.2
90°	24.3	25.4	26.7	27.6	28.0	28.4	29.0	29.4
92.5°	26.6	27.2	27.8	28.3	28.5	28.9	29.2	29.4
95°	44.9	46.2	47.3	47.9	47.6	47.3	47.2	46.9
97.5°	58.9	59.8	60.8	61.4	61.7	62.1	62.3	62.6
100°	66.1	67.9	69.9	71.2	71.6	72.1	72.6	73.1
102.5°	68.9	71.5	74.0	75.6	76.2	77.0	77.7	78.3
105°	71.9	74.5	77.2	79.0	80.0	81.0	81.9	82.9
107.5°	87.7	85.0	82.3	81.4	82.4	83.4	84.4	85.3
110°	142.4	118.2	93.9	82.3	83.3	84.3	85.2	86.1



TEST NUMBER: P331517-940

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	304.6	216.2	127.8	83.9	84.7	85.5	86.2	87.0
115°	448.5	336.4	224.1	159.3	141.8	124.4	106.9	89.4
117.5°	691.2	664.0	636.9	594.6	537.3	479.9	422.6	365.2
120°	805.4	808.2	811.2	796.3	763.6	730.8	698.1	665.4
122.5°	854.5	856.3	858.0	855.7	849.4	843.0	836.7	830.3
125°	925.1	926.8	928.5	929.7	930.4	931.2	931.9	932.6
127.5°	990.3	992.8	995.3	996.7	996.8	996.9	997.0	997.2
130°	1031.8	1034.5	1037.1	1038.3	1038.0	1037.9	1037.6	1037.3
132.5°	1072.0	1074.2	1076.6	1077.5	1077.4	1077.1	1076.8	1076.7
135°	1129.4	1131.8	1134.3	1135.2	1134.8	1134.3	1133.8	1133.4
137.5°	1182.8	1185.2	1187.6	1188.3	1187.5	1186.7	1185.9	1185.0
140°	1217.4	1219.5	1221.7	1222.2	1220.9	1219.8	1218.5	1217.4
142.5°	1249.2	1251.2	1253.2	1253.6	1252.4	1251.2	1249.9	1248.8
145°	1293.8	1295.5	1297.2	1297.4	1296.2	1295.0	1293.8	1292.6
147.5°	1332.7	1333.9	1335.2	1335.2	1334.3	1333.2	1332.2	1331.2
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)