

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: P331518-940

Luminaire Tested: **S122DIW-S485D1240U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331518-940
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-S485D1240U940-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH 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: 5598.7 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

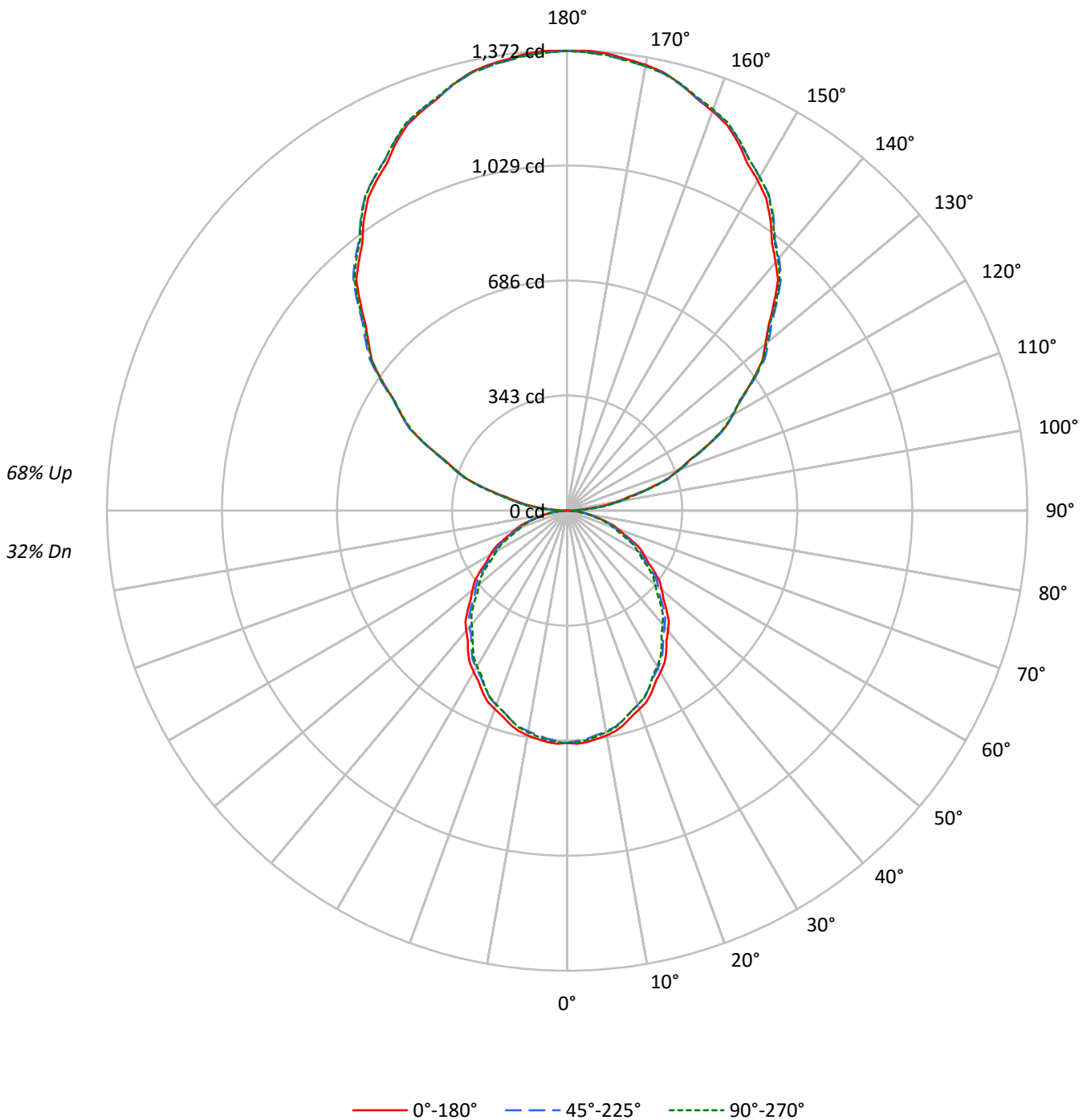
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	39	39	39	32
1	94	89	86	82	84	81	77	74	64	62	60	49	47	46	35	34	33	33	33	33	27
2	85	78	72	67	76	70	65	61	56	52	49	43	40	38	30	29	28	28	28	28	22
3	78	69	61	56	70	62	56	51	49	45	42	38	35	32	27	25	24	24	24	24	19
4	71	61	53	47	64	55	48	43	44	39	35	34	30	28	24	22	20	20	20	20	16
5	65	54	46	40	58	49	42	37	39	34	30	30	27	24	22	19	18	18	18	18	14
6	60	48	40	35	54	44	37	32	35	30	26	27	24	21	20	17	16	16	16	16	12
7	55	43	36	30	50	39	33	28	32	27	23	25	21	18	18	16	14	14	14	14	11
8	51	39	32	27	46	36	29	25	29	24	20	22	19	16	16	14	12	12	12	12	10
9	48	36	28	24	43	33	26	22	26	22	18	21	17	15	15	13	11	11	11	11	9
10	44	33	26	21	40	30	24	19	24	20	16	19	16	13	14	12	10	10	10	10	8

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	1.2
10°-20°	183.3	3.3
20°-30°	269.4	4.8
30°-40°	312.9	5.6
40°-50°	312.5	5.6
50°-60°	272.6	4.9
60°-70°	201.5	3.6
70°-80°	114.1	2.0
80°-90°	36.2	0.6
90°-100°	86.8	1.6
100°-110°	269.6	4.8
110°-120°	460.9	8.2
120°-130°	606.1	10.8
130°-140°	680.3	12.2
140°-150°	667.1	11.9
150°-160°	559.5	10.0
160°-170°	371.1	6.6
170°-180°	129.7	2.3
0°-30°	517.7	9.2
0°-40°	830.6	14.8
0°-60°	1415.7	25.3
0°-90°	1767.5	31.6
90°-120°	817.4	14.6
90°-150°	2770.9	49.5
90°-180°	3831.0	68.4
0°-180°	5598.7	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	16	40	38	39	4
95°	60	71	74	74	72	69
105°	249	252	254	257	257	263
115°	462	469	467	466	462	457
125°	673	683	680	677	675	601
135°	871	883	886	884	881	672
145°	1057	1065	1072	1073	1068	660
155°	1208	1212	1215	1220	1218	556
165°	1315	1314	1314	1321	1316	371
175°	1368	1364	1362	1369	1363	130
180°	1370	1370	1370	1370	1370	



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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	10.2	10.6	11.0	11.3	11.9	12.8	13.7	14.6	15.5	15.1
90°	1.2	4.3	7.3	10.4	13.5	17.8	23.5	29.2	34.8	40.5	39.9
92.5°	20.6	22.8	25.1	27.4	29.6	31.4	32.7	34.1	35.4	36.7	36.8
95°	60.1	62.7	65.3	67.9	70.4	72.0	72.5	72.9	73.5	74.0	74.0
97.5°	109.9	112.1	114.4	116.6	118.9	120.5	121.5	122.4	123.4	124.4	124.4
100°	146.9	148.9	151.0	153.0	155.1	156.5	157.2	158.0	158.8	159.5	159.5
102.5°	185.7	187.3	189.0	190.6	192.3	193.6	194.6	195.6	196.5	197.5	197.7
105°	248.6	249.3	250.1	250.9	251.6	252.4	252.8	253.3	253.9	254.4	254.9
107.5°	311.9	313.1	314.2	315.3	316.5	317.0	317.0	317.0	317.0	317.0	317.3
110°	352.7	354.2	355.7	357.3	358.8	359.6	359.6	359.6	359.6	359.6	359.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	397.1	398.6	400.1	401.7	403.2	403.9	403.7	403.5	403.2	403.1	402.4
115°	462.5	464.0	465.6	467.1	468.7	469.1	468.7	468.1	467.6	467.1	466.9
117.5°	527.7	529.8	531.8	533.9	535.9	536.3	534.8	533.3	531.9	530.5	529.9
120°	571.1	573.2	575.3	577.4	579.4	579.4	577.4	575.3	573.2	571.1	571.1
122.5°	610.9	613.4	615.9	618.3	620.8	621.3	619.9	618.5	617.0	615.5	614.9
125°	672.9	675.2	677.5	679.8	682.2	683.0	682.2	681.4	680.6	679.8	679.1
127.5°	733.3	736.2	739.1	742.1	745.0	746.0	745.1	744.1	743.2	742.3	741.4
130°	771.2	774.5	777.9	781.2	784.5	786.0	785.5	785.0	784.4	783.9	783.4
132.5°	813.8	816.5	819.2	821.9	824.7	826.1	826.2	826.3	826.3	826.4	825.4
135°	870.7	873.4	876.3	879.1	882.0	883.6	884.1	884.7	885.2	885.6	885.4
137.5°	930.5	932.8	935.1	937.5	939.8	941.3	941.9	942.6	943.3	944.0	943.8
140°	966.6	968.9	971.3	973.6	975.9	977.7	978.9	980.3	981.5	982.8	982.8
142.5°	1003.6	1005.9	1008.3	1010.6	1012.9	1014.4	1015.3	1016.2	1017.1	1018.0	1018.2
145°	1056.8	1058.6	1060.4	1062.2	1064.0	1065.7	1067.2	1068.7	1070.3	1071.8	1072.1
147.5°	1104.2	1106.3	1108.5	1110.7	1112.9	1114.5	1115.4	1116.5	1117.5	1118.6	1119.1
150°	1136.6	1138.1	1139.7	1141.2	1142.7	1144.1	1145.0	1146.1	1147.1	1148.2	1148.9
152.5°	1165.3	1166.8	1168.3	1169.8	1171.4	1172.8	1174.0	1175.3	1176.5	1177.8	1178.8
155°	1208.3	1209.1	1209.8	1210.6	1211.4	1212.1	1212.9	1213.6	1214.4	1215.2	1216.5
157.5°	1245.0	1245.5	1246.1	1246.6	1247.1	1247.6	1248.0	1248.5	1248.9	1249.5	1251.2
160°	1267.2	1267.7	1268.3	1268.8	1269.3	1269.7	1269.9	1270.2	1270.4	1270.7	1272.2
162.5°	1287.5	1287.7	1287.8	1287.9	1288.0	1288.2	1288.4	1288.7	1289.0	1289.2	1290.9
165°	1314.6	1314.4	1314.1	1313.8	1313.6	1313.5	1313.5	1313.5	1313.5	1313.5	1315.3
167.5°	1337.3	1336.5	1335.8	1335.0	1334.2	1333.8	1333.7	1333.7	1333.6	1333.6	1335.4
170°	1349.3	1348.5	1347.8	1347.0	1346.2	1345.8	1345.5	1345.2	1345.0	1344.7	1346.5
172.5°	1357.6	1356.9	1356.1	1355.3	1354.6	1354.1	1353.8	1353.5	1353.3	1353.0	1354.9
175°	1367.8	1367.1	1366.3	1365.5	1364.8	1364.1	1363.6	1363.1	1362.5	1362.0	1363.9
177.5°	1372.0	1371.4	1370.7	1370.1	1369.5	1369.0	1368.6	1368.2	1367.8	1367.3	1368.6
180°	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1



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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°	14.6	14.2	13.7	13.5	13.4	13.3	13.3	13.2
90°	39.4	39.0	38.4	38.3	38.5	38.8	39.1	39.3
92.5°	37.0	37.1	37.2	37.3	37.3	37.4	37.5	37.5
95°	74.0	74.0	74.0	73.7	73.2	72.7	72.2	71.7
97.5°	124.4	124.4	124.4	124.4	124.3	124.3	124.2	124.2
100°	159.5	159.5	159.5	159.4	159.2	158.9	158.6	158.4
102.5°	197.9	198.1	198.3	198.3	198.0	197.8	197.5	197.2
105°	255.4	255.9	256.5	256.7	256.7	256.7	256.7	256.7
107.5°	317.4	317.6	317.9	317.4	316.2	315.0	313.8	312.6
110°	359.6	359.6	359.6	359.2	358.5	357.7	356.9	356.1



TEST NUMBER: P331518-940

CATALOG NUMBER: S122DIW-S485D1240U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	401.8	401.2	400.6	400.0	399.4	398.9	398.3	397.7
115°	466.6	466.4	466.1	465.6	464.8	464.0	463.2	462.5
117.5°	529.2	528.6	528.0	527.4	526.6	525.8	525.0	524.2
120°	571.1	571.1	571.1	570.8	570.0	569.3	568.5	567.8
122.5°	614.4	613.8	613.1	612.5	612.0	611.4	610.8	610.3
125°	678.3	677.5	676.8	676.3	676.0	675.7	675.5	675.2
127.5°	740.5	739.5	738.6	737.7	736.9	736.1	735.3	734.4
130°	782.9	782.4	781.9	781.1	780.1	779.1	778.0	776.9
132.5°	824.2	823.0	822.0	821.0	820.2	819.3	818.5	817.7
135°	885.2	884.9	884.7	884.1	883.3	882.6	881.8	881.0
137.5°	943.5	943.3	943.2	942.5	941.5	940.5	939.4	938.4
140°	982.8	982.8	982.8	982.3	981.2	980.3	979.2	978.2
142.5°	1018.3	1018.6	1018.8	1018.3	1017.4	1016.3	1015.3	1014.2
145°	1072.4	1072.6	1072.8	1072.5	1071.5	1070.4	1069.4	1068.4
147.5°	1119.6	1120.3	1120.8	1120.6	1119.6	1118.7	1117.7	1116.7
150°	1149.7	1150.5	1151.2	1151.2	1150.5	1149.7	1148.9	1148.2
152.5°	1179.7	1180.6	1181.6	1181.6	1180.6	1179.7	1178.8	1177.8
155°	1217.8	1219.1	1220.3	1220.6	1219.9	1219.1	1218.3	1217.5
157.5°	1252.9	1254.6	1256.4	1256.7	1255.4	1254.2	1252.9	1251.7
160°	1273.8	1275.3	1276.8	1277.1	1276.1	1275.1	1274.1	1273.0
162.5°	1292.7	1294.4	1296.2	1296.5	1295.2	1294.0	1292.7	1291.6
165°	1317.1	1318.8	1320.7	1320.9	1319.6	1318.4	1317.1	1315.8
167.5°	1337.2	1339.0	1340.8	1341.0	1339.7	1338.4	1337.0	1335.7
170°	1348.3	1350.1	1351.9	1352.0	1350.5	1349.0	1347.4	1345.9
172.5°	1356.6	1358.4	1360.2	1360.3	1358.8	1357.3	1355.8	1354.2
175°	1365.7	1367.4	1369.2	1369.4	1367.8	1366.3	1364.8	1363.2
177.5°	1369.8	1371.1	1372.3	1372.3	1371.1	1369.8	1368.6	1367.3
180°	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1

(END OF REPORT)