

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: P331576-935

Luminaire Tested: **S122DIW-S865D1240U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331576-935  
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-S865D1240U935-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 865 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: 6712.0 lumens  
Efficiency: N/A  
Efficacy: 96.2 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

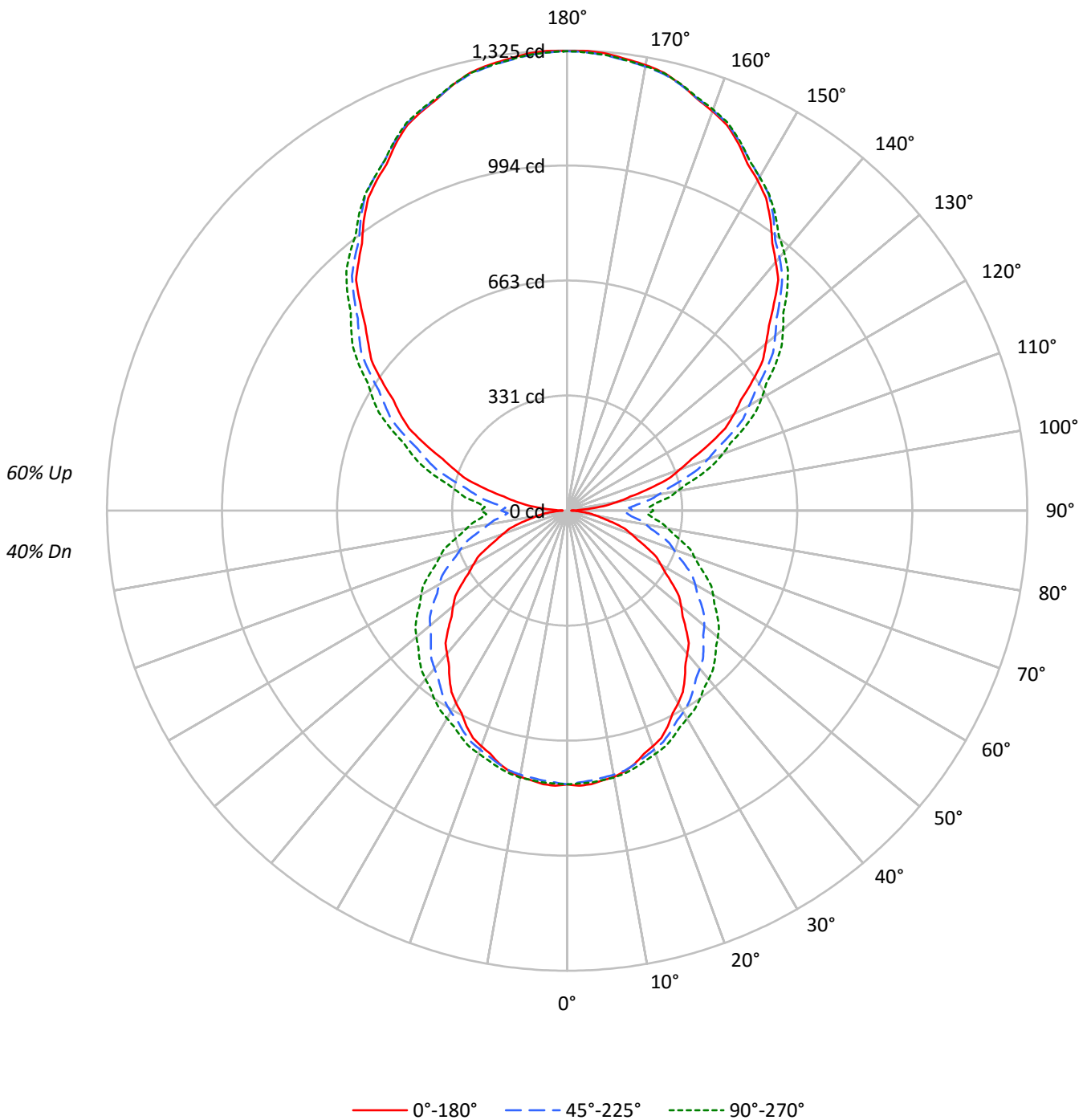
Input Watts (W): 69.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40				
1	94	90	85	81	85	81	78	74	66	64	61	52	50	49	39	38	37	31				
2	85	77	71	65	77	70	65	60	57	53	50	45	42	40	34	32	30	25				
3	78	68	60	54	70	62	55	50	50	45	41	40	36	33	30	27	25	21				
4	71	60	51	45	64	54	47	42	44	39	35	35	31	28	26	24	21	17				
5	65	53	45	38	58	48	41	35	39	34	30	31	27	24	24	21	18	15				
6	59	47	39	33	54	43	36	31	35	30	26	28	24	21	21	18	16	13				
7	55	42	34	29	50	39	32	27	32	26	22	25	21	18	19	16	14	11				
8	51	38	31	25	46	35	28	23	29	24	20	23	19	16	18	15	13	10				
9	47	35	27	22	43	32	25	21	26	21	18	21	17	14	16	13	11	9				
10	44	32	25	20	40	29	23	18	24	19	16	20	16	13	15	12	10	8				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	12728	12728	12728
5°	12790	12252	12205
10°	12710	11890	11756
15°	12535	11506	11284
20°	12312	11097	10828
25°	12095	10701	10415
30°	11786	10293	10000
35°	11474	9900	9708
40°	11147	9566	9415
45°	10835	9267	9165
50°	10500	8995	8920
55°	10150	8703	8668
60°	9721	8403	8403
65°	9278	8047	8088
70°	8774	7666	7748
75°	8132	7293	7435
80°	7126	6912	7117
85°	6164	6582	6872



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.7	1.1
10°-20°	214.2	3.2
20°-30°	324.6	4.8
30°-40°	395.4	5.9
40°-50°	425.3	6.3
50°-60°	413.1	6.2
60°-70°	360.7	5.4
70°-80°	277.7	4.1
80°-90°	191.6	2.9
90°-100°	212.2	3.2
100°-110°	354.1	5.3
110°-120°	507.0	7.6
120°-130°	619.8	9.2
130°-140°	671.4	10.0
140°-150°	646.6	9.6
150°-160°	540.2	8.0
160°-170°	358.3	5.3
170°-180°	125.2	1.9
0°-30°	613.5	9.1
0°-40°	1008.9	15.0
0°-60°	1847.2	27.5
0°-90°	2677.2	39.9
90°-120°	1073.3	16.0
90°-150°	3011.0	44.9
90°-180°	4035.0	60.1
0°-180°	6712.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	788	788	788	788	788	
5°	791	787	780	787	786	75
15°	754	756	756	766	766	212
25°	686	694	704	717	721	315
35°	591	610	632	656	665	369
45°	484	516	555	589	602	374
55°	371	413	472	512	528	332
65°	254	310	377	422	439	252
75°	140	205	278	325	342	149
85°	41	112	185	231	249	44
90°	13	93	190	232	248	11
95°	67	132	203	244	258	74
105°	246	284	344	384	399	260
115°	451	472	520	551	562	446
125°	652	663	695	722	732	583
135°	842	854	868	890	896	650
145°	1020	1028	1035	1042	1044	637
155°	1167	1170	1173	1178	1176	537
165°	1269	1268	1268	1275	1270	358
175°	1321	1318	1315	1322	1316	125
180°	1323	1323	1323	1323	1323	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	792.9	792.3	791.7	791.1	790.5	789.5	788.0	786.6	785.1	783.8	784.8
5°	790.6	789.9	789.1	788.3	787.6	786.4	784.9	783.3	781.9	780.3	781.9
7.5°	783.5	783.0	782.5	782.0	781.5	780.7	779.5	778.3	777.1	776.0	777.8
10°	778.1	777.6	777.1	776.5	776.0	775.4	774.6	773.9	773.1	772.3	774.4
12.5°	768.9	769.0	769.1	769.2	769.3	769.0	768.5	767.9	767.4	766.8	768.9
15°	754.1	754.6	755.1	755.6	756.0	756.3	756.3	756.3	756.3	756.3	758.6
17.5°	734.9	735.9	737.0	738.0	739.1	740.0	740.9	741.7	742.5	743.3	745.7
20°	722.0	723.3	724.6	725.9	727.1	728.3	729.3	730.3	731.3	732.4	735.1
22.5°	708.3	709.8	711.3	712.7	714.2	715.7	717.1	718.5	720.0	721.3	724.2
25°	685.5	687.3	689.1	690.9	692.6	694.7	696.9	699.2	701.5	703.8	706.8
27.5°	658.1	661.0	663.8	666.8	669.7	672.4	675.1	677.9	680.5	683.2	687.1
30°	639.8	643.1	646.4	649.7	653.0	656.3	659.6	662.9	666.2	669.5	673.6
32.5°	619.7	623.4	627.1	630.9	634.6	638.3	642.2	646.2	650.1	653.9	658.7
35°	590.6	595.0	599.3	603.6	608.0	612.5	617.3	622.2	627.0	631.8	637.4
37.5°	559.1	564.1	569.1	574.0	579.0	584.6	590.9	597.2	603.4	609.7	615.9
40°	538.1	543.7	549.3	554.9	560.4	566.7	573.5	580.4	587.3	594.1	600.7
42.5°	518.0	523.6	529.2	534.8	540.4	547.1	554.9	562.8	570.7	578.6	585.7
45°	484.4	491.3	498.1	505.0	511.9	519.7	528.6	537.5	546.4	555.3	563.1
47.5°	451.3	458.7	466.2	473.7	481.1	490.1	500.5	510.9	521.3	531.8	539.9
50°	428.4	436.3	444.2	452.0	459.9	469.6	481.0	492.4	503.9	515.3	523.9
52.5°	406.5	414.7	423.1	431.4	439.6	449.8	461.8	473.8	485.9	497.9	506.7
55°	371.3	380.5	389.6	398.7	407.9	419.0	432.2	445.5	458.7	471.8	481.0
57.5°	336.6	346.9	357.2	367.5	377.8	389.7	403.1	416.6	430.1	443.5	453.4
60°	311.9	322.8	333.7	344.7	355.6	368.2	382.7	397.2	411.6	426.2	435.8
62.5°	290.0	301.3	312.6	323.9	335.3	348.2	362.7	377.1	391.6	406.0	416.3
65°	253.7	266.0	278.5	290.9	303.4	317.1	332.1	347.1	362.1	377.0	387.4
67.5°	220.2	233.2	246.2	259.2	272.2	286.5	301.8	317.1	332.4	347.8	358.3
70°	196.5	209.7	222.9	236.1	249.3	263.8	279.6	295.2	311.0	326.7	337.7
72.5°	174.6	188.2	201.8	215.4	229.0	243.7	259.8	275.7	291.6	307.5	318.3
75°	140.5	154.7	168.9	183.2	197.4	212.7	228.9	245.1	261.4	277.6	288.5
77.5°	107.6	122.5	137.4	152.2	167.1	182.8	199.3	215.9	232.3	248.8	259.7
80°	85.7	101.2	116.7	132.2	147.7	163.6	180.1	196.7	213.1	229.6	240.3
82.5°	67.4	82.7	98.0	113.2	128.5	144.6	161.3	178.0	194.7	211.4	222.1
85°	41.2	56.9	72.6	88.3	104.1	120.1	136.3	152.6	168.8	185.1	195.8
87.5°	22.6	38.3	54.1	69.8	85.5	102.0	119.4	136.7	154.1	171.4	181.7
90°	12.6	30.2	48.0	65.6	83.3	103.1	124.8	146.5	168.2	189.9	199.6
92.5°	30.4	46.2	62.2	78.1	93.9	110.4	127.3	144.2	161.2	178.1	188.1
95°	67.2	81.6	96.0	110.5	124.8	139.9	155.7	171.3	187.1	202.9	212.5
97.5°	114.1	126.8	139.7	152.5	165.2	179.4	195.0	210.5	226.1	241.7	251.1
100°	149.8	161.2	172.5	183.9	195.3	208.4	223.4	238.4	253.4	268.3	277.7
102.5°	186.4	196.6	206.7	216.9	227.0	239.5	254.3	269.1	283.8	298.5	307.9
105°	245.7	253.8	261.9	270.1	278.2	289.0	302.7	316.5	330.2	343.9	353.3
107.5°	306.7	313.7	320.6	327.6	334.6	344.4	357.1	369.7	382.4	395.0	403.7
110°	345.1	351.6	358.2	364.8	371.3	380.8	393.3	405.7	418.2	430.6	438.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	388.0	393.7	399.4	405.2	411.0	419.7	431.3	442.9	454.5	466.1	473.7
115°	451.2	455.4	459.7	464.0	468.3	475.9	486.8	497.7	508.7	519.6	526.9
117.5°	513.0	516.8	520.6	524.4	528.2	534.7	543.9	553.0	562.2	571.4	578.3
120°	554.9	557.9	560.9	564.0	567.0	572.5	580.7	588.8	597.0	605.2	612.3
122.5°	593.3	596.2	598.9	601.7	604.5	609.9	618.1	626.3	634.5	642.6	648.9
125°	652.0	654.3	656.5	658.8	661.0	665.8	673.1	680.5	687.9	695.3	701.4
127.5°	710.3	712.9	715.5	718.1	720.6	724.7	730.4	736.1	741.7	747.3	752.8
130°	746.9	749.9	752.9	755.9	758.8	762.8	767.6	772.4	777.2	782.0	787.6
132.5°	788.0	790.4	792.8	795.1	797.5	800.8	805.0	809.3	813.5	817.7	822.4
135°	841.8	844.6	847.2	850.0	852.7	855.6	858.7	861.7	864.7	867.7	872.8
137.5°	899.7	901.8	904.0	906.2	908.4	910.3	912.1	913.9	915.6	917.4	921.9
140°	934.4	936.4	938.4	940.4	942.4	944.3	946.0	947.7	949.5	951.2	955.3
142.5°	970.2	972.2	974.1	976.1	978.1	979.6	980.5	981.5	982.4	983.3	986.8
145°	1020.4	1022.2	1023.9	1025.6	1027.3	1029.0	1030.4	1031.9	1033.5	1034.9	1036.6
147.5°	1066.2	1068.2	1070.3	1072.5	1074.5	1076.1	1077.0	1078.1	1079.0	1080.0	1080.7
150°	1097.4	1098.9	1100.4	1101.9	1103.4	1104.7	1105.6	1106.6	1107.6	1108.6	1109.3
152.5°	1125.2	1126.6	1128.1	1129.5	1131.1	1132.4	1133.6	1134.8	1136.0	1137.2	1138.2
155°	1166.7	1167.4	1168.1	1168.9	1169.7	1170.4	1171.1	1171.8	1172.6	1173.4	1174.6
157.5°	1202.1	1202.6	1203.2	1203.7	1204.1	1204.6	1205.1	1205.5	1205.9	1206.4	1208.1
160°	1223.6	1224.1	1224.6	1225.1	1225.5	1226.0	1226.2	1226.4	1226.7	1226.9	1228.4
162.5°	1243.2	1243.4	1243.5	1243.5	1243.6	1243.8	1244.1	1244.3	1244.6	1244.8	1246.5
165°	1269.4	1269.1	1268.9	1268.6	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3	1270.0
167.5°	1291.2	1290.5	1289.8	1289.0	1288.2	1287.9	1287.8	1287.8	1287.7	1287.6	1289.4
170°	1302.9	1302.1	1301.4	1300.6	1299.9	1299.4	1299.2	1298.9	1298.6	1298.4	1300.1
172.5°	1310.9	1310.2	1309.4	1308.6	1307.9	1307.4	1307.2	1306.9	1306.7	1306.4	1308.2
175°	1320.7	1320.0	1319.2	1318.4	1317.8	1317.2	1316.6	1316.1	1315.6	1315.1	1316.9
177.5°	1324.7	1324.1	1323.5	1322.9	1322.3	1321.9	1321.5	1321.0	1320.7	1320.3	1321.5
180°	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	785.7	786.8	787.8	788.2	787.7	787.3	786.9	786.5
5°	783.3	784.9	786.4	787.0	786.8	786.5	786.3	786.0
7.5°	779.6	781.4	783.3	784.1	783.9	783.6	783.3	783.1
10°	776.4	778.4	780.5	781.4	781.1	780.8	780.6	780.3
12.5°	770.9	772.9	775.0	775.8	775.6	775.3	775.1	774.8
15°	760.9	763.2	765.5	766.5	766.2	765.9	765.7	765.5
17.5°	748.1	750.4	752.9	754.1	754.1	754.1	754.1	754.1
20°	738.0	740.7	743.5	744.9	744.9	744.9	744.9	744.9
22.5°	726.9	729.8	732.5	734.2	734.5	734.9	735.4	735.8
25°	709.9	712.9	716.0	717.9	718.6	719.4	720.1	720.9
27.5°	691.0	694.8	698.6	700.9	701.5	702.0	702.6	703.1
30°	677.6	681.7	685.8	688.2	688.9	689.7	690.4	691.2
32.5°	663.3	668.0	672.6	675.7	677.0	678.4	679.8	681.1
35°	643.0	648.6	654.2	657.8	659.6	661.4	663.1	665.0
37.5°	622.0	628.2	634.4	638.4	640.3	642.2	644.1	646.0
40°	607.3	613.9	620.5	624.9	627.2	629.5	631.8	634.1
42.5°	593.0	600.2	607.4	612.2	614.4	616.7	619.0	621.3
45°	571.0	578.9	586.8	591.9	594.5	597.0	599.6	602.1
47.5°	548.2	556.4	564.6	570.2	572.9	575.8	578.5	581.3
50°	532.5	541.1	549.8	555.5	558.3	561.1	563.9	566.7
52.5°	515.6	524.4	533.2	539.2	542.2	545.2	548.1	551.1
55°	490.2	499.3	508.4	514.6	517.9	521.2	524.5	527.8
57.5°	463.2	473.0	482.9	489.6	492.8	496.2	499.6	502.9
60°	445.5	455.1	464.8	471.3	474.9	478.5	482.0	485.6
62.5°	426.5	436.8	447.0	453.9	457.2	460.5	463.9	467.3
65°	397.9	408.3	418.7	425.5	428.8	432.1	435.4	438.7
67.5°	368.8	379.3	389.9	396.8	400.3	403.7	407.2	410.6
70°	348.6	359.5	370.4	377.4	380.5	383.5	386.6	389.6
72.5°	329.0	339.7	350.4	357.6	361.3	364.9	368.6	372.2
75°	299.5	310.4	321.3	328.4	331.7	335.0	338.3	341.6
77.5°	270.6	281.5	292.3	299.5	303.1	306.6	310.2	313.7
80°	251.0	261.7	272.3	279.4	282.9	286.5	290.1	293.6
82.5°	232.7	243.3	254.0	261.1	264.4	267.7	271.0	274.4
85°	206.4	217.1	227.7	234.9	238.4	241.9	245.5	249.1
87.5°	191.9	202.2	212.5	219.2	222.6	225.8	229.1	232.5
90°	209.2	218.9	228.5	235.0	238.3	241.6	244.9	248.1
92.5°	198.2	208.3	218.3	224.9	228.0	231.1	234.2	237.3
95°	222.1	231.8	241.4	247.5	250.1	252.6	255.2	257.7
97.5°	260.5	269.8	279.2	285.4	288.3	291.4	294.3	297.2
100°	287.1	296.5	305.9	311.9	314.4	316.9	319.5	322.0
102.5°	317.3	326.7	336.1	342.1	344.6	347.2	349.7	352.2
105°	362.7	372.0	381.4	387.4	390.3	393.0	395.9	398.6
107.5°	412.5	421.2	429.9	435.1	436.8	438.4	440.1	441.7
110°	446.9	455.0	463.1	468.2	470.3	472.3	474.3	476.4





TEST NUMBER: P331576-935

CATALOG NUMBER: S122DIW-S865D1240U935-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	481.2	488.8	496.3	501.2	503.4	505.7	507.9	510.1
115°	534.3	541.7	549.1	553.8	555.8	557.8	559.9	562.0
117.5°	585.2	592.1	599.1	603.5	605.3	607.2	609.0	610.8
120°	619.4	626.5	633.6	638.3	640.2	642.3	644.4	646.4
122.5°	655.2	661.5	667.8	671.9	673.7	675.6	677.4	679.2
125°	707.5	713.6	719.7	723.8	725.8	727.9	730.0	731.9
127.5°	758.2	763.5	769.0	772.4	773.9	775.2	776.7	778.2
130°	793.2	798.8	804.4	807.8	808.8	809.9	810.9	811.9
132.5°	827.2	832.1	836.9	839.9	841.1	842.3	843.6	844.8
135°	877.9	883.0	888.0	891.2	892.5	893.8	895.1	896.4
137.5°	926.3	930.8	935.3	937.9	938.6	939.4	940.0	940.8
140°	959.3	963.5	967.5	969.7	970.3	970.9	971.4	971.9
142.5°	990.2	993.7	997.1	999.0	999.4	999.7	1000.1	1000.3
145°	1038.5	1040.3	1042.0	1043.0	1043.3	1043.6	1043.9	1044.1
147.5°	1081.5	1082.3	1083.1	1083.2	1082.9	1082.5	1082.2	1081.8
150°	1110.1	1110.9	1111.6	1111.6	1110.9	1110.1	1109.3	1108.6
152.5°	1139.1	1140.0	1140.9	1140.9	1140.0	1139.1	1138.2	1137.2
155°	1175.9	1177.1	1178.3	1178.5	1177.8	1177.1	1176.3	1175.6
157.5°	1209.8	1211.4	1213.1	1213.4	1212.2	1211.0	1209.8	1208.6
160°	1229.9	1231.4	1232.9	1233.1	1232.2	1231.1	1230.2	1229.2
162.5°	1248.2	1249.8	1251.5	1251.8	1250.6	1249.4	1248.2	1247.1
165°	1271.7	1273.4	1275.2	1275.4	1274.2	1273.0	1271.7	1270.5
167.5°	1291.2	1292.9	1294.6	1294.9	1293.6	1292.3	1291.0	1289.7
170°	1301.8	1303.6	1305.4	1305.4	1304.0	1302.5	1301.0	1299.5
172.5°	1309.9	1311.6	1313.4	1313.5	1312.0	1310.5	1309.1	1307.5
175°	1318.6	1320.3	1322.1	1322.2	1320.7	1319.2	1317.8	1316.2
177.5°	1322.7	1323.9	1325.0	1325.0	1323.9	1322.7	1321.5	1320.3
180°	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9

(END OF REPORT)