

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: P331575-935

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331575-935
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-S865D1240U935-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 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: 7276.7 lumens
Efficiency: N/A
Efficacy: 104.3 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

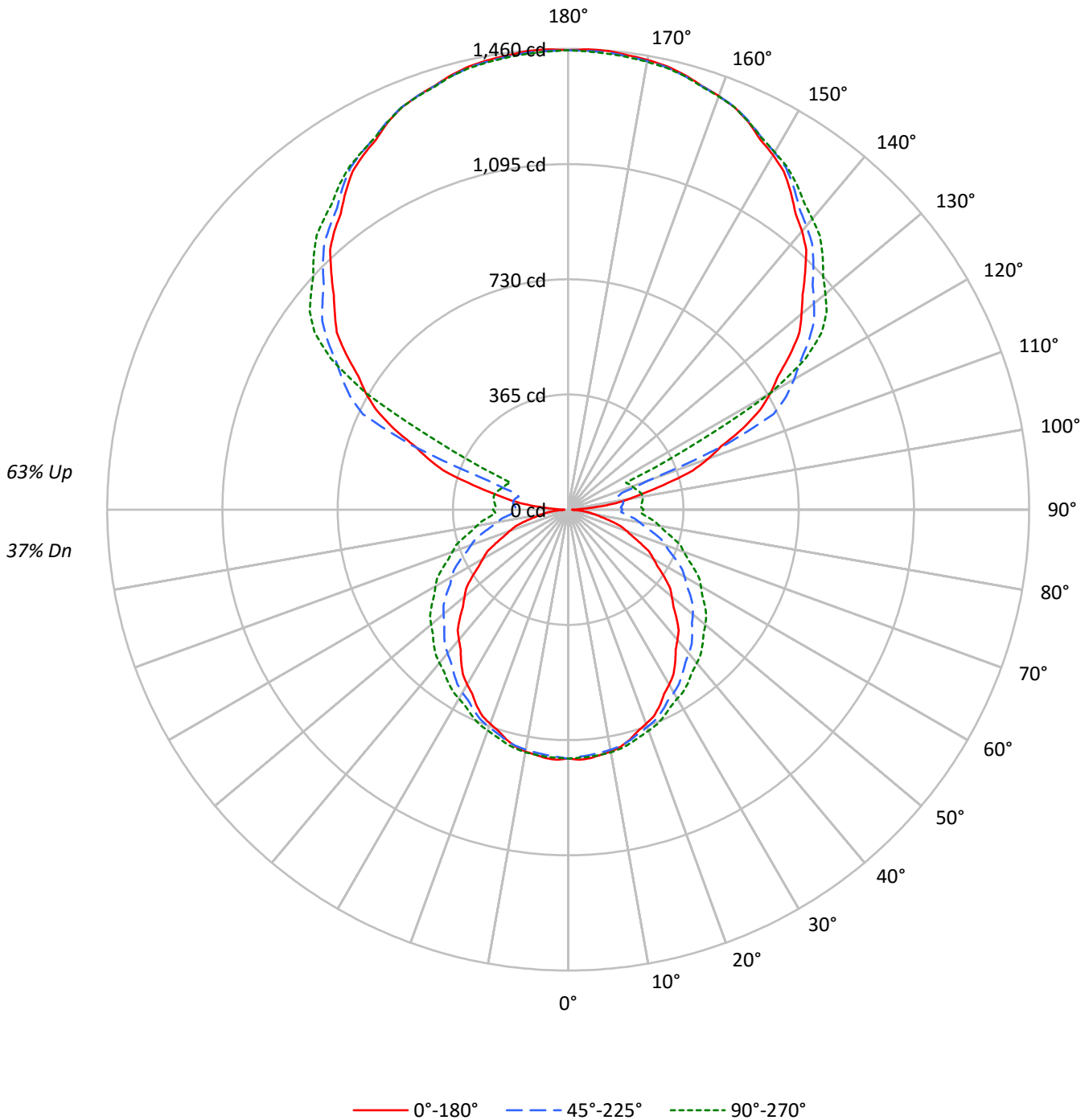
Input Watts (W): 69.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331575-935

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Luminous Intensity Polar Plot





TEST NUMBER: P331575-935

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

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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	37				37
1	94	89	85	81	85	81	77	74	65	62	60	50	49	47	37	36	35				29	
2	85	77	71	65	76	70	64	60	56	52	49	44	41	38	32	30	29				23	
3	77	67	60	54	69	61	54	49	49	44	40	38	35	32	28	26	24				19	
4	70	59	51	45	63	54	47	41	43	38	34	34	30	27	25	22	20				16	
5	64	53	44	38	58	48	41	35	39	33	29	30	26	23	22	20	17				14	
6	59	47	39	33	53	43	35	30	35	29	25	27	23	20	20	17	15				12	
7	55	42	34	29	49	38	31	26	31	26	22	25	21	18	18	15	13				10	
8	51	38	30	25	46	35	28	23	28	23	19	22	18	16	17	14	12				9	
9	47	35	27	22	42	32	25	20	26	21	17	20	17	14	15	13	11				8	
10	44	32	25	20	40	29	23	18	24	19	15	19	15	12	14	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	1.0
10°-20°	214.2	2.9
20°-30°	324.6	4.5
30°-40°	395.4	5.4
40°-50°	425.3	5.8
50°-60°	413.1	5.7
60°-70°	360.7	5.0
70°-80°	277.7	3.8
80°-90°	189.9	2.6
90°-100°	176.9	2.4
100°-110°	271.8	3.7
110°-120°	537.9	7.4
120°-130°	820.2	11.3
130°-140°	850.0	11.7
140°-150°	779.1	10.7
150°-160°	624.4	8.6
160°-170°	402.3	5.5
170°-180°	138.5	1.9
0°-30°	613.5	8.4
0°-40°	1008.9	13.9
0°-60°	1847.2	25.4
0°-90°	2675.5	36.8
90°-120°	986.6	13.6
90°-150°	3435.9	47.2
90°-180°	4601.0	63.2
0°-180°	7276.7	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°	12	91	172	221	239	11
95°	78	100	172	219	234	91
105°	326	374	162	212	231	349
115°	610	643	718	287	202	600
125°	859	875	929	966	980	766
135°	1061	1078	1098	1131	1140	819
145°	1229	1229	1246	1259	1261	769
155°	1353	1345	1357	1362	1354	623
165°	1426	1420	1423	1429	1423	403
175°	1459	1452	1454	1460	1450	139
180°	1456	1456	1456	1456	1456	



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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	38.2	53.9	69.6	85.2	101.3	118.0	134.6	151.2	167.8	178.4
90°	12.5	29.8	47.1	64.4	81.7	99.4	117.5	135.6	153.8	171.9	183.2
92.5°	31.8	45.3	58.7	72.2	85.7	100.7	117.3	133.9	150.4	167.0	177.5
95°	77.6	81.8	86.0	90.2	94.5	105.0	121.8	138.7	155.6	172.5	183.3
97.5°	143.9	132.7	121.6	110.4	99.3	102.9	121.3	139.7	158.2	176.5	186.8
100°	194.4	171.8	149.0	126.4	103.8	101.5	119.7	137.9	156.1	174.3	185.5
102.5°	249.1	250.9	252.7	254.5	256.3	247.5	228.0	208.5	189.1	169.5	181.2
105°	325.9	340.3	354.6	369.0	383.4	365.2	314.6	263.9	213.2	162.5	173.9
107.5°	414.7	426.3	437.9	449.4	461.0	434.8	370.7	306.8	242.8	178.8	184.8
110°	471.1	481.1	491.1	501.1	511.1	488.5	433.3	378.2	322.9	267.7	252.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	525.0	533.7	542.3	551.0	559.6	561.5	556.6	551.6	546.8	541.9	464.7
115°	610.2	616.9	623.7	630.5	637.2	649.3	666.6	683.8	701.1	718.4	617.7
117.5°	685.1	691.4	697.7	703.9	710.2	720.6	735.2	749.8	764.4	778.9	760.3
120°	740.7	745.2	749.8	754.2	758.8	768.3	782.6	796.9	811.3	825.7	835.6
122.5°	787.9	791.9	796.1	800.2	804.3	813.4	827.5	841.7	855.8	870.0	878.6
125°	858.6	861.6	864.6	867.7	870.7	878.6	891.1	903.7	916.3	928.8	937.3
127.5°	923.7	926.8	929.9	933.0	936.1	942.6	952.5	962.3	972.2	982.1	990.8
130°	964.9	968.5	971.9	975.4	978.9	984.6	992.5	1000.4	1008.3	1016.2	1024.8
132.5°	1007.0	1010.0	1012.9	1015.8	1018.8	1023.6	1030.3	1037.0	1043.6	1050.3	1058.4
135°	1060.7	1064.5	1068.2	1071.9	1075.6	1079.9	1084.5	1089.2	1093.8	1098.5	1106.1
137.5°	1116.1	1118.7	1121.2	1123.8	1126.4	1129.4	1132.9	1136.4	1140.0	1143.4	1150.4
140°	1152.3	1153.9	1155.5	1157.2	1158.8	1161.1	1164.2	1167.3	1170.4	1173.5	1179.7
142.5°	1182.7	1184.0	1185.5	1187.0	1188.4	1190.6	1193.7	1196.7	1199.8	1202.8	1208.0
145°	1229.1	1228.9	1228.6	1228.4	1228.2	1230.0	1234.1	1238.0	1242.0	1246.0	1249.1
147.5°	1270.6	1269.7	1268.9	1267.9	1267.0	1268.6	1272.5	1276.4	1280.4	1284.3	1285.7
150°	1297.6	1296.0	1294.3	1292.6	1291.0	1292.1	1295.8	1299.6	1303.3	1307.1	1308.5
152.5°	1320.3	1318.5	1316.6	1314.8	1313.0	1313.9	1317.4	1321.0	1324.6	1328.1	1329.6
155°	1353.4	1351.3	1349.2	1347.0	1345.0	1345.3	1348.2	1350.9	1353.8	1356.6	1358.0
157.5°	1379.3	1377.5	1375.7	1374.0	1372.2	1372.3	1374.2	1376.2	1378.2	1380.2	1381.7
160°	1394.5	1393.1	1391.6	1390.3	1388.9	1388.9	1390.3	1391.6	1393.1	1394.5	1395.9
162.5°	1408.0	1406.5	1405.2	1403.8	1402.3	1402.2	1403.4	1404.6	1405.9	1407.1	1408.7
165°	1426.1	1424.7	1423.2	1421.9	1420.5	1420.1	1420.8	1421.5	1422.2	1422.9	1424.5
167.5°	1439.6	1438.1	1436.8	1435.4	1433.9	1433.6	1434.3	1434.9	1435.5	1436.1	1437.8
170°	1447.2	1445.7	1444.3	1442.9	1441.5	1441.1	1441.5	1442.0	1442.4	1442.9	1444.6
172.5°	1452.2	1450.8	1449.4	1447.9	1446.6	1446.1	1446.6	1447.0	1447.5	1447.9	1449.6
175°	1458.7	1457.1	1455.4	1453.8	1452.2	1451.6	1452.1	1452.5	1453.0	1453.5	1455.1
177.5°	1459.7	1458.4	1457.2	1455.9	1454.5	1454.0	1454.1	1454.3	1454.5	1454.7	1456.0
180°	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5



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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°	189.0	199.6	210.2	217.1	220.5	223.9	227.2	230.5
90°	194.5	205.9	217.1	224.6	228.1	231.6	235.1	238.7
92.5°	188.1	198.7	209.2	216.2	219.6	222.8	226.2	229.5
95°	194.1	204.9	215.8	222.6	225.3	228.2	231.0	233.8
97.5°	197.2	207.5	217.8	224.6	227.9	231.2	234.5	237.8
100°	196.8	208.1	219.4	226.6	229.9	233.2	236.4	239.6
102.5°	192.9	204.5	216.1	223.6	227.0	230.5	233.9	237.4
105°	185.5	196.9	208.4	215.9	219.6	223.4	227.1	230.8
107.5°	190.6	196.6	202.5	207.3	211.0	214.7	218.4	222.2
110°	237.1	221.9	206.6	200.8	204.6	208.3	212.0	215.8



TEST NUMBER: P331575-935

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	387.4	310.1	232.9	196.0	199.6	203.1	206.6	210.2
115°	516.9	416.1	315.4	258.0	243.9	229.9	215.9	201.7
117.5°	741.6	722.9	704.1	668.4	615.6	562.8	510.1	457.3
120°	845.6	855.5	865.4	855.9	827.2	798.3	769.6	740.7
122.5°	887.1	895.7	904.3	906.7	903.0	899.2	895.5	891.7
125°	945.8	954.3	962.8	968.5	971.6	974.5	977.5	980.5
127.5°	999.4	1008.1	1016.8	1022.4	1024.8	1027.1	1029.5	1031.9
130°	1033.5	1042.2	1050.9	1056.1	1057.9	1059.7	1061.5	1063.3
132.5°	1066.5	1074.6	1082.7	1087.6	1089.4	1091.2	1093.0	1094.8
135°	1113.8	1121.5	1129.1	1133.8	1135.3	1136.9	1138.4	1140.0
137.5°	1157.4	1164.3	1171.3	1175.3	1176.1	1177.1	1178.0	1179.0
140°	1185.8	1192.0	1198.2	1201.4	1201.8	1202.1	1202.5	1202.8
142.5°	1213.1	1218.3	1223.5	1226.2	1226.3	1226.5	1226.6	1226.8
145°	1252.3	1255.4	1258.6	1260.2	1260.3	1260.4	1260.5	1260.7
147.5°	1287.1	1288.6	1290.0	1290.5	1290.1	1289.8	1289.3	1289.0
150°	1309.8	1311.3	1312.7	1312.8	1311.6	1310.4	1309.2	1308.1
152.5°	1330.9	1332.3	1333.8	1333.7	1332.1	1330.6	1329.0	1327.5
155°	1359.3	1360.8	1362.2	1361.9	1360.0	1358.2	1356.3	1354.4
157.5°	1383.4	1384.9	1386.6	1386.4	1384.6	1382.8	1381.0	1379.1
160°	1397.3	1398.7	1400.1	1400.0	1398.4	1396.7	1395.1	1393.4
162.5°	1410.3	1411.9	1413.5	1413.2	1411.3	1409.2	1407.2	1405.2
165°	1426.2	1427.8	1429.4	1429.4	1427.8	1426.2	1424.5	1422.9
167.5°	1439.4	1441.1	1442.7	1442.5	1440.4	1438.3	1436.1	1434.1
170°	1446.2	1447.9	1449.5	1449.2	1447.2	1445.0	1442.9	1440.8
172.5°	1451.2	1452.9	1454.5	1454.3	1452.2	1450.1	1447.9	1445.9
175°	1456.7	1458.4	1460.0	1459.7	1457.3	1455.0	1452.6	1450.3
177.5°	1457.3	1458.6	1460.0	1459.7	1458.1	1456.4	1454.7	1453.0
180°	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5

(END OF REPORT)