

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: P331581-930

Luminaire Tested: **S122DIW-S865D1440U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331581-930
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-S865D1440U930-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7548.0 lumens
Efficiency: N/A
Efficacy: 98.5 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

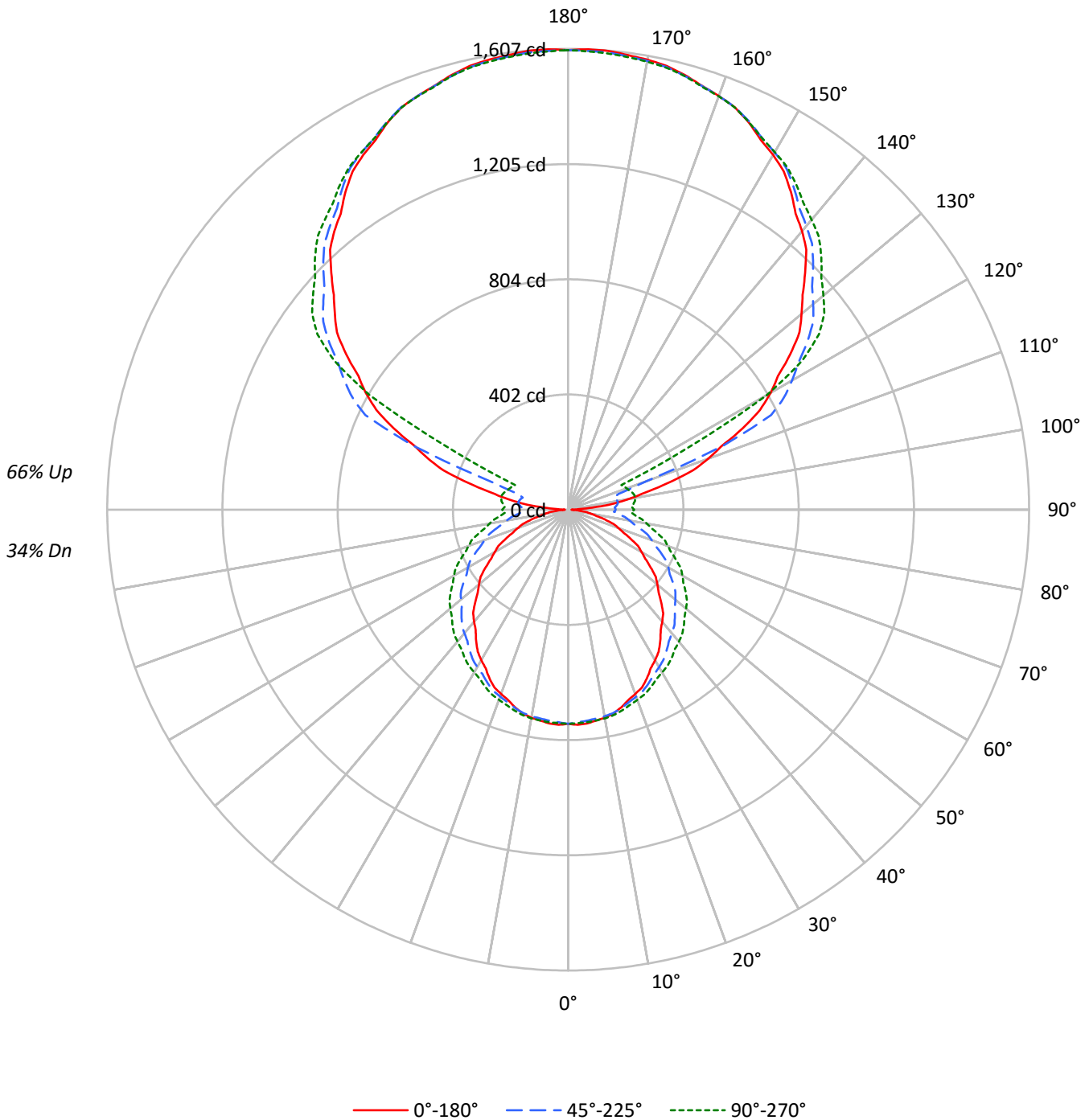
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331581-930

CATALOG NUMBER: S122DIW-S865D1440U930-4F0-1E-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	0
RCR																		
0	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	34
1	93	88	84	80	84	80	76	73	63	61	59	48	47	45	35	34	33	26
2	84	77	70	65	76	69	64	59	55	51	48	42	39	37	30	28	27	21
3	77	67	59	53	69	60	54	49	48	43	40	37	33	31	26	24	22	17
4	70	59	51	45	63	53	46	41	42	37	33	32	29	26	23	21	19	15
5	64	52	44	38	57	47	40	35	38	33	28	29	25	22	21	18	16	13
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	19	16	14	11
7	54	42	34	28	49	38	31	26	31	25	21	24	20	17	17	14	12	10
8	50	38	30	25	45	34	28	23	28	23	19	21	18	15	16	13	11	9
9	47	34	27	22	42	31	25	20	25	20	17	20	16	13	14	12	10	8
10	43	31	24	20	39	29	22	18	23	18	15	18	14	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12053	12053	12053
5°	12111	11602	11558
10°	12036	11258	11133
15°	11869	10896	10685
20°	11659	10507	10254
25°	11452	10132	9863
30°	11160	9747	9469
35°	10866	9375	9193
40°	10556	9059	8916
45°	10260	8774	8678
50°	9944	8519	8446
55°	9611	8242	8208
60°	9207	7957	7957
65°	8784	7620	7658
70°	8310	7260	7336
75°	7704	6907	7041
80°	6744	6545	6739
85°	5835	6234	6508



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	0.9
10°-20°	202.8	2.7
20°-30°	307.4	4.1
30°-40°	374.4	5.0
40°-50°	402.8	5.3
50°-60°	391.1	5.2
60°-70°	341.5	4.5
70°-80°	262.9	3.5
80°-90°	180.4	2.4
90°-100°	175.0	2.3
100°-110°	284.8	3.8
110°-120°	582.6	7.7
120°-130°	897.7	11.9
130°-140°	933.6	12.4
140°-150°	857.4	11.4
150°-160°	687.4	9.1
160°-170°	443.0	5.9
170°-180°	152.5	2.0
0°-30°	580.9	7.7
0°-40°	955.3	12.7
0°-60°	1749.2	23.2
0°-90°	2534.0	33.6
90°-120°	1042.4	13.8
90°-150°	3731.1	49.4
90°-180°	5014.0	66.4
0°-180°	7548.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	749	745	739	745	744	71
15°	714	716	716	725	725	201
25°	649	657	666	679	683	298
35°	559	578	598	621	630	349
45°	459	488	526	558	570	354
55°	352	392	447	484	500	314
65°	240	294	357	400	415	239
75°	133	194	263	308	324	141
85°	39	106	175	219	236	42
90°	12	88	166	213	230	11
95°	84	100	170	215	228	99
105°	358	406	164	212	231	383
115°	671	705	780	300	204	660
125°	945	962	1017	1053	1067	843
135°	1168	1186	1207	1240	1248	902
145°	1353	1353	1372	1386	1386	846
155°	1490	1481	1494	1500	1491	686
165°	1570	1564	1566	1574	1566	443
175°	1606	1598	1600	1607	1597	153
180°	1602	1602	1602	1602	1602	



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CATALOG NUMBER: S122DIW-S865D1440U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	750.8	750.2	749.7	749.1	748.5	747.5	746.2	744.9	743.5	742.2	743.1
5°	748.6	748.0	747.2	746.5	745.8	744.7	743.2	741.8	740.4	738.9	740.4
7.5°	741.9	741.4	740.9	740.5	740.0	739.2	738.1	737.0	735.9	734.8	736.5
10°	736.8	736.3	735.8	735.3	734.8	734.3	733.5	732.8	732.1	731.3	733.3
12.5°	728.1	728.2	728.3	728.4	728.5	728.2	727.7	727.2	726.7	726.1	728.1
15°	714.0	714.5	715.0	715.5	715.9	716.2	716.2	716.2	716.2	716.2	718.4
17.5°	695.9	696.8	697.9	698.9	699.9	700.7	701.6	702.3	703.1	703.8	706.1
20°	683.7	684.9	686.2	687.4	688.5	689.7	690.6	691.5	692.5	693.5	696.1
22.5°	670.7	672.1	673.5	674.9	676.3	677.7	679.1	680.4	681.8	683.1	685.7
25°	649.1	650.8	652.5	654.2	655.8	657.8	659.9	662.1	664.2	666.4	669.3
27.5°	623.1	625.9	628.6	631.4	634.1	636.7	639.3	641.9	644.4	646.9	650.6
30°	605.8	608.9	612.1	615.2	618.3	621.5	624.6	627.7	630.9	634.0	637.8
32.5°	586.8	590.3	593.8	597.4	600.9	604.5	608.1	611.9	615.6	619.2	623.7
35°	559.3	563.4	567.5	571.6	575.7	580.0	584.6	589.1	593.7	598.3	603.6
37.5°	529.5	534.2	538.9	543.6	548.3	553.6	559.5	565.5	571.4	577.3	583.2
40°	509.6	514.9	520.2	525.5	530.7	536.6	543.1	549.6	556.1	562.6	568.8
42.5°	490.5	495.8	501.1	506.4	511.7	518.0	525.5	533.0	540.4	547.9	554.6
45°	458.7	465.2	471.7	478.2	484.7	492.1	500.5	509.0	517.4	525.8	533.2
47.5°	427.3	434.4	441.5	448.6	455.6	464.1	473.9	483.8	493.7	503.5	511.3
50°	405.7	413.1	420.6	428.0	435.5	444.7	455.4	466.3	477.1	488.0	496.1
52.5°	384.9	392.7	400.6	408.5	416.3	425.9	437.3	448.7	460.1	471.5	479.8
55°	351.6	360.3	368.9	377.6	386.2	396.8	409.3	421.8	434.3	446.8	455.4
57.5°	318.7	328.5	338.3	348.0	357.8	369.0	381.7	394.5	407.2	420.0	429.3
60°	295.4	305.7	316.0	326.4	336.7	348.7	362.4	376.1	389.8	403.6	412.7
62.5°	274.6	285.3	296.0	306.7	317.5	329.7	343.4	357.1	370.8	384.5	394.2
65°	240.2	251.9	263.7	275.5	287.3	300.3	314.5	328.6	342.8	357.0	366.9
67.5°	208.6	220.9	233.2	245.5	257.8	271.3	285.8	300.3	314.8	329.3	339.2
70°	186.1	198.6	211.1	223.6	236.1	249.8	264.7	279.6	294.5	309.4	319.8
72.5°	165.3	178.2	191.1	204.0	216.9	230.8	246.0	261.1	276.1	291.2	301.4
75°	133.1	146.5	160.0	173.5	186.9	201.4	216.7	232.1	247.5	262.9	273.2
77.5°	101.9	116.0	130.1	144.1	158.2	173.1	188.7	204.4	220.0	235.6	245.9
80°	81.1	95.8	110.5	125.1	139.8	154.9	170.6	186.2	201.8	217.4	227.6
82.5°	63.8	78.3	92.8	107.2	121.7	136.9	152.7	168.5	184.3	200.2	210.3
85°	39.0	53.9	68.7	83.6	98.6	113.7	129.1	144.5	159.9	175.3	185.4
87.5°	21.4	36.4	51.2	66.1	81.0	96.4	112.2	128.0	143.7	159.6	169.7
90°	12.0	28.8	45.6	62.3	79.1	96.2	113.7	131.1	148.5	166.0	176.9
92.5°	33.3	46.1	58.9	71.6	84.3	98.6	114.4	130.2	146.1	161.9	172.0
95°	84.1	86.8	89.6	92.4	95.2	104.7	121.0	137.2	153.4	169.7	180.1
97.5°	157.2	143.2	129.3	115.4	101.5	103.5	121.6	139.6	157.6	175.6	185.6
100°	212.8	186.4	160.0	133.6	107.2	102.9	120.7	138.6	156.5	174.3	185.2
102.5°	273.2	273.9	274.5	275.2	275.8	264.3	240.8	217.2	193.6	170.1	181.5
105°	357.9	372.6	387.3	402.0	416.7	395.2	337.3	279.5	221.6	163.8	175.0
107.5°	455.8	467.6	479.4	491.2	503.0	472.8	400.4	328.0	255.6	183.2	188.4
110°	518.0	528.2	538.4	548.7	558.9	532.6	469.9	407.2	344.5	281.9	263.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	577.4	586.2	595.0	603.9	612.7	613.5	606.3	599.2	591.9	584.7	498.5
115°	671.1	678.1	685.1	692.1	699.2	711.3	728.6	745.8	763.1	780.3	668.3
117.5°	753.7	760.3	767.0	773.6	780.2	790.8	805.2	819.6	834.1	848.5	826.7
120°	814.9	819.8	824.6	829.4	834.2	843.8	858.0	872.3	886.6	900.8	910.6
122.5°	866.9	871.3	875.8	880.3	884.7	894.0	908.1	922.2	936.2	950.3	958.7
125°	944.9	948.2	951.6	955.0	958.3	966.2	978.8	991.4	1004.0	1016.6	1024.9
127.5°	1016.5	1020.0	1023.4	1027.0	1030.5	1037.1	1046.9	1056.8	1066.7	1076.5	1085.1
130°	1062.0	1065.8	1069.8	1073.7	1077.5	1083.4	1091.3	1099.2	1107.1	1114.9	1123.6
132.5°	1108.4	1111.7	1114.9	1118.2	1121.4	1126.4	1133.2	1139.9	1146.6	1153.3	1161.3
135°	1167.6	1171.7	1175.8	1180.0	1184.1	1188.5	1193.2	1197.9	1202.6	1207.4	1215.0
137.5°	1228.6	1231.4	1234.3	1237.1	1239.9	1243.2	1246.9	1250.6	1254.3	1257.9	1264.9
140°	1268.4	1270.3	1272.1	1273.9	1275.8	1278.3	1281.7	1285.0	1288.3	1291.6	1297.7
142.5°	1301.9	1303.5	1305.1	1306.7	1308.3	1310.8	1314.2	1317.5	1320.9	1324.2	1329.3
145°	1353.2	1352.9	1352.7	1352.4	1352.2	1354.2	1358.6	1363.0	1367.3	1371.7	1375.0
147.5°	1398.9	1397.9	1396.9	1396.0	1395.0	1396.6	1400.9	1405.3	1409.7	1414.0	1415.5
150°	1428.6	1426.8	1425.0	1423.2	1421.3	1422.5	1426.6	1430.8	1434.8	1439.0	1440.6
152.5°	1453.6	1451.6	1449.6	1447.6	1445.6	1446.5	1450.4	1454.3	1458.2	1462.2	1463.7
155°	1490.0	1487.7	1485.4	1483.0	1480.7	1481.2	1484.3	1487.4	1490.4	1493.5	1495.0
157.5°	1518.6	1516.6	1514.7	1512.7	1510.7	1510.8	1513.0	1515.2	1517.3	1519.5	1521.3
160°	1535.2	1533.7	1532.2	1530.6	1529.1	1529.1	1530.6	1532.2	1533.7	1535.2	1536.8
162.5°	1550.0	1548.6	1547.0	1545.5	1543.9	1543.8	1545.2	1546.5	1547.8	1549.2	1550.9
165°	1570.0	1568.5	1566.9	1565.4	1563.8	1563.5	1564.2	1565.0	1565.8	1566.5	1568.4
167.5°	1584.9	1583.3	1581.8	1580.2	1578.7	1578.3	1579.0	1579.7	1580.5	1581.2	1583.0
170°	1593.3	1591.7	1590.2	1588.6	1587.1	1586.5	1587.1	1587.6	1588.0	1588.6	1590.4
172.5°	1598.8	1597.3	1595.7	1594.2	1592.6	1592.1	1592.6	1593.1	1593.7	1594.2	1595.9
175°	1606.0	1604.2	1602.4	1600.6	1598.8	1598.1	1598.6	1599.1	1599.7	1600.2	1602.0
177.5°	1607.1	1605.7	1604.3	1602.8	1601.3	1600.8	1600.9	1601.2	1601.3	1601.6	1603.0
180°	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	744.0	745.0	746.0	746.3	745.9	745.5	745.1	744.8
5°	741.8	743.2	744.7	745.3	745.0	744.8	744.5	744.3
7.5°	738.3	740.0	741.8	742.5	742.2	742.0	741.8	741.5
10°	735.2	737.1	739.1	739.9	739.6	739.4	739.2	738.9
12.5°	730.0	731.9	733.9	734.7	734.4	734.2	733.9	733.7
15°	720.5	722.7	724.9	725.8	725.5	725.3	725.0	724.9
17.5°	708.4	710.6	712.9	714.0	714.0	714.0	714.0	714.0
20°	698.8	701.4	704.0	705.4	705.4	705.4	705.4	705.4
22.5°	688.4	691.0	693.7	695.2	695.5	695.9	696.3	696.8
25°	672.2	675.1	678.0	679.8	680.4	681.2	681.9	682.7
27.5°	654.3	657.9	661.5	663.7	664.2	664.7	665.3	665.8
30°	641.6	645.5	649.4	651.7	652.3	653.1	653.8	654.5
32.5°	628.1	632.5	636.9	639.8	641.1	642.4	643.7	645.0
35°	608.9	614.2	619.5	622.9	624.6	626.3	627.9	629.7
37.5°	589.0	594.8	600.7	604.5	606.3	608.1	609.9	611.7
40°	575.0	581.3	587.6	591.7	593.9	596.1	598.3	600.5
42.5°	561.5	568.3	575.2	579.7	581.8	584.0	586.1	588.3
45°	540.7	548.1	555.6	560.5	563.0	565.3	567.8	570.1
47.5°	519.1	526.8	534.7	539.9	542.5	545.2	547.8	550.5
50°	504.3	512.4	520.7	526.0	528.6	531.3	533.9	536.6
52.5°	488.2	496.6	504.9	510.5	513.4	516.2	519.0	521.9
55°	464.1	472.8	481.4	487.3	490.4	493.6	496.7	499.8
57.5°	438.6	447.9	457.3	463.6	466.7	469.9	473.0	476.2
60°	421.8	431.0	440.1	446.3	449.7	453.1	456.4	459.8
62.5°	403.9	413.6	423.3	429.8	432.9	436.1	439.3	442.5
65°	376.7	386.6	396.5	402.9	406.0	409.2	412.3	415.4
67.5°	349.2	359.1	369.2	375.8	379.0	382.3	385.6	388.8
70°	330.1	340.4	350.7	357.3	360.3	363.1	366.1	368.9
72.5°	311.5	321.6	331.8	338.6	342.1	345.5	349.0	352.5
75°	283.6	293.9	304.3	311.0	314.1	317.2	320.3	323.5
77.5°	256.2	266.5	276.8	283.6	287.0	290.3	293.8	297.1
80°	237.7	247.8	257.9	264.6	267.9	271.3	274.7	278.0
82.5°	220.4	230.4	240.5	247.2	250.4	253.5	256.7	259.8
85°	195.4	205.5	215.6	222.4	225.8	229.1	232.4	235.9
87.5°	179.7	189.7	199.8	206.4	209.6	212.8	216.0	219.2
90°	187.8	198.7	209.6	216.8	220.1	223.6	227.0	230.4
92.5°	182.1	192.2	202.3	209.0	212.1	215.3	218.5	221.7
95°	190.5	200.9	211.3	217.8	220.5	223.1	225.8	228.4
97.5°	195.5	205.5	215.3	221.8	225.0	228.2	231.3	234.5
100°	196.2	207.2	218.1	225.2	228.4	231.5	234.6	237.8
102.5°	192.8	204.2	215.6	223.0	226.3	229.8	233.1	236.4
105°	186.3	197.5	208.8	216.2	219.9	223.6	227.2	230.9
107.5°	193.6	198.8	204.0	208.4	212.1	215.7	219.4	223.1
110°	245.7	227.7	209.6	202.4	206.1	209.8	213.4	217.1



TEST NUMBER: P331581-930

CATALOG NUMBER: S122DIW-S865D1440U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	412.1	325.8	239.5	198.1	201.5	205.0	208.5	212.0
115°	556.2	444.1	332.0	268.0	252.1	236.2	220.3	204.3
117.5°	805.0	783.3	761.5	721.4	662.8	604.4	545.8	487.3
120°	920.5	930.3	940.1	929.0	896.8	864.6	832.5	800.4
122.5°	967.1	975.5	983.9	985.9	981.4	976.9	972.4	967.9
125°	1033.2	1041.5	1049.8	1055.4	1058.3	1061.3	1064.2	1067.1
127.5°	1093.7	1102.3	1110.9	1116.3	1118.6	1120.9	1123.2	1125.4
130°	1132.1	1140.8	1149.3	1154.5	1156.2	1157.8	1159.5	1161.1
132.5°	1169.4	1177.4	1185.4	1190.2	1191.8	1193.5	1195.1	1196.9
135°	1222.6	1230.3	1237.9	1242.4	1243.8	1245.2	1246.7	1248.1
137.5°	1271.9	1278.8	1285.7	1289.6	1290.4	1291.1	1291.8	1292.7
140°	1303.9	1310.1	1316.2	1319.4	1319.6	1319.7	1319.9	1320.1
142.5°	1334.6	1339.8	1344.9	1347.5	1347.4	1347.4	1347.4	1347.4
145°	1378.3	1381.5	1384.7	1386.3	1386.3	1386.2	1386.1	1385.9
147.5°	1417.0	1418.5	1420.1	1420.6	1420.1	1419.6	1419.1	1418.5
150°	1442.1	1443.7	1445.2	1445.3	1444.1	1442.8	1441.4	1440.1
152.5°	1465.3	1466.8	1468.4	1468.3	1466.6	1464.9	1463.2	1461.5
155°	1496.6	1498.1	1499.7	1499.4	1497.4	1495.3	1493.2	1491.2
157.5°	1523.0	1524.7	1526.5	1526.3	1524.4	1522.3	1520.3	1518.3
160°	1538.3	1539.9	1541.4	1541.3	1539.5	1537.7	1535.9	1534.1
162.5°	1552.7	1554.4	1556.2	1555.9	1553.7	1551.5	1549.3	1547.1
165°	1570.2	1572.0	1573.8	1573.8	1572.0	1570.2	1568.4	1566.5
167.5°	1584.8	1586.6	1588.4	1588.1	1585.8	1583.5	1581.2	1578.8
170°	1592.2	1594.0	1595.8	1595.5	1593.3	1590.9	1588.6	1586.2
172.5°	1597.7	1599.5	1601.3	1601.1	1598.8	1596.4	1594.2	1591.8
175°	1603.8	1605.6	1607.4	1607.0	1604.4	1601.8	1599.3	1596.7
177.5°	1604.4	1605.9	1607.4	1607.1	1605.2	1603.4	1601.6	1599.7
180°	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5

(END OF REPORT)