

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: P331581-927

Luminaire Tested: **S122DIW-S865D1440U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331581-927
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-S865D1440U927-4F0-1E-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: 7334.0 lumens
Efficiency: N/A
Efficacy: 95.7 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

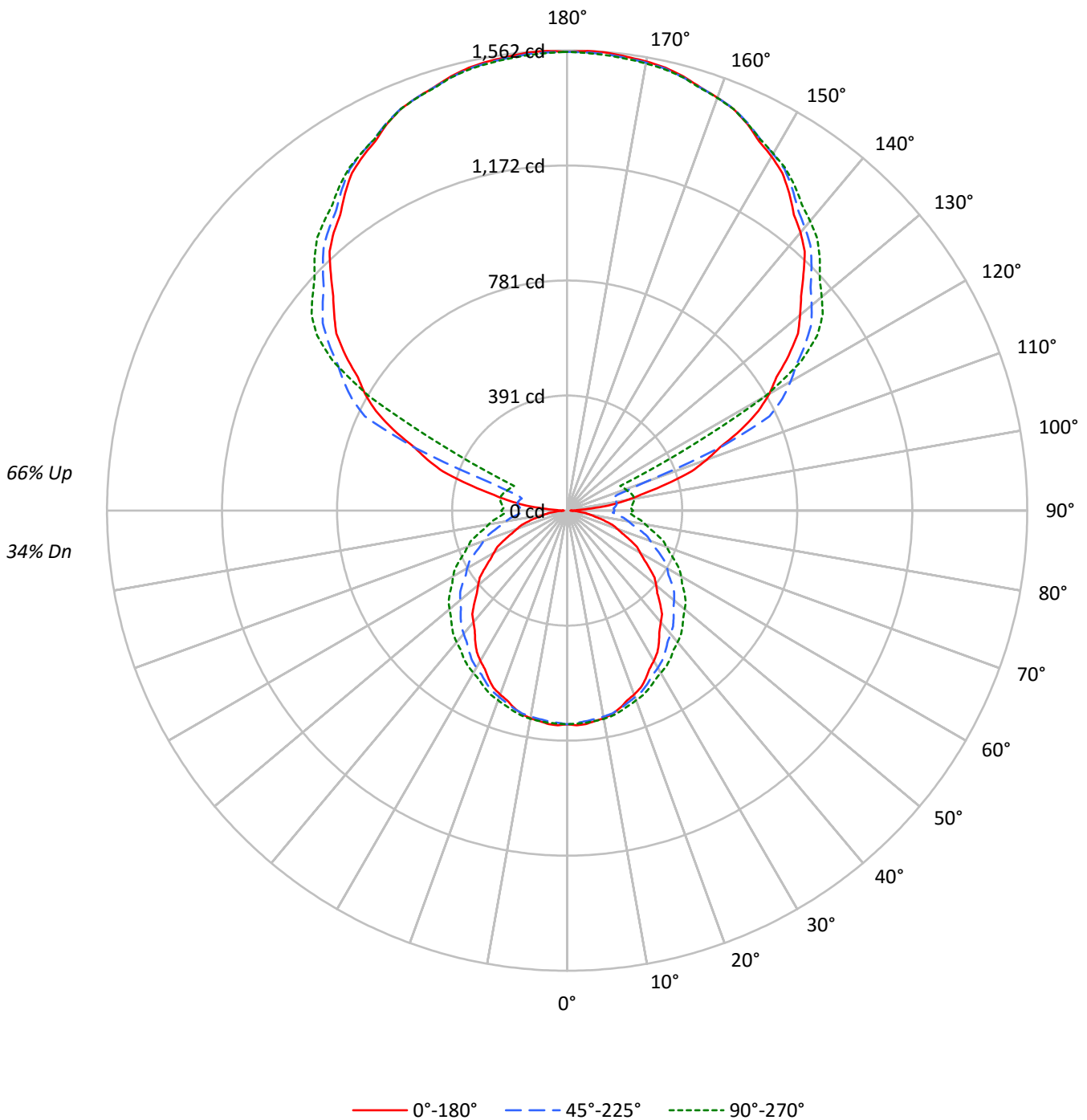
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331581-927

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Luminous Intensity Polar Plot





TEST NUMBER: P331581-927

CATALOG NUMBER: S122DIW-S865D1440U927-4F0-1E-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°	11711	11711	11711
5°	11768	11274	11230
10°	11694	10940	10818
15°	11533	10587	10382
20°	11328	10209	9963
25°	11128	9845	9582
30°	10845	9471	9201
35°	10557	9109	8932
40°	10256	8801	8662
45°	9969	8526	8433
50°	9662	8276	8207
55°	9341	8008	7975
60°	8945	7730	7732
65°	8536	7405	7441
70°	8073	7053	7130
75°	7484	6710	6841
80°	6553	6361	6548
85°	5671	6056	6323



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.7	0.9
10°-20°	197.1	2.7
20°-30°	298.7	4.1
30°-40°	363.8	5.0
40°-50°	391.3	5.3
50°-60°	380.0	5.2
60°-70°	331.8	4.5
70°-80°	255.5	3.5
80°-90°	175.3	2.4
90°-100°	170.1	2.3
100°-110°	276.7	3.8
110°-120°	566.1	7.7
120°-130°	872.2	11.9
130°-140°	907.1	12.4
140°-150°	833.1	11.4
150°-160°	667.9	9.1
160°-170°	430.4	5.9
170°-180°	148.2	2.0
0°-30°	564.5	7.7
0°-40°	928.2	12.7
0°-60°	1699.6	23.2
0°-90°	2462.2	33.6
90°-120°	1012.9	13.8
90°-150°	3625.3	49.4
90°-180°	4872.0	66.4
0°-180°	7334.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	725	725	725	725	725	
5°	727	724	718	724	723	69
15°	694	696	696	705	704	195
25°	631	638	648	660	663	290
35°	543	562	581	604	612	340
45°	446	475	511	542	554	344
55°	342	380	434	471	486	305
65°	233	286	347	388	404	232
75°	129	189	255	299	314	137
85°	38	103	170	213	229	41
90°	12	85	161	207	224	10
95°	82	97	165	208	222	96
105°	348	394	159	206	224	372
115°	652	685	758	292	198	642
125°	918	935	988	1023	1037	819
135°	1134	1153	1173	1205	1213	876
145°	1315	1315	1333	1346	1347	822
155°	1448	1439	1451	1457	1449	667
165°	1526	1519	1522	1529	1522	431
175°	1560	1553	1555	1562	1551	148
180°	1557	1557	1557	1557	1557	



TEST NUMBER: P331581-927

CATALOG NUMBER: S122DIW-S865D1440U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3
2.5°	729.5	729.0	728.4	727.9	727.3	726.4	725.0	723.7	722.4	721.1	722.1
5°	727.4	726.7	726.0	725.3	724.6	723.6	722.2	720.7	719.4	718.0	719.4
7.5°	720.9	720.4	719.9	719.5	719.1	718.3	717.2	716.1	715.0	714.0	715.7
10°	715.9	715.4	714.9	714.5	714.0	713.4	712.7	712.0	711.3	710.6	712.5
12.5°	707.4	707.6	707.7	707.7	707.8	707.6	707.1	706.5	706.1	705.5	707.4
15°	693.8	694.3	694.7	695.2	695.6	695.9	695.9	695.9	695.9	695.9	698.0
17.5°	676.1	677.1	678.1	679.1	680.0	680.9	681.7	682.4	683.2	683.9	686.1
20°	664.3	665.5	666.7	667.9	669.0	670.1	671.0	671.9	672.9	673.8	676.4
22.5°	651.7	653.1	654.4	655.8	657.1	658.5	659.8	661.1	662.4	663.7	666.3
25°	630.7	632.3	634.0	635.6	637.2	639.1	641.2	643.3	645.4	647.5	650.3
27.5°	605.5	608.2	610.8	613.5	616.2	618.7	621.2	623.7	626.1	628.6	632.2
30°	588.7	591.7	594.8	597.8	600.8	603.9	606.9	609.9	613.0	616.0	619.7
32.5°	570.1	573.5	576.9	580.4	583.8	587.3	590.9	594.5	598.1	601.7	606.0
35°	543.4	547.4	551.4	555.4	559.4	563.6	568.0	572.4	576.9	581.3	586.5
37.5°	514.4	519.0	523.6	528.1	532.7	537.9	543.7	549.5	555.2	560.9	566.6
40°	495.1	500.3	505.4	510.6	515.6	521.4	527.7	534.0	540.3	546.6	552.7
42.5°	476.6	481.7	486.9	492.0	497.2	503.4	510.6	517.8	525.1	532.3	538.9
45°	445.7	452.0	458.3	464.6	471.0	478.2	486.3	494.6	502.7	510.9	518.1
47.5°	415.2	422.1	429.0	435.9	442.7	450.9	460.5	470.1	479.7	489.3	496.8
50°	394.2	401.4	408.7	415.9	423.2	432.1	442.5	453.0	463.6	474.1	482.0
52.5°	374.0	381.6	389.3	396.9	404.5	413.8	424.9	435.9	447.0	458.1	466.2
55°	341.7	350.1	358.5	366.9	375.3	385.6	397.7	409.9	422.0	434.1	442.5
57.5°	309.7	319.2	328.7	338.1	347.6	358.5	370.9	383.3	395.7	408.1	417.2
60°	287.0	297.0	307.0	317.1	327.2	338.8	352.1	365.4	378.7	392.1	401.0
62.5°	266.8	277.2	287.6	298.0	308.5	320.4	333.7	347.0	360.3	373.6	383.0
65°	233.4	244.8	256.3	267.7	279.2	291.8	305.5	319.3	333.1	346.9	356.5
67.5°	202.6	214.6	226.6	238.5	250.5	263.6	277.7	291.8	305.9	320.0	329.6
70°	180.8	193.0	205.1	217.2	229.4	242.7	257.2	271.6	286.1	300.6	310.7
72.5°	160.7	173.2	185.7	198.2	210.7	224.3	239.0	253.7	268.3	283.0	292.9
75°	129.3	142.4	155.4	168.6	181.6	195.7	210.6	225.5	240.5	255.4	265.5
77.5°	99.0	112.7	126.4	140.1	153.8	168.2	183.4	198.6	213.7	228.9	238.9
80°	78.8	93.1	107.3	121.6	135.9	150.5	165.7	180.9	196.1	211.3	221.1
82.5°	62.0	76.0	90.2	104.2	118.3	133.0	148.4	163.7	179.1	194.5	204.3
85°	37.9	52.4	66.8	81.3	95.8	110.5	125.4	140.4	155.3	170.3	180.1
87.5°	20.8	35.3	49.7	64.2	78.7	93.6	109.0	124.4	139.7	155.0	164.9
90°	11.6	28.0	44.3	60.5	76.8	93.5	110.4	127.4	144.3	161.3	171.9
92.5°	32.4	44.8	57.2	69.6	81.9	95.8	111.1	126.5	142.0	157.3	167.2
95°	81.7	84.4	87.1	89.8	92.5	101.7	117.6	133.3	149.1	164.9	175.0
97.5°	152.7	139.2	125.6	112.2	98.6	100.6	118.1	135.6	153.1	170.6	180.3
100°	206.8	181.1	155.4	129.8	104.2	100.0	117.3	134.7	152.0	169.4	180.0
102.5°	265.5	266.1	266.7	267.4	268.0	256.8	233.9	211.0	188.1	165.2	176.3
105°	347.8	362.0	376.4	390.6	404.9	384.0	327.7	271.6	215.3	159.1	170.1
107.5°	442.9	454.3	465.8	477.3	488.8	459.4	389.0	318.7	248.3	178.0	183.1
110°	503.4	513.3	523.2	533.1	543.0	517.5	456.6	395.7	334.8	273.9	256.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	561.0	569.6	578.1	586.8	595.3	596.1	589.1	582.2	575.1	568.2	484.3
115°	652.0	658.9	665.7	672.5	679.4	691.2	707.9	724.7	741.5	758.2	649.4
117.5°	732.4	738.8	745.2	751.6	758.1	768.3	782.4	796.4	810.4	824.4	803.3
120°	791.8	796.5	801.2	805.9	810.6	819.8	833.7	847.6	861.4	875.3	884.8
122.5°	842.3	846.6	851.0	855.3	859.6	868.6	882.3	896.0	909.7	923.4	931.5
125°	918.1	921.3	924.6	927.9	931.1	938.8	951.1	963.3	975.6	987.8	995.9
127.5°	987.7	991.1	994.4	997.8	1001.2	1007.7	1017.2	1026.8	1036.4	1046.0	1054.3
130°	1031.9	1035.6	1039.4	1043.2	1046.9	1052.7	1060.3	1068.0	1075.7	1083.3	1091.7
132.5°	1077.0	1080.1	1083.3	1086.5	1089.6	1094.5	1101.1	1107.6	1114.1	1120.6	1128.4
135°	1134.5	1138.5	1142.5	1146.5	1150.5	1154.8	1159.4	1164.0	1168.5	1173.1	1180.6
137.5°	1193.7	1196.5	1199.3	1202.1	1204.8	1207.9	1211.6	1215.1	1218.7	1222.3	1229.0
140°	1232.5	1234.3	1236.0	1237.8	1239.6	1242.1	1245.3	1248.6	1251.7	1255.0	1260.9
142.5°	1265.0	1266.5	1268.1	1269.6	1271.2	1273.7	1276.9	1280.2	1283.4	1286.7	1291.7
145°	1314.9	1314.5	1314.3	1314.1	1313.8	1315.8	1320.1	1324.4	1328.6	1332.8	1336.0
147.5°	1359.2	1358.3	1357.3	1356.4	1355.4	1357.0	1361.2	1365.5	1369.7	1373.9	1375.4
150°	1388.1	1386.3	1384.6	1382.8	1381.0	1382.2	1386.2	1390.2	1394.2	1398.2	1399.7
152.5°	1412.4	1410.5	1408.5	1406.5	1404.6	1405.5	1409.3	1413.1	1416.9	1420.7	1422.2
155°	1447.8	1445.5	1443.3	1441.0	1438.8	1439.2	1442.2	1445.2	1448.2	1451.1	1452.6
157.5°	1475.5	1473.6	1471.7	1469.8	1467.9	1468.0	1470.1	1472.2	1474.3	1476.4	1478.1
160°	1491.7	1490.2	1488.7	1487.2	1485.7	1485.7	1487.2	1488.7	1490.2	1491.7	1493.2
162.5°	1506.1	1504.7	1503.2	1501.7	1500.2	1500.0	1501.3	1502.6	1504.0	1505.2	1507.0
165°	1525.5	1524.0	1522.5	1521.0	1519.5	1519.2	1519.9	1520.6	1521.4	1522.1	1523.9
167.5°	1539.9	1538.4	1536.9	1535.4	1533.9	1533.5	1534.2	1534.9	1535.6	1536.4	1538.1
170°	1548.1	1546.6	1545.1	1543.6	1542.1	1541.5	1542.1	1542.5	1543.0	1543.6	1545.3
172.5°	1553.5	1552.0	1550.5	1549.0	1547.4	1547.0	1547.4	1547.9	1548.5	1549.0	1550.7
175°	1560.4	1558.7	1557.0	1555.2	1553.5	1552.8	1553.3	1553.8	1554.3	1554.8	1556.6
177.5°	1561.5	1560.2	1558.8	1557.4	1555.9	1555.4	1555.5	1555.8	1555.9	1556.2	1557.6
180°	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3
2.5°	722.9	723.9	724.8	725.2	724.8	724.4	724.0	723.7
5°	720.7	722.2	723.6	724.1	723.9	723.7	723.4	723.2
7.5°	717.3	719.0	720.7	721.4	721.2	721.0	720.7	720.5
10°	714.3	716.2	718.1	718.9	718.7	718.4	718.2	718.0
12.5°	709.3	711.1	713.0	713.8	713.6	713.4	713.1	712.9
15°	700.1	702.2	704.3	705.2	705.0	704.7	704.5	704.3
17.5°	688.3	690.5	692.7	693.8	693.8	693.8	693.8	693.8
20°	679.0	681.5	684.0	685.4	685.4	685.4	685.4	685.4
22.5°	668.8	671.5	674.0	675.5	675.8	676.2	676.6	677.0
25°	653.2	655.9	658.8	660.5	661.2	661.9	662.6	663.3
27.5°	635.7	639.3	642.8	644.8	645.4	645.9	646.4	646.9
30°	623.4	627.2	631.0	633.2	633.8	634.5	635.3	636.0
32.5°	610.3	614.6	618.9	621.7	622.9	624.2	625.4	626.7
35°	591.6	596.8	601.9	605.2	606.9	608.6	610.1	611.8
37.5°	572.3	578.0	583.7	587.4	589.1	590.9	592.6	594.4
40°	558.7	564.8	570.9	575.0	577.1	579.2	581.3	583.4
42.5°	545.6	552.2	558.9	563.2	565.3	567.4	569.5	571.6
45°	525.4	532.6	539.9	544.6	547.0	549.3	551.7	554.0
47.5°	504.4	511.9	519.5	524.6	527.1	529.7	532.3	534.9
50°	490.0	497.9	505.9	511.1	513.7	516.3	518.8	521.4
52.5°	474.4	482.5	490.6	496.1	498.8	501.6	504.3	507.1
55°	451.0	459.4	467.8	473.5	476.5	479.6	482.6	485.6
57.5°	426.2	435.2	444.3	450.4	453.4	456.5	459.6	462.7
60°	409.9	418.7	427.6	433.6	437.0	440.2	443.5	446.8
62.5°	392.4	401.9	411.3	417.6	420.6	423.7	426.8	429.9
65°	366.1	375.7	385.2	391.5	394.5	397.6	400.6	403.6
67.5°	339.3	349.0	358.7	365.1	368.3	371.5	374.6	377.8
70°	320.8	330.7	340.8	347.2	350.1	352.8	355.7	358.5
72.5°	302.7	312.5	322.4	329.0	332.4	335.7	339.1	342.5
75°	275.5	285.6	295.6	302.1	305.2	308.2	311.2	314.3
77.5°	249.0	259.0	268.9	275.6	278.8	282.1	285.4	288.7
80°	230.9	240.7	250.6	257.1	260.3	263.6	266.9	270.1
82.5°	214.1	223.9	233.7	240.2	243.3	246.3	249.4	252.5
85°	189.9	199.7	209.5	216.1	219.4	222.6	225.9	229.2
87.5°	174.6	184.3	194.2	200.6	203.7	206.8	209.8	212.9
90°	182.5	193.1	203.7	210.6	213.9	217.2	220.5	223.9
92.5°	177.0	186.7	196.5	203.0	206.1	209.2	212.3	215.4
95°	185.1	195.2	205.3	211.7	214.2	216.8	219.4	221.9
97.5°	190.0	199.6	209.2	215.6	218.6	221.7	224.7	227.8
100°	190.6	201.3	211.9	218.8	221.9	224.9	228.0	231.1
102.5°	187.4	198.4	209.5	216.7	219.9	223.2	226.5	229.7
105°	181.0	191.9	202.9	210.1	213.7	217.2	220.8	224.3
107.5°	188.1	193.1	198.2	202.5	206.0	209.6	213.2	216.7
110°	238.8	221.3	203.7	196.7	200.3	203.8	207.4	211.0



TEST NUMBER: P331581-927

CATALOG NUMBER: S122DIW-S865D1440U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	400.4	316.6	232.7	192.5	195.8	199.2	202.6	206.0
115°	540.4	431.5	322.6	260.4	244.9	229.5	214.0	198.5
117.5°	782.2	761.0	739.9	700.9	644.0	587.2	530.4	473.5
120°	894.4	903.9	913.5	902.6	871.4	840.1	808.9	777.7
122.5°	939.7	947.8	956.0	957.9	953.5	949.2	944.8	940.5
125°	1003.9	1011.9	1020.0	1025.5	1028.3	1031.2	1034.0	1036.9
127.5°	1062.7	1071.0	1079.4	1084.7	1086.9	1089.1	1091.3	1093.5
130°	1100.0	1108.4	1116.7	1121.7	1123.4	1125.0	1126.6	1128.2
132.5°	1136.2	1144.0	1151.8	1156.4	1158.0	1159.7	1161.3	1162.9
135°	1188.0	1195.4	1202.8	1207.2	1208.6	1209.9	1211.3	1212.7
137.5°	1235.8	1242.5	1249.3	1253.0	1253.8	1254.5	1255.2	1256.0
140°	1266.9	1273.0	1278.9	1282.0	1282.1	1282.3	1282.5	1282.6
142.5°	1296.7	1301.8	1306.8	1309.3	1309.2	1309.2	1309.2	1309.2
145°	1339.2	1342.4	1345.4	1347.0	1346.9	1346.9	1346.8	1346.6
147.5°	1376.8	1378.3	1379.8	1380.3	1379.8	1379.3	1378.9	1378.3
150°	1401.2	1402.7	1404.2	1404.3	1403.1	1401.8	1400.6	1399.3
152.5°	1423.7	1425.2	1426.7	1426.6	1425.0	1423.4	1421.7	1420.1
155°	1454.1	1455.6	1457.1	1456.9	1454.9	1452.9	1450.9	1448.9
157.5°	1479.8	1481.5	1483.2	1483.0	1481.1	1479.2	1477.2	1475.3
160°	1494.7	1496.2	1497.7	1497.6	1495.9	1494.1	1492.3	1490.6
162.5°	1508.6	1510.4	1512.0	1511.8	1509.7	1507.5	1505.4	1503.2
165°	1525.7	1527.4	1529.1	1529.1	1527.4	1525.7	1523.9	1522.1
167.5°	1539.8	1541.6	1543.3	1543.1	1540.9	1538.6	1536.4	1534.1
170°	1547.1	1548.8	1550.5	1550.3	1548.1	1545.8	1543.6	1541.3
172.5°	1552.4	1554.2	1555.9	1555.7	1553.5	1551.2	1549.0	1546.7
175°	1558.3	1560.0	1561.8	1561.5	1558.9	1556.4	1553.9	1551.4
177.5°	1558.9	1560.4	1561.8	1561.5	1559.7	1558.0	1556.2	1554.3
180°	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0

(END OF REPORT)