

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: P331582-935

Luminaire Tested: **S122DIW-S865D1440U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331582-935
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-S865D1440U935-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7314.6 lumens
Efficiency: N/A
Efficacy: 95.5 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

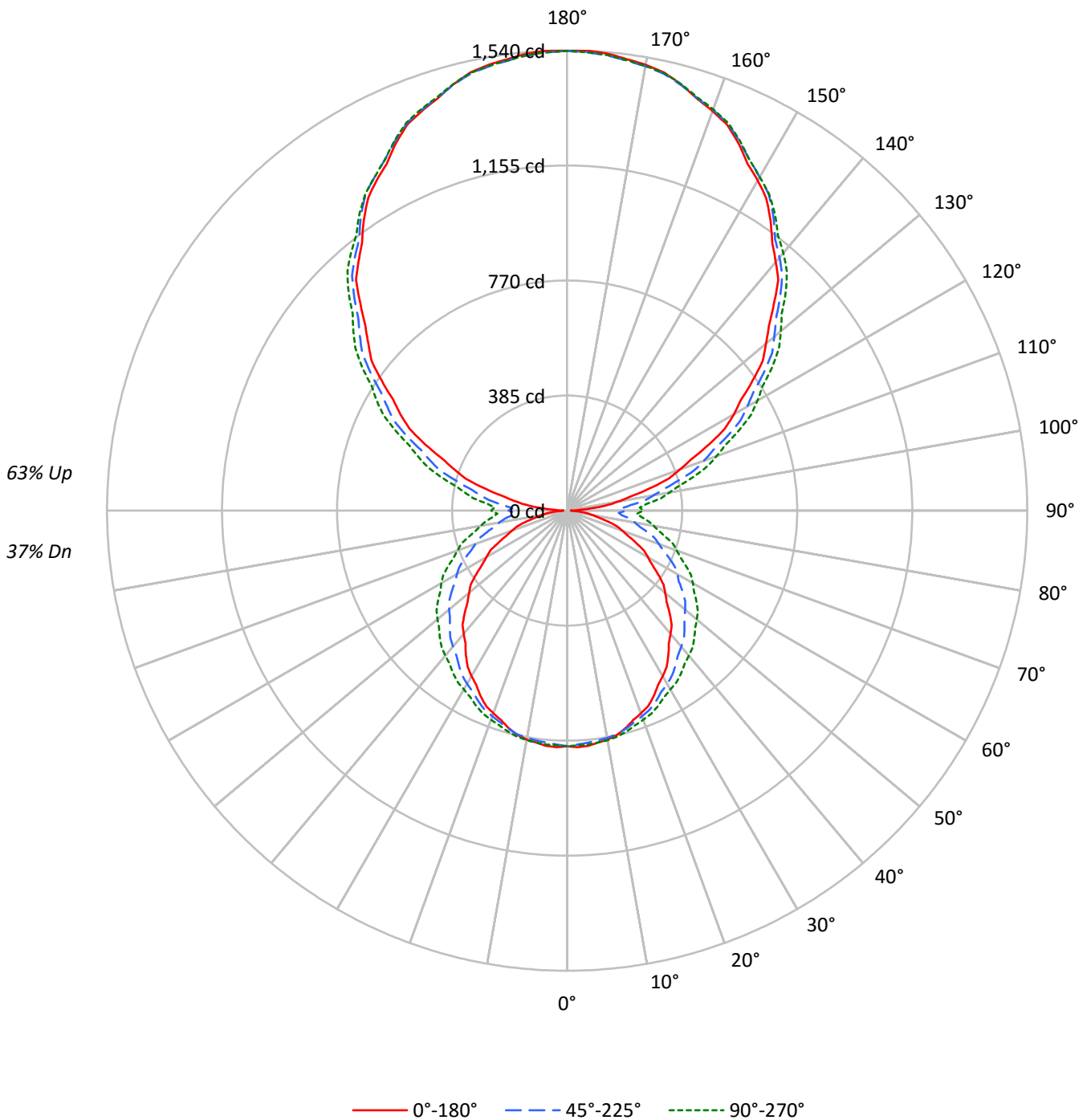
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	0
RCR																		
0	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	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	43	41	38	32	30	28	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	40	35	39	33	29	30	26	23	22	19	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	24	21	18	18	15	13	10
8	50	38	30	25	45	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	24	20	39	29	23	18	24	19	15	19	15	12	14	11	10	7

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	4.4
30°-40°	395.4	5.4
40°-50°	425.3	5.8
50°-60°	413.1	5.6
60°-70°	360.7	4.9
70°-80°	277.7	3.8
80°-90°	192.5	2.6
90°-100°	225.8	3.1
100°-110°	396.5	5.4
110°-120°	579.4	7.9
120°-130°	715.0	9.8
130°-140°	778.2	10.6
140°-150°	751.4	10.3
150°-160°	628.1	8.6
160°-170°	416.6	5.7
170°-180°	145.6	2.0
0°-30°	613.5	8.4
0°-40°	1008.9	13.8
0°-60°	1847.2	25.3
0°-90°	2678.1	36.6
90°-120°	1201.6	16.4
90°-150°	3446.2	47.1
90°-180°	4637.0	63.4
0°-180°	7314.6	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	96	196	238	254	11
95°	77	144	214	256	269	85
105°	285	323	384	425	439	301
115°	524	546	593	625	635	518
125°	758	771	802	828	838	677
135°	978	993	1007	1029	1035	756
145°	1186	1195	1203	1211	1212	741
155°	1356	1360	1364	1370	1367	624
165°	1476	1475	1474	1483	1477	416
175°	1536	1532	1529	1537	1530	146
180°	1538	1538	1538	1538	1538	



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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	38.5	54.3	70.1	85.9	102.6	120.1	137.7	155.2	172.7	183.0
90°	12.7	30.9	49.1	67.2	85.5	105.9	128.5	151.0	173.7	196.2	205.8
92.5°	33.6	49.9	66.1	82.4	98.6	115.3	132.4	149.6	166.7	183.8	193.9
95°	76.6	91.4	106.2	121.1	135.9	151.2	167.0	182.9	198.6	214.5	224.1
97.5°	131.3	144.5	157.6	170.7	183.9	198.4	214.0	229.8	245.5	261.2	270.6
100°	172.8	184.5	196.2	207.9	219.6	233.1	248.1	263.2	278.3	293.3	302.7
102.5°	215.5	226.0	236.4	246.8	257.3	269.9	284.8	299.7	314.6	329.6	339.0
105°	284.8	293.0	301.3	309.4	317.7	328.7	342.5	356.3	370.1	383.8	393.3
107.5°	355.7	362.8	370.0	377.2	384.4	394.3	406.9	419.5	432.1	444.8	453.6
110°	400.5	407.3	414.1	420.9	427.7	437.3	449.8	462.2	474.7	487.1	495.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	450.3	456.3	462.3	468.3	474.3	483.1	494.7	506.3	517.9	529.5	536.9
115°	523.7	528.3	532.8	537.4	541.8	549.6	560.4	571.3	582.1	593.0	600.3
117.5°	595.8	599.9	604.1	608.2	612.3	618.9	627.8	636.8	645.8	654.7	661.5
120°	644.6	648.0	651.3	654.6	658.0	663.5	671.4	679.2	687.1	694.9	702.1
122.5°	689.3	692.5	695.7	698.8	702.0	707.6	715.5	723.4	731.3	739.3	745.5
125°	757.8	760.3	762.9	765.5	768.1	773.0	780.3	787.6	794.8	802.1	808.0
127.5°	825.4	828.5	831.6	834.6	837.6	841.9	847.4	852.9	858.4	863.9	869.2
130°	868.1	871.6	875.0	878.6	882.0	886.1	891.0	895.7	900.4	905.2	910.7
132.5°	915.8	918.6	921.4	924.2	927.0	930.6	934.8	939.0	943.2	947.4	952.1
135°	978.5	981.7	984.9	988.1	991.3	994.4	997.5	1000.6	1003.8	1006.9	1011.8
137.5°	1045.8	1048.4	1050.9	1053.4	1055.9	1058.2	1060.1	1061.9	1063.8	1065.7	1070.1
140°	1086.2	1088.6	1091.0	1093.3	1095.6	1097.8	1099.8	1101.7	1103.6	1105.6	1109.7
142.5°	1127.8	1130.1	1132.5	1134.8	1137.2	1138.9	1140.0	1141.1	1142.1	1143.2	1146.7
145°	1186.4	1188.4	1190.4	1192.4	1194.5	1196.4	1198.1	1199.8	1201.5	1203.2	1205.1
147.5°	1239.6	1242.0	1244.4	1246.9	1249.3	1251.1	1252.2	1253.4	1254.6	1255.7	1256.5
150°	1275.9	1277.6	1279.4	1281.2	1282.9	1284.3	1285.5	1286.6	1287.8	1288.9	1289.8
152.5°	1308.1	1309.8	1311.6	1313.3	1315.1	1316.6	1318.0	1319.4	1320.8	1322.2	1323.3
155°	1356.4	1357.3	1358.1	1359.0	1359.9	1360.7	1361.6	1362.4	1363.3	1364.2	1365.6
157.5°	1397.7	1398.3	1398.9	1399.5	1400.0	1400.6	1401.1	1401.6	1402.1	1402.7	1404.5
160°	1422.6	1423.2	1423.7	1424.4	1425.0	1425.4	1425.6	1425.9	1426.2	1426.5	1428.2
162.5°	1445.4	1445.6	1445.7	1445.8	1446.0	1446.1	1446.4	1446.7	1447.0	1447.3	1449.2
165°	1475.8	1475.6	1475.2	1475.0	1474.7	1474.5	1474.5	1474.5	1474.5	1474.5	1476.5
167.5°	1501.2	1500.4	1499.5	1498.7	1497.8	1497.4	1497.3	1497.3	1497.2	1497.1	1499.2
170°	1514.8	1513.9	1513.0	1512.2	1511.3	1510.7	1510.5	1510.2	1509.8	1509.6	1511.6
172.5°	1524.1	1523.3	1522.4	1521.6	1520.7	1520.1	1519.8	1519.5	1519.2	1518.9	1521.0
175°	1535.5	1534.6	1533.8	1532.9	1532.1	1531.4	1530.8	1530.2	1529.7	1529.0	1531.1
177.5°	1540.2	1539.6	1538.9	1538.2	1537.5	1536.9	1536.4	1535.9	1535.5	1535.0	1536.4
180°	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2



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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°	193.2	203.5	213.7	220.4	223.8	227.0	230.4	233.7
90°	215.4	225.0	234.5	241.0	244.4	247.7	251.0	254.3
92.5°	204.0	214.0	224.1	230.7	233.8	236.9	240.0	243.1
95°	233.8	243.4	253.0	259.1	261.6	264.1	266.5	269.0
97.5°	280.0	289.4	298.8	305.0	307.9	310.8	313.7	316.8
100°	312.2	321.6	331.0	336.9	339.4	341.9	344.4	346.9
102.5°	348.4	357.8	367.2	373.2	375.7	378.2	380.7	383.2
105°	402.8	412.2	421.6	427.8	430.6	433.3	436.2	438.9
107.5°	462.4	471.1	479.8	485.0	486.5	487.9	489.4	490.9
110°	503.3	511.4	519.6	524.6	526.5	528.5	530.4	532.4



TEST NUMBER: P331582-935

CATALOG NUMBER: S122DIW-S865D1440U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	544.3	551.8	559.2	564.0	566.2	568.3	570.5	572.7
115°	607.6	614.9	622.2	626.9	628.8	630.8	632.7	634.6
117.5°	668.4	675.2	682.0	686.3	688.0	689.7	691.5	693.2
120°	709.1	716.3	723.3	727.9	729.8	731.8	733.7	735.6
122.5°	751.7	757.9	764.1	768.1	769.8	771.6	773.4	775.2
125°	814.1	820.0	826.0	830.0	832.0	834.1	836.0	838.0
127.5°	874.4	879.7	884.9	888.3	889.6	890.9	892.2	893.5
130°	916.2	921.7	927.2	930.5	931.3	932.2	933.1	933.9
132.5°	956.7	961.3	966.0	968.8	969.9	971.0	972.2	973.3
135°	1016.9	1022.0	1027.0	1030.1	1031.3	1032.4	1033.6	1034.7
137.5°	1074.5	1078.9	1083.4	1085.9	1086.5	1087.0	1087.6	1088.2
140°	1113.7	1117.8	1121.9	1124.0	1124.5	1124.8	1125.2	1125.5
142.5°	1150.2	1153.7	1157.2	1159.0	1159.2	1159.3	1159.5	1159.6
145°	1206.9	1208.7	1210.5	1211.4	1211.6	1211.7	1211.8	1211.9
147.5°	1257.4	1258.2	1259.0	1259.2	1258.7	1258.3	1257.7	1257.2
150°	1290.6	1291.5	1292.4	1292.4	1291.5	1290.6	1289.8	1288.9
152.5°	1324.3	1325.4	1326.5	1326.5	1325.4	1324.3	1323.3	1322.2
155°	1367.1	1368.6	1369.9	1370.3	1369.4	1368.6	1367.7	1366.8
157.5°	1406.5	1408.5	1410.5	1410.7	1409.4	1408.0	1406.6	1405.2
160°	1429.9	1431.7	1433.4	1433.7	1432.5	1431.4	1430.3	1429.1
162.5°	1451.2	1453.2	1455.1	1455.4	1454.1	1452.7	1451.3	1449.8
165°	1478.6	1480.6	1482.6	1482.9	1481.4	1480.1	1478.6	1477.1
167.5°	1501.2	1503.2	1505.2	1505.5	1504.0	1502.4	1501.0	1499.4
170°	1513.6	1515.6	1517.7	1517.8	1516.0	1514.3	1512.6	1510.9
172.5°	1522.9	1525.0	1527.0	1527.2	1525.4	1523.7	1522.0	1520.3
175°	1533.1	1535.1	1537.1	1537.3	1535.5	1533.8	1532.1	1530.3
177.5°	1537.8	1539.2	1540.6	1540.6	1539.2	1537.8	1536.4	1535.0
180°	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2

(END OF REPORT)