

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

Luminaire Tested: **S122DIW-S865D1240U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331576
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-S865D1240U835-4F0-1E-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: 7795.6 lumens
Efficiency: N/A
Efficacy: 111.7 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

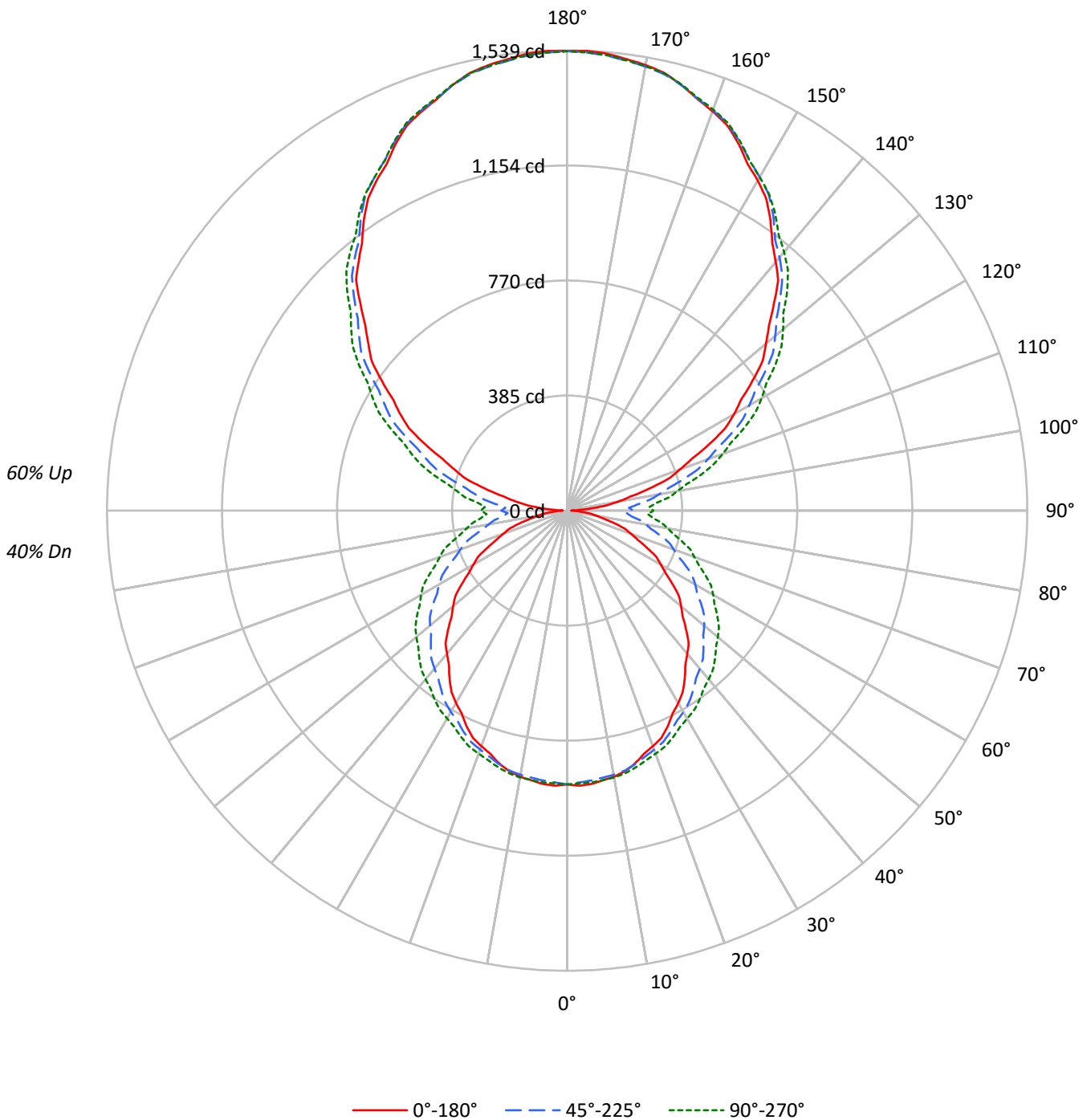
Input Watts (W): 69.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	14783	14783	14783
5°	14855	14230	14176
10°	14762	13809	13655
15°	14558	13364	13106
20°	14300	12888	12577
25°	14048	12428	12096
30°	13689	11955	11614
35°	13327	11498	11275
40°	12947	11110	10935
45°	12584	10762	10645
50°	12196	10448	10360
55°	11790	10109	10067
60°	11292	9759	9760
65°	10774	9347	9393
70°	10189	8905	8999
75°	9446	8470	8637
80°	8274	8029	8266
85°	7152	7646	7981



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.8	1.1
10°-20°	248.8	3.2
20°-30°	377.0	4.8
30°-40°	459.2	5.9
40°-50°	494.0	6.3
50°-60°	479.7	6.2
60°-70°	418.9	5.4
70°-80°	322.5	4.1
80°-90°	222.6	2.9
90°-100°	246.5	3.2
100°-110°	411.3	5.3
110°-120°	588.8	7.6
120°-130°	719.9	9.2
130°-140°	779.8	10.0
140°-150°	751.0	9.6
150°-160°	627.4	8.0
160°-170°	416.2	5.3
170°-180°	145.5	1.9
0°-30°	712.5	9.1
0°-40°	1171.7	15.0
0°-60°	2145.5	27.5
0°-90°	3109.4	39.9
90°-120°	1246.5	16.0
90°-150°	3497.1	44.9
90°-180°	4686.0	60.1
0°-180°	7795.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	918	914	906	914	913	87
15°	876	878	878	890	889	247
25°	796	806	817	833	837	366
35°	686	709	734	762	772	429
45°	563	599	645	684	699	434
55°	431	480	548	594	613	385
65°	295	360	438	490	510	293
75°	163	238	322	377	397	173
85°	48	130	215	269	289	51
90°	15	108	220	269	288	12
95°	78	154	236	284	299	86
105°	285	329	399	446	463	302
115°	524	548	604	640	653	518
125°	757	770	808	838	850	677
135°	978	992	1008	1033	1041	755
145°	1185	1194	1202	1211	1213	740
155°	1355	1359	1363	1369	1365	623
165°	1474	1473	1473	1481	1476	416
175°	1534	1530	1527	1536	1529	146
180°	1536	1536	1536	1536	1536	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	920.9	920.2	919.5	918.8	918.1	916.9	915.2	913.6	911.9	910.3	911.5
5°	918.2	917.4	916.5	915.6	914.7	913.4	911.6	909.8	908.1	906.3	908.1
7.5°	910.0	909.4	908.8	908.3	907.7	906.7	905.3	904.0	902.6	901.3	903.4
10°	903.7	903.1	902.5	901.9	901.3	900.6	899.7	898.8	897.9	897.0	899.4
12.5°	893.0	893.2	893.3	893.4	893.5	893.2	892.6	891.9	891.3	890.6	893.0
15°	875.8	876.4	877.0	877.6	878.1	878.4	878.4	878.4	878.4	878.4	881.1
17.5°	853.5	854.7	856.0	857.2	858.4	859.5	860.5	861.4	862.4	863.3	866.1
20°	838.6	840.1	841.6	843.1	844.5	845.9	847.0	848.2	849.4	850.6	853.8
22.5°	822.7	824.4	826.1	827.8	829.5	831.2	832.9	834.5	836.2	837.8	841.1
25°	796.2	798.2	800.3	802.4	804.4	806.8	809.4	812.1	814.7	817.4	820.9
27.5°	764.3	767.7	771.0	774.4	777.8	781.0	784.1	787.3	790.4	793.5	798.0
30°	743.1	746.9	750.8	754.6	758.4	762.3	766.1	769.9	773.8	777.6	782.3
32.5°	719.7	724.0	728.3	732.7	737.0	741.4	745.9	750.5	755.0	759.5	765.0
35°	686.0	691.0	696.1	701.1	706.1	711.4	717.0	722.6	728.2	733.8	740.3
37.5°	649.4	655.2	661.0	666.7	672.5	679.0	686.3	693.6	700.8	708.1	715.3
40°	625.0	631.5	638.0	644.5	650.9	658.2	666.1	674.1	682.1	690.0	697.7
42.5°	601.6	608.1	614.6	621.1	627.6	635.4	644.5	653.7	662.8	672.0	680.3
45°	562.6	570.6	578.5	586.5	594.5	603.6	613.9	624.3	634.6	644.9	654.0
47.5°	524.1	532.8	541.5	550.2	558.8	569.2	581.3	593.4	605.5	617.6	627.1
50°	497.6	506.7	515.9	525.0	534.2	545.4	558.6	571.9	585.2	598.5	608.5
52.5°	472.1	481.7	491.4	501.0	510.6	522.4	536.4	550.3	564.3	578.3	588.5
55°	431.3	441.9	452.5	463.1	473.7	486.7	502.0	517.4	532.7	548.0	558.6
57.5°	390.9	402.9	414.9	426.8	438.8	452.6	468.2	483.9	499.5	515.1	526.6
60°	362.3	374.9	387.6	400.3	413.0	427.7	444.5	461.3	478.1	495.0	506.2
62.5°	336.8	349.9	363.1	376.2	389.4	404.4	421.2	438.0	454.8	471.6	483.5
65°	294.6	309.0	323.5	337.9	352.4	368.3	385.7	403.1	420.5	437.9	450.0
67.5°	255.8	270.9	286.0	301.1	316.2	332.7	350.5	368.3	386.1	403.9	416.1
70°	228.2	243.6	258.9	274.2	289.6	306.4	324.7	342.9	361.2	379.5	392.2
72.5°	202.8	218.6	234.4	250.2	266.0	283.1	301.7	320.2	338.7	357.2	369.7
75°	163.2	179.7	196.2	212.8	229.3	247.0	265.8	284.7	303.6	322.4	335.1
77.5°	125.0	142.3	159.6	176.8	194.1	212.3	231.5	250.7	269.8	289.0	301.6
80°	99.5	117.5	135.5	153.5	171.5	190.0	209.2	228.4	247.5	266.7	279.1
82.5°	78.3	96.0	113.8	131.5	149.3	167.9	187.3	206.7	226.1	245.5	257.9
85°	47.8	66.1	84.3	102.6	120.9	139.5	158.3	177.2	196.1	215.0	227.4
87.5°	26.3	44.5	62.8	81.1	99.3	118.5	138.7	158.8	179.0	199.1	211.0
90°	14.6	35.1	55.7	76.2	96.8	119.7	144.9	170.1	195.3	220.5	231.8
92.5°	35.3	53.7	72.2	90.7	109.1	128.2	147.8	167.5	187.2	206.8	218.5
95°	78.0	94.8	111.5	128.3	145.0	162.5	180.8	199.0	217.3	235.6	246.8
97.5°	132.5	147.3	162.2	177.1	191.9	208.4	226.5	244.5	262.6	280.7	291.6
100°	174.0	187.2	200.4	213.6	226.8	242.1	259.5	276.9	294.3	311.6	322.5
102.5°	216.5	228.3	240.1	251.9	263.7	278.2	295.3	312.5	329.6	346.7	357.6
105°	285.4	294.8	304.2	313.7	323.1	335.7	351.6	367.6	383.5	399.4	410.3
107.5°	356.2	364.3	372.4	380.5	388.6	400.0	414.7	429.4	444.1	458.8	468.9
110°	400.8	408.4	416.0	423.7	431.3	442.3	456.8	471.2	485.7	500.1	509.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	450.6	457.3	463.9	470.6	477.3	487.4	500.9	514.4	527.9	541.4	550.2
115°	524.0	528.9	533.9	538.9	543.9	552.7	565.4	578.1	590.8	603.5	612.0
117.5°	595.8	600.2	604.6	609.1	613.5	621.0	631.7	642.3	653.0	663.6	671.7
120°	644.5	648.0	651.5	655.0	658.5	664.9	674.4	683.9	693.4	702.9	711.2
122.5°	689.1	692.4	695.6	698.8	702.1	708.4	717.9	727.4	736.9	746.3	753.7
125°	757.3	759.9	762.5	765.1	767.7	773.3	781.8	790.4	799.0	807.5	814.6
127.5°	825.0	828.0	831.0	834.0	836.9	841.7	848.3	854.9	861.4	868.0	874.3
130°	867.5	871.0	874.4	877.9	881.3	885.9	891.5	897.1	902.7	908.3	914.8
132.5°	915.2	918.0	920.8	923.5	926.3	930.1	935.0	939.9	944.8	949.7	955.2
135°	977.7	980.9	984.0	987.2	990.4	993.7	997.3	1000.8	1004.3	1007.8	1013.7
137.5°	1044.9	1047.4	1049.9	1052.5	1055.0	1057.3	1059.3	1061.4	1063.4	1065.5	1070.7
140°	1085.3	1087.6	1089.9	1092.2	1094.5	1096.7	1098.7	1100.7	1102.8	1104.8	1109.5
142.5°	1126.8	1129.1	1131.4	1133.7	1136.0	1137.7	1138.8	1139.9	1141.0	1142.1	1146.1
145°	1185.1	1187.2	1189.2	1191.2	1193.2	1195.1	1196.8	1198.5	1200.3	1202.0	1204.0
147.5°	1238.3	1240.7	1243.1	1245.6	1248.0	1249.8	1250.9	1252.1	1253.2	1254.4	1255.2
150°	1274.6	1276.3	1278.1	1279.8	1281.5	1283.0	1284.1	1285.3	1286.4	1287.6	1288.4
152.5°	1306.8	1308.5	1310.2	1311.9	1313.7	1315.2	1316.6	1318.0	1319.4	1320.8	1321.9
155°	1355.0	1355.9	1356.7	1357.6	1358.5	1359.3	1360.2	1361.0	1361.9	1362.8	1364.2
157.5°	1396.2	1396.8	1397.4	1398.0	1398.5	1399.1	1399.6	1400.1	1400.6	1401.2	1403.1
160°	1421.1	1421.7	1422.3	1422.9	1423.4	1423.9	1424.1	1424.4	1424.7	1425.0	1426.7
162.5°	1443.9	1444.1	1444.2	1444.3	1444.4	1444.6	1444.9	1445.2	1445.5	1445.8	1447.7
165°	1474.3	1474.0	1473.7	1473.4	1473.1	1473.0	1473.0	1473.0	1473.0	1473.0	1475.0
167.5°	1499.7	1498.8	1498.0	1497.1	1496.2	1495.8	1495.7	1495.7	1495.6	1495.5	1497.6
170°	1513.2	1512.3	1511.5	1510.6	1509.7	1509.2	1508.9	1508.6	1508.3	1508.0	1510.0
172.5°	1522.5	1521.7	1520.8	1519.9	1519.1	1518.5	1518.2	1517.9	1517.6	1517.3	1519.4
175°	1533.9	1533.1	1532.2	1531.3	1530.5	1529.8	1529.2	1528.6	1528.0	1527.4	1529.5
177.5°	1538.6	1537.9	1537.2	1536.5	1535.8	1535.3	1534.8	1534.3	1533.9	1533.4	1534.8
180°	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	912.6	913.8	915.0	915.4	914.9	914.4	913.9	913.5
5°	909.8	911.6	913.4	914.1	913.8	913.5	913.2	912.9
7.5°	905.5	907.6	909.8	910.7	910.4	910.1	909.8	909.5
10°	901.7	904.1	906.5	907.5	907.2	906.9	906.6	906.3
12.5°	895.4	897.7	900.1	901.1	900.8	900.5	900.2	899.9
15°	883.7	886.4	889.1	890.2	889.9	889.6	889.3	889.1
17.5°	868.9	871.6	874.4	875.8	875.8	875.8	875.8	875.8
20°	857.1	860.3	863.5	865.2	865.2	865.2	865.2	865.2
22.5°	844.3	847.6	850.8	852.7	853.1	853.6	854.1	854.6
25°	824.5	828.0	831.6	833.8	834.6	835.5	836.4	837.3
27.5°	802.5	807.0	811.4	814.0	814.7	815.3	816.0	816.6
30°	787.0	791.7	796.5	799.3	800.1	801.0	801.9	802.8
32.5°	770.4	775.8	781.2	784.8	786.3	787.9	789.5	791.1
35°	746.8	753.3	759.8	764.0	766.1	768.2	770.2	772.3
37.5°	722.4	729.6	736.8	741.5	743.7	745.9	748.1	750.3
40°	705.3	713.0	720.7	725.8	728.5	731.1	733.8	736.5
42.5°	688.7	697.1	705.5	711.0	713.6	716.3	718.9	721.6
45°	663.2	672.3	681.5	687.5	690.5	693.4	696.4	699.3
47.5°	636.7	646.2	655.8	662.2	665.4	668.7	671.9	675.2
50°	618.5	628.5	638.6	645.2	648.4	651.7	654.9	658.2
52.5°	598.8	609.1	619.3	626.2	629.7	633.2	636.6	640.1
55°	569.3	579.9	590.5	597.7	601.5	605.4	609.2	613.0
57.5°	538.0	549.4	560.9	568.6	572.4	576.3	580.2	584.1
60°	517.4	528.6	539.8	547.4	551.6	555.7	559.8	564.0
62.5°	495.4	507.3	519.2	527.2	531.0	534.9	538.8	542.7
65°	462.1	474.2	486.3	494.2	498.0	501.9	505.7	509.5
67.5°	428.3	440.5	452.8	460.9	464.9	468.9	472.9	476.9
70°	404.9	417.5	430.2	438.3	441.9	445.4	449.0	452.5
72.5°	382.1	394.5	407.0	415.3	419.6	423.8	428.1	432.3
75°	347.8	360.5	373.2	381.4	385.3	389.1	392.9	396.8
77.5°	314.3	326.9	339.5	347.9	352.0	356.1	360.3	364.4
80°	291.5	303.9	316.3	324.5	328.6	332.8	336.9	341.0
82.5°	270.3	282.6	295.0	303.2	307.1	310.9	314.8	318.7
85°	239.7	252.1	264.5	272.8	276.9	281.0	285.1	289.3
87.5°	222.9	234.8	246.8	254.6	258.5	262.3	266.1	270.0
90°	243.0	254.2	265.4	272.9	276.8	280.6	284.4	288.2
92.5°	230.2	241.9	253.5	261.2	264.8	268.4	272.0	275.6
95°	258.0	269.2	280.4	287.5	290.5	293.4	296.4	299.3
97.5°	302.5	313.4	324.3	331.5	334.9	338.4	341.8	345.2
100°	333.5	344.4	355.3	362.2	365.2	368.1	371.1	374.0
102.5°	368.5	379.4	390.4	397.3	400.2	403.2	406.1	409.1
105°	421.2	432.1	443.0	450.0	453.3	456.5	459.8	463.0
107.5°	479.1	489.2	499.3	505.4	507.3	509.2	511.1	513.0
110°	519.0	528.4	537.9	543.8	546.2	548.5	550.9	553.3



TEST NUMBER: P331576

CATALOG NUMBER: S122DIW-S865D1240U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	558.9	567.7	576.4	582.1	584.7	587.3	589.9	592.5
115°	620.6	629.1	637.7	643.2	645.5	647.9	650.3	652.7
117.5°	679.7	687.7	695.8	700.9	703.0	705.2	707.3	709.4
120°	719.4	727.7	735.9	741.3	743.6	746.0	748.4	750.8
122.5°	761.0	768.3	775.6	780.4	782.5	784.7	786.8	788.9
125°	821.7	828.8	835.9	840.7	843.0	845.4	847.8	850.1
127.5°	880.6	886.8	893.1	897.1	898.8	900.4	902.1	903.8
130°	921.3	927.8	934.3	938.2	939.4	940.6	941.8	943.0
132.5°	960.8	966.4	972.0	975.5	976.9	978.3	979.8	981.2
135°	1019.6	1025.5	1031.4	1035.1	1036.6	1038.1	1039.6	1041.1
137.5°	1075.9	1081.1	1086.3	1089.3	1090.1	1091.0	1091.8	1092.7
140°	1114.2	1119.0	1123.7	1126.3	1127.0	1127.6	1128.2	1128.8
142.5°	1150.1	1154.1	1158.1	1160.3	1160.7	1161.1	1161.5	1161.8
145°	1206.1	1208.2	1210.2	1211.4	1211.7	1212.1	1212.4	1212.7
147.5°	1256.1	1257.0	1257.9	1258.1	1257.7	1257.3	1256.9	1256.5
150°	1289.3	1290.2	1291.0	1291.0	1290.2	1289.3	1288.4	1287.6
152.5°	1323.0	1324.0	1325.1	1325.1	1324.0	1323.0	1321.9	1320.8
155°	1365.7	1367.1	1368.5	1368.8	1368.0	1367.1	1366.2	1365.4
157.5°	1405.1	1407.0	1409.0	1409.3	1407.9	1406.5	1405.1	1403.7
160°	1428.5	1430.2	1431.9	1432.2	1431.1	1429.9	1428.8	1427.6
162.5°	1449.7	1451.6	1453.6	1453.9	1452.5	1451.1	1449.7	1448.4
165°	1477.0	1479.0	1481.1	1481.3	1479.9	1478.5	1477.0	1475.6
167.5°	1499.6	1501.6	1503.6	1503.9	1502.4	1500.9	1499.4	1497.9
170°	1512.0	1514.0	1516.1	1516.2	1514.5	1512.8	1511.0	1509.3
172.5°	1521.4	1523.4	1525.4	1525.5	1523.8	1522.1	1520.4	1518.6
175°	1531.5	1533.5	1535.5	1535.7	1533.9	1532.2	1530.5	1528.7
177.5°	1536.2	1537.6	1538.9	1538.9	1537.6	1536.2	1534.8	1533.4
180°	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5

(END OF REPORT)