

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

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331575
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-S865D1240U835-4F0-1E-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: 8451.4 lumens
Efficiency: N/A
Efficacy: 121.1 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

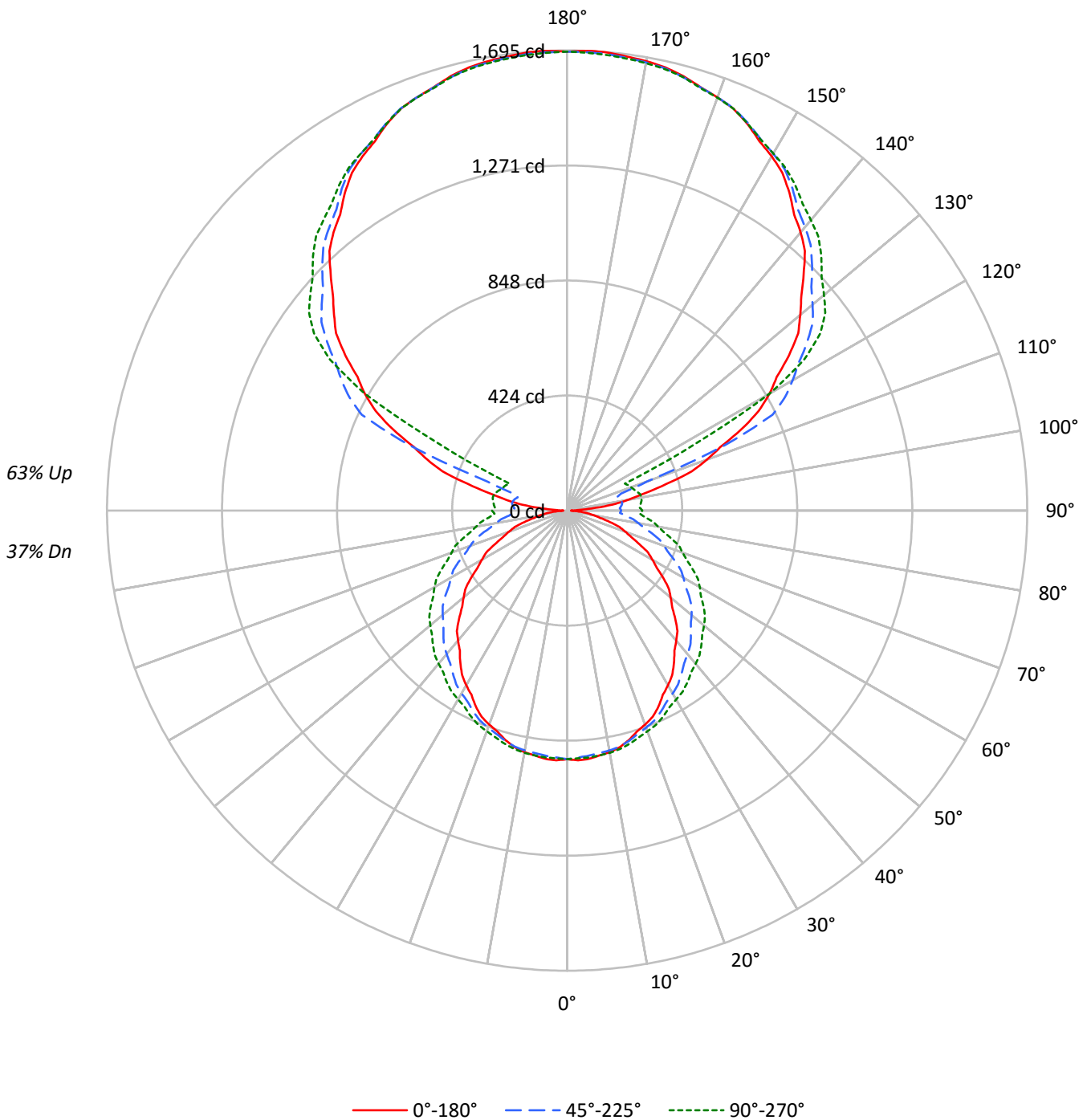
Input Watts (W): 69.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331575

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

Luminous Intensity Polar Plot





TEST NUMBER: P331575

CATALOG NUMBER: S122DIW-S865D1240U835-4F0-1E-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°	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



TEST NUMBER: P331575

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.8	1.0
10°-20°	248.8	2.9
20°-30°	377.0	4.5
30°-40°	459.2	5.4
40°-50°	494.0	5.8
50°-60°	479.7	5.7
60°-70°	418.9	5.0
70°-80°	322.5	3.8
80°-90°	220.6	2.6
90°-100°	205.5	2.4
100°-110°	315.7	3.7
110°-120°	624.7	7.4
120°-130°	952.6	11.3
130°-140°	987.3	11.7
140°-150°	904.9	10.7
150°-160°	725.2	8.6
160°-170°	467.3	5.5
170°-180°	160.9	1.9
0°-30°	712.5	8.4
0°-40°	1171.7	13.9
0°-60°	2145.5	25.4
0°-90°	3107.4	36.8
90°-120°	1145.9	13.6
90°-150°	3990.6	47.2
90°-180°	5344.0	63.2
0°-180°	8451.4	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°	14	105	200	257	277	13
95°	90	116	200	255	272	106
105°	378	435	189	246	268	405
115°	709	747	834	333	234	697
125°	997	1016	1079	1122	1139	889
135°	1232	1252	1276	1314	1324	952
145°	1428	1428	1447	1463	1464	893
155°	1572	1562	1576	1582	1573	724
165°	1656	1650	1653	1660	1653	468
175°	1694	1686	1688	1696	1684	161
180°	1690	1690	1690	1690	1690	



TEST NUMBER: P331575

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

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	44.4	62.6	80.8	98.9	117.7	137.0	156.3	175.6	194.9	207.2
90°	14.5	34.6	54.7	74.8	94.9	115.4	136.5	157.5	178.6	199.6	212.8
92.5°	36.9	52.6	68.2	83.9	99.5	117.0	136.2	155.5	174.7	194.0	206.2
95°	90.1	95.0	99.9	104.8	109.7	121.9	141.5	161.1	180.7	200.3	212.9
97.5°	167.1	154.1	141.2	128.2	115.3	119.5	140.9	162.3	183.7	205.0	217.0
100°	225.8	199.5	173.1	146.8	120.5	117.9	139.0	160.2	181.3	202.4	215.5
102.5°	289.3	291.4	293.5	295.6	297.7	287.4	264.8	242.2	219.6	196.9	210.4
105°	378.5	395.2	411.9	428.6	445.3	424.2	365.4	306.5	247.6	188.7	202.0
107.5°	481.7	495.1	508.6	522.0	535.4	505.0	430.6	356.3	282.0	207.7	214.6
110°	547.2	558.8	570.4	582.0	593.6	567.4	503.3	439.2	375.0	310.9	293.2



TEST NUMBER: P331575

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	609.8	619.9	629.9	639.9	649.9	652.1	646.4	640.7	635.1	629.4	539.7
115°	708.7	716.5	724.4	732.3	740.1	754.1	774.2	794.2	814.3	834.4	717.4
117.5°	795.7	803.0	810.3	817.5	824.8	836.9	853.9	870.8	887.8	904.7	883.0
120°	860.3	865.5	870.8	876.0	881.3	892.3	909.0	925.6	942.3	959.0	970.5
122.5°	915.1	919.8	924.6	929.4	934.1	944.7	961.1	977.6	994.0	1010.4	1020.4
125°	997.2	1000.7	1004.2	1007.8	1011.3	1020.4	1035.0	1049.6	1064.2	1078.8	1088.6
127.5°	1072.8	1076.4	1080.0	1083.6	1087.2	1094.8	1106.3	1117.7	1129.2	1140.7	1150.7
130°	1120.7	1124.8	1128.8	1132.9	1136.9	1143.5	1152.7	1161.9	1171.1	1180.3	1190.3
132.5°	1169.6	1173.0	1176.4	1179.8	1183.3	1188.8	1196.6	1204.4	1212.1	1219.9	1229.3
135°	1231.9	1236.3	1240.6	1245.0	1249.3	1254.2	1259.6	1265.0	1270.4	1275.8	1284.7
137.5°	1296.3	1299.3	1302.2	1305.2	1308.2	1311.7	1315.8	1319.9	1324.0	1328.0	1336.1
140°	1338.3	1340.2	1342.1	1344.0	1345.9	1348.6	1352.2	1355.8	1359.3	1362.9	1370.1
142.5°	1373.6	1375.2	1376.9	1378.6	1380.2	1382.8	1386.4	1389.9	1393.5	1397.0	1403.0
145°	1427.5	1427.3	1427.0	1426.7	1426.5	1428.6	1433.3	1437.9	1442.5	1447.1	1450.8
147.5°	1475.7	1474.7	1473.7	1472.6	1471.6	1473.4	1477.9	1482.5	1487.1	1491.6	1493.3
150°	1507.1	1505.2	1503.3	1501.3	1499.4	1500.7	1505.0	1509.4	1513.7	1518.1	1519.7
152.5°	1533.5	1531.4	1529.2	1527.1	1525.0	1526.0	1530.1	1534.3	1538.4	1542.5	1544.2
155°	1571.9	1569.4	1567.0	1564.5	1562.1	1562.5	1565.8	1569.0	1572.3	1575.6	1577.2
157.5°	1602.0	1599.9	1597.8	1595.8	1593.7	1593.8	1596.1	1598.4	1600.7	1603.0	1604.8
160°	1619.6	1618.0	1616.3	1614.7	1613.1	1613.1	1614.7	1616.3	1618.0	1619.6	1621.2
162.5°	1635.3	1633.6	1632.0	1630.4	1628.7	1628.6	1630.0	1631.4	1632.9	1634.3	1636.1
165°	1656.3	1654.7	1653.0	1651.4	1649.8	1649.4	1650.2	1651.0	1651.8	1652.6	1654.5
167.5°	1672.0	1670.3	1668.7	1667.1	1665.4	1665.0	1665.8	1666.5	1667.3	1668.0	1669.9
170°	1680.8	1679.1	1677.5	1675.9	1674.2	1673.7	1674.2	1674.8	1675.3	1675.9	1677.8
172.5°	1686.6	1685.0	1683.4	1681.7	1680.1	1679.6	1680.1	1680.6	1681.2	1681.7	1683.6
175°	1694.2	1692.3	1690.4	1688.5	1686.6	1685.9	1686.5	1687.0	1687.6	1688.1	1690.0
177.5°	1695.4	1693.9	1692.4	1690.9	1689.3	1688.7	1688.9	1689.1	1689.3	1689.6	1691.1
180°	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5



TEST NUMBER: P331575

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

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°	219.5	231.8	244.1	252.2	256.1	260.0	263.9	267.7
90°	225.9	239.1	252.2	260.9	264.9	269.0	273.1	277.2
92.5°	218.5	230.8	243.0	251.1	255.0	258.8	262.7	266.6
95°	225.4	238.0	250.6	258.5	261.7	265.0	268.3	271.5
97.5°	229.0	241.0	253.0	260.9	264.7	268.5	272.4	276.2
100°	228.6	241.7	254.8	263.2	267.0	270.8	274.6	278.3
102.5°	224.0	237.5	251.0	259.7	263.7	267.7	271.7	275.7
105°	215.4	228.7	242.0	250.8	255.1	259.5	263.8	268.1
107.5°	221.4	228.3	235.2	240.8	245.1	249.4	253.7	258.1
110°	275.4	257.7	239.9	233.2	237.6	241.9	246.2	250.6



TEST NUMBER: P331575

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	449.9	360.2	270.5	227.7	231.8	235.9	240.0	244.1
115°	600.3	483.3	366.3	299.6	283.3	267.0	250.7	234.3
117.5°	861.3	839.6	817.8	776.3	715.0	653.7	592.4	531.1
120°	982.1	993.6	1005.1	994.1	960.7	927.2	893.8	860.3
122.5°	1030.3	1040.3	1050.3	1053.1	1048.8	1044.4	1040.1	1035.7
125°	1098.5	1108.4	1118.2	1124.9	1128.4	1131.8	1135.3	1138.8
127.5°	1160.8	1170.9	1181.0	1187.4	1190.2	1192.9	1195.7	1198.5
130°	1200.4	1210.5	1220.5	1226.6	1228.7	1230.8	1232.9	1235.0
132.5°	1238.7	1248.1	1257.5	1263.2	1265.3	1267.4	1269.5	1271.6
135°	1293.6	1302.5	1311.4	1316.8	1318.6	1320.4	1322.2	1324.0
137.5°	1344.2	1352.3	1360.4	1365.0	1366.0	1367.1	1368.2	1369.3
140°	1377.2	1384.4	1391.6	1395.4	1395.8	1396.2	1396.6	1397.0
142.5°	1409.0	1415.0	1421.0	1424.1	1424.3	1424.5	1424.6	1424.8
145°	1454.5	1458.1	1461.8	1463.7	1463.8	1463.9	1464.0	1464.2
147.5°	1494.9	1496.6	1498.2	1498.8	1498.4	1498.0	1497.5	1497.1
150°	1521.3	1523.0	1524.6	1524.7	1523.4	1522.0	1520.6	1519.3
152.5°	1545.8	1547.4	1549.1	1549.0	1547.2	1545.4	1543.6	1541.8
155°	1578.8	1580.5	1582.1	1581.8	1579.6	1577.5	1575.3	1573.1
157.5°	1606.7	1608.5	1610.4	1610.2	1608.1	1606.0	1603.9	1601.7
160°	1622.9	1624.5	1626.1	1626.0	1624.1	1622.2	1620.3	1618.4
162.5°	1638.0	1639.8	1641.7	1641.4	1639.1	1636.7	1634.4	1632.1
165°	1656.4	1658.3	1660.2	1660.2	1658.3	1656.4	1654.5	1652.6
167.5°	1671.8	1673.7	1675.6	1675.4	1672.9	1670.5	1668.0	1665.6
170°	1679.7	1681.6	1683.5	1683.2	1680.8	1678.3	1675.9	1673.4
172.5°	1685.5	1687.4	1689.3	1689.1	1686.6	1684.2	1681.7	1679.3
175°	1691.9	1693.8	1695.7	1695.3	1692.6	1689.9	1687.1	1684.4
177.5°	1692.6	1694.1	1695.7	1695.4	1693.5	1691.5	1689.6	1687.6
180°	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5

(END OF REPORT)