

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: P331575-830

Luminaire Tested: **S122DIW-S865D1240U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331575-830
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-S865D1240U830-4F0-1E-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: 7965.8 lumens
Efficiency: N/A
Efficacy: 114.1 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

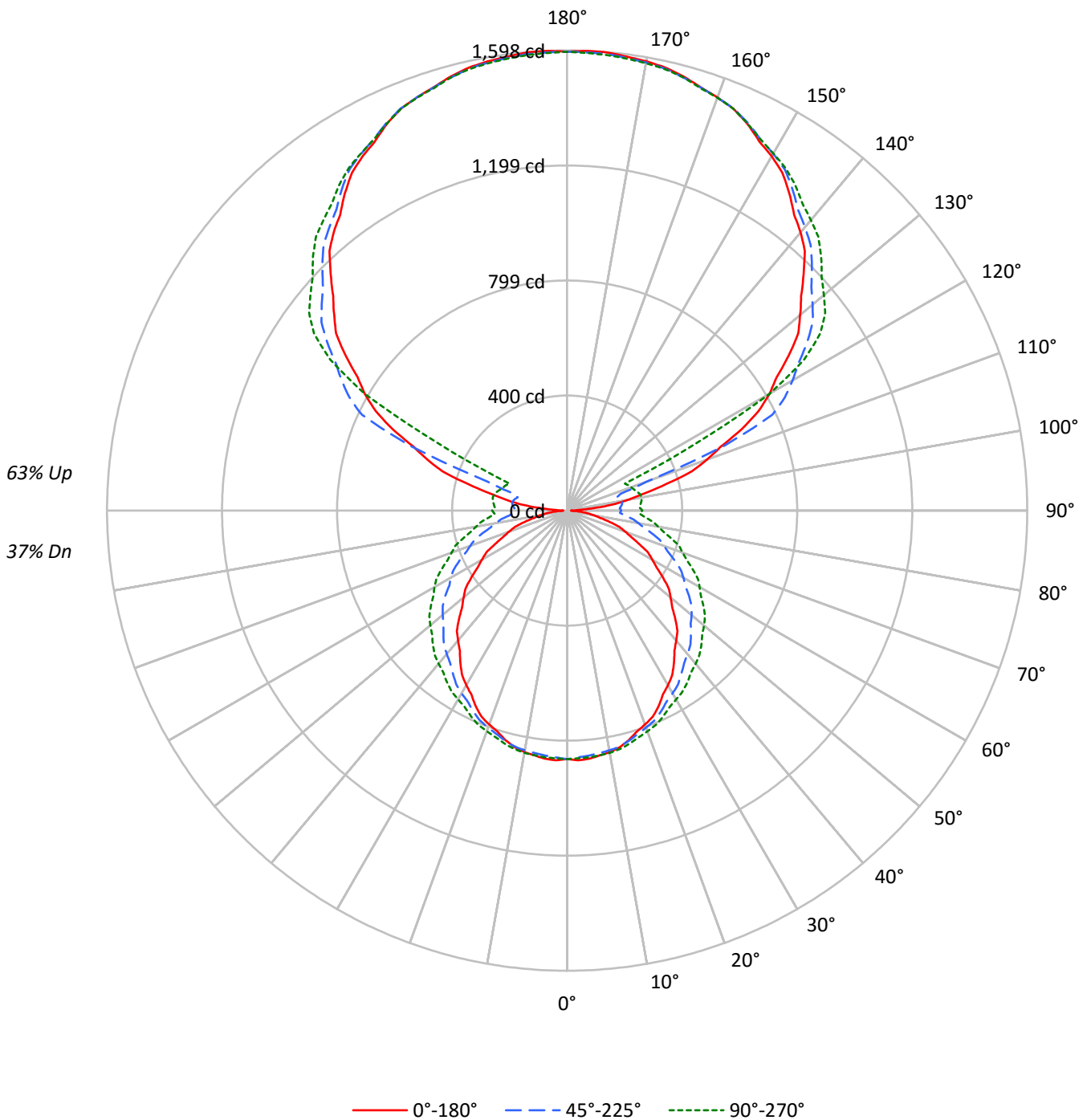
Input Watts (W): 69.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331575-830

CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331575-830

CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-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	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°	13934	13934	13934
5°	14000	13412	13361
10°	13914	13017	12870
15°	13722	12596	12353
20°	13478	12147	11855
25°	13241	11713	11401
30°	12903	11268	10947
35°	12562	10837	10627
40°	12203	10472	10307
45°	11862	10143	10033
50°	11495	9847	9765
55°	11112	9528	9489
60°	10644	9199	9199
65°	10156	8809	8853
70°	9605	8393	8482
75°	8902	7984	8141
80°	7800	7568	7791
85°	6748	7205	7523



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.8	1.0
10°-20°	234.5	2.9
20°-30°	355.3	4.5
30°-40°	432.8	5.4
40°-50°	465.6	5.8
50°-60°	452.2	5.7
60°-70°	394.8	5.0
70°-80°	304.0	3.8
80°-90°	207.9	2.6
90°-100°	193.7	2.4
100°-110°	297.5	3.7
110°-120°	588.8	7.4
120°-130°	897.9	11.3
130°-140°	930.5	11.7
140°-150°	852.9	10.7
150°-160°	683.5	8.6
160°-170°	440.5	5.5
170°-180°	151.6	1.9
0°-30°	671.6	8.4
0°-40°	1104.4	13.9
0°-60°	2022.2	25.4
0°-90°	2928.9	36.8
90°-120°	1080.0	13.6
90°-150°	3761.4	47.2
90°-180°	5037.0	63.2
0°-180°	7965.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	865	862	854	861	860	82
15°	826	828	828	839	838	232
25°	750	759	770	785	789	345
35°	647	668	692	718	728	404
45°	530	565	608	645	659	409
55°	406	453	516	560	578	363
65°	278	340	413	462	480	276
75°	154	224	304	356	374	163
85°	45	123	203	253	273	48
90°	14	99	188	242	261	12
95°	85	109	189	240	256	100
105°	357	410	178	232	253	382
115°	668	704	786	314	221	657
125°	940	958	1017	1057	1073	838
135°	1161	1180	1202	1239	1248	897
145°	1346	1346	1364	1379	1380	842
155°	1482	1472	1485	1491	1483	682
165°	1561	1555	1558	1565	1558	441
175°	1597	1589	1591	1598	1588	152
180°	1593	1593	1593	1593	1593	



TEST NUMBER: P331575-830

CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	868.0	867.3	866.7	866.0	865.3	864.2	862.6	861.1	859.5	858.0	859.1
5°	865.4	864.7	863.8	863.0	862.1	860.9	859.2	857.5	855.9	854.2	855.9
7.5°	857.7	857.1	856.6	856.1	855.5	854.6	853.3	852.1	850.7	849.5	851.5
10°	851.8	851.2	850.6	850.1	849.5	848.9	848.0	847.2	846.3	845.5	847.7
12.5°	841.7	841.9	842.0	842.1	842.2	841.9	841.3	840.7	840.1	839.4	841.7
15°	825.5	826.0	826.6	827.2	827.6	827.9	827.9	827.9	827.9	827.9	830.5
17.5°	804.5	805.6	806.8	807.9	809.1	810.1	811.1	811.9	812.8	813.7	816.3
20°	790.4	791.8	793.2	794.7	796.0	797.3	798.3	799.5	800.6	801.7	804.7
22.5°	775.4	777.0	778.6	780.2	781.8	783.4	785.0	786.6	788.2	789.7	792.8
25°	750.5	752.3	754.3	756.3	758.2	760.4	762.9	765.4	767.9	770.4	773.7
27.5°	720.4	723.6	726.7	729.9	733.1	736.1	739.0	742.1	745.0	747.9	752.1
30°	700.4	704.0	707.7	711.2	714.8	718.5	722.1	725.7	729.3	732.9	737.4
32.5°	678.3	682.4	686.5	690.6	694.7	698.8	703.0	707.4	711.6	715.9	721.0
35°	646.6	651.3	656.1	660.8	665.5	670.5	675.8	681.1	686.4	691.6	697.8
37.5°	612.1	617.6	623.0	628.4	633.9	640.0	646.9	653.7	660.5	667.4	674.2
40°	589.1	595.2	601.3	607.5	613.5	620.4	627.8	635.4	642.9	650.4	657.6
42.5°	567.0	573.2	579.3	585.4	591.5	598.9	607.5	616.1	624.7	633.4	641.2
45°	530.3	537.8	545.3	552.8	560.3	568.9	578.6	588.4	598.1	607.8	616.4
47.5°	494.0	502.2	510.4	518.6	526.7	536.5	547.9	559.3	570.7	582.1	591.1
50°	469.0	477.6	486.3	494.8	503.5	514.1	526.5	539.0	551.6	564.1	573.5
52.5°	445.0	454.0	463.2	472.2	481.3	492.4	505.6	518.7	531.9	545.1	554.7
55°	406.5	416.5	426.5	436.5	446.5	458.7	473.2	487.7	502.1	516.5	526.5
57.5°	368.4	379.8	391.1	402.3	413.6	426.6	441.3	456.1	470.8	485.5	496.3
60°	341.5	353.4	365.3	377.3	389.3	403.1	419.0	434.8	450.6	466.6	477.1
62.5°	317.4	329.8	342.2	354.6	367.0	381.2	397.0	412.8	428.7	444.5	455.7
65°	277.7	291.2	304.9	318.5	332.2	347.1	363.5	379.9	396.3	412.7	424.1
67.5°	241.1	255.3	269.6	283.8	298.0	313.6	330.4	347.1	363.9	380.7	392.2
70°	215.1	229.6	244.0	258.4	273.0	288.8	306.0	323.2	340.4	357.7	369.7
72.5°	191.1	206.0	220.9	235.8	250.7	266.8	284.4	301.8	319.2	336.7	348.5
75°	153.8	169.4	184.9	200.6	216.1	232.8	250.5	268.3	286.2	303.9	315.8
77.5°	117.8	134.1	150.4	166.6	182.9	200.1	218.2	236.3	254.3	272.4	284.3
80°	93.8	110.7	127.7	144.7	161.6	179.1	197.2	215.3	233.3	251.4	263.1
82.5°	73.8	90.5	107.3	123.9	140.7	158.3	176.5	194.8	213.1	231.4	243.1
85°	45.1	62.3	79.5	96.7	114.0	131.5	149.2	167.0	184.8	202.6	214.3
87.5°	24.8	41.8	59.0	76.2	93.2	110.9	129.1	147.3	165.5	183.7	195.3
90°	13.7	32.6	51.6	70.5	89.4	108.8	128.7	148.5	168.3	188.1	200.6
92.5°	34.8	49.6	64.3	79.1	93.8	110.3	128.4	146.6	164.7	182.9	194.4
95°	84.9	89.5	94.2	98.8	103.4	114.9	133.4	151.8	170.3	188.8	200.7
97.5°	157.5	145.2	133.1	120.8	108.7	112.6	132.8	153.0	173.1	193.2	204.5
100°	212.8	188.0	163.2	138.4	113.6	111.1	131.0	151.0	170.9	190.8	203.1
102.5°	272.7	274.7	276.6	278.6	280.6	270.9	249.6	228.3	207.0	185.6	198.3
105°	356.8	372.5	388.2	404.0	419.7	399.8	344.4	288.9	233.4	177.9	190.4
107.5°	454.0	466.7	479.4	492.0	504.6	476.0	405.9	335.8	265.8	195.8	202.3
110°	515.8	526.7	537.6	548.6	559.5	534.8	474.4	414.0	353.5	293.0	276.4



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CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	574.8	584.3	593.7	603.1	612.6	614.6	609.3	603.9	598.6	593.2	508.7
115°	668.0	675.3	682.8	690.2	697.6	710.8	729.7	748.6	767.5	786.5	676.2
117.5°	750.0	756.9	763.7	770.5	777.4	788.8	804.8	820.8	836.8	852.7	832.3
120°	810.9	815.8	820.8	825.7	830.7	841.0	856.8	872.4	888.2	903.9	914.7
122.5°	862.5	867.0	871.5	876.0	880.4	890.4	905.9	921.4	936.9	952.3	961.8
125°	939.9	943.2	946.5	949.9	953.2	961.8	975.5	989.3	1003.1	1016.8	1026.1
127.5°	1011.2	1014.6	1017.9	1021.3	1024.7	1031.9	1042.7	1053.5	1064.3	1075.2	1084.6
130°	1056.3	1060.2	1063.9	1067.8	1071.6	1077.8	1086.5	1095.1	1103.8	1112.5	1121.9
132.5°	1102.4	1105.6	1108.8	1112.0	1115.3	1120.5	1127.8	1135.2	1142.5	1149.8	1158.7
135°	1161.1	1165.3	1169.3	1173.5	1177.5	1182.1	1187.2	1192.3	1197.4	1202.5	1210.9
137.5°	1221.8	1224.6	1227.4	1230.2	1233.0	1236.3	1240.2	1244.1	1247.9	1251.7	1259.3
140°	1261.4	1263.2	1265.0	1266.8	1268.6	1271.1	1274.5	1277.9	1281.2	1284.6	1291.4
142.5°	1294.7	1296.2	1297.8	1299.4	1300.9	1303.3	1306.7	1310.0	1313.4	1316.7	1322.4
145°	1345.5	1345.3	1345.0	1344.7	1344.5	1346.5	1350.9	1355.3	1359.6	1364.0	1367.4
147.5°	1390.9	1390.0	1389.0	1388.0	1387.0	1388.7	1393.0	1397.3	1401.7	1405.9	1407.5
150°	1420.5	1418.7	1416.9	1415.0	1413.2	1414.5	1418.5	1422.7	1426.7	1430.9	1432.4
152.5°	1445.4	1443.4	1441.3	1439.4	1437.4	1438.3	1442.2	1446.1	1450.0	1453.9	1455.5
155°	1481.6	1479.2	1477.0	1474.6	1472.3	1472.7	1475.8	1478.8	1482.0	1485.1	1486.6
157.5°	1510.0	1508.0	1506.0	1504.1	1502.1	1502.2	1504.4	1506.6	1508.7	1510.9	1512.6
160°	1526.5	1525.0	1523.4	1521.9	1520.4	1520.4	1521.9	1523.4	1525.0	1526.5	1528.0
162.5°	1541.3	1539.7	1538.2	1536.7	1535.1	1535.0	1536.3	1537.7	1539.1	1540.4	1542.1
165°	1561.1	1559.6	1558.0	1556.5	1555.0	1554.6	1555.4	1556.1	1556.9	1557.6	1559.4
167.5°	1575.9	1574.3	1572.8	1571.3	1569.7	1569.3	1570.1	1570.7	1571.5	1572.2	1574.0
170°	1584.2	1582.6	1581.1	1579.6	1578.0	1577.5	1578.0	1578.6	1579.0	1579.6	1581.4
172.5°	1589.7	1588.2	1586.7	1585.1	1583.6	1583.1	1583.6	1584.0	1584.6	1585.1	1586.9
175°	1596.9	1595.1	1593.3	1591.5	1589.7	1589.0	1589.6	1590.1	1590.6	1591.1	1592.9
177.5°	1598.0	1596.6	1595.2	1593.7	1592.2	1591.7	1591.9	1592.0	1592.2	1592.5	1593.9
180°	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	860.2	861.3	862.4	862.8	862.3	861.9	861.4	861.0
5°	857.5	859.2	860.9	861.6	861.3	861.0	860.7	860.4
7.5°	853.5	855.5	857.5	858.4	858.1	857.8	857.5	857.2
10°	849.9	852.2	854.4	855.4	855.1	854.8	854.5	854.2
12.5°	844.0	846.1	848.4	849.3	849.0	848.8	848.5	848.2
15°	832.9	835.5	838.0	839.1	838.8	838.5	838.2	838.0
17.5°	819.0	821.5	824.2	825.5	825.5	825.5	825.5	825.5
20°	807.9	810.9	813.9	815.5	815.5	815.5	815.5	815.5
22.5°	795.8	798.9	801.9	803.7	804.1	804.6	805.0	805.5
25°	777.1	780.4	783.8	785.9	786.6	787.5	788.3	789.2
27.5°	756.4	760.6	764.8	767.2	767.9	768.5	769.1	769.7
30°	741.8	746.2	750.7	753.4	754.1	755.0	755.8	756.7
32.5°	726.1	731.2	736.3	739.7	741.1	742.6	744.1	745.6
35°	703.9	710.0	716.1	720.1	722.1	724.1	725.9	727.9
37.5°	680.9	687.7	694.5	698.9	701.0	703.0	705.1	707.2
40°	664.8	672.0	679.3	684.1	686.6	689.1	691.6	694.2
42.5°	649.1	657.0	665.0	670.1	672.6	675.1	677.6	680.1
45°	625.1	633.7	642.3	648.0	650.8	653.6	656.4	659.1
47.5°	600.1	609.1	618.1	624.2	627.2	630.3	633.3	636.4
50°	583.0	592.4	601.9	608.1	611.1	614.3	617.3	620.4
52.5°	564.4	574.1	583.7	590.2	593.5	596.8	600.0	603.3
55°	536.6	546.6	556.6	563.4	566.9	570.6	574.2	577.8
57.5°	507.1	517.8	528.7	535.9	539.5	543.2	546.9	550.5
60°	487.7	498.2	508.8	515.9	519.9	523.8	527.6	531.6
62.5°	466.9	478.2	489.4	496.9	500.5	504.2	507.8	511.5
65°	435.5	447.0	458.4	465.8	469.4	473.1	476.6	480.2
67.5°	403.7	415.2	426.8	434.4	438.2	442.0	445.7	449.5
70°	381.6	393.5	405.5	413.1	416.5	419.8	423.2	426.5
72.5°	360.1	371.8	383.6	391.4	395.5	399.4	403.5	407.5
75°	327.8	339.8	351.8	359.5	363.2	366.7	370.3	374.0
77.5°	296.2	308.1	320.0	327.9	331.8	335.6	339.6	343.5
80°	274.8	286.4	298.1	305.9	309.7	313.7	317.5	321.4
82.5°	254.8	266.4	278.1	285.8	289.5	293.0	296.7	300.4
85°	225.9	237.6	249.3	257.1	261.0	264.9	268.7	272.7
87.5°	206.9	218.5	230.1	237.7	241.4	245.1	248.7	252.3
90°	212.9	225.4	237.7	245.9	249.7	253.5	257.4	261.3
92.5°	205.9	217.5	229.0	236.7	240.3	243.9	247.6	251.3
95°	212.4	224.3	236.2	243.6	246.7	249.8	252.9	255.9
97.5°	215.8	227.2	238.5	245.9	249.5	253.1	256.7	260.3
100°	215.5	227.8	240.2	248.1	251.7	255.2	258.8	262.3
102.5°	211.1	223.9	236.6	244.8	248.5	252.3	256.1	259.9
105°	203.0	215.6	228.1	236.4	240.4	244.6	248.6	252.7
107.5°	208.7	215.2	221.7	227.0	231.0	235.1	239.1	243.3
110°	259.6	242.9	226.1	219.8	223.9	228.0	232.1	236.2



TEST NUMBER: P331575-830

CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	424.0	339.5	255.0	214.6	218.5	222.3	226.2	230.1
115°	565.8	455.5	345.3	282.4	267.0	251.7	236.3	220.8
117.5°	811.8	791.4	770.8	731.7	673.9	616.1	558.4	500.6
120°	925.7	936.5	947.3	937.0	905.5	873.9	842.4	810.9
122.5°	971.1	980.5	990.0	992.6	988.5	984.4	980.3	976.2
125°	1035.4	1044.7	1054.0	1060.3	1063.6	1066.8	1070.1	1073.4
127.5°	1094.1	1103.6	1113.1	1119.2	1121.8	1124.4	1127.0	1129.6
130°	1131.4	1140.9	1150.4	1156.1	1158.1	1160.1	1162.1	1164.0
132.5°	1167.5	1176.4	1185.2	1190.6	1192.6	1194.6	1196.6	1198.5
135°	1219.3	1227.7	1236.1	1241.1	1242.8	1244.5	1246.2	1247.9
137.5°	1267.0	1274.6	1282.2	1286.6	1287.5	1288.5	1289.6	1290.6
140°	1298.1	1304.9	1311.6	1315.2	1315.6	1316.0	1316.4	1316.7
142.5°	1328.0	1333.7	1339.4	1342.3	1342.5	1342.7	1342.7	1342.9
145°	1370.9	1374.3	1377.8	1379.6	1379.7	1379.8	1379.9	1380.1
147.5°	1409.0	1410.6	1412.1	1412.7	1412.3	1411.9	1411.5	1411.1
150°	1433.9	1435.5	1437.0	1437.1	1435.9	1434.5	1433.2	1432.0
152.5°	1457.0	1458.5	1460.1	1460.0	1458.3	1456.6	1454.9	1453.2
155°	1488.1	1489.7	1491.2	1490.9	1488.8	1486.9	1484.8	1482.7
157.5°	1514.4	1516.1	1517.9	1517.7	1515.7	1513.7	1511.7	1509.7
160°	1529.7	1531.2	1532.7	1532.6	1530.8	1529.0	1527.2	1525.4
162.5°	1543.9	1545.6	1547.4	1547.1	1544.9	1542.7	1540.5	1538.3
165°	1561.2	1563.0	1564.8	1564.8	1563.0	1561.2	1559.4	1557.6
167.5°	1575.7	1577.5	1579.3	1579.1	1576.8	1574.5	1572.2	1569.9
170°	1583.2	1585.0	1586.8	1586.5	1584.2	1581.9	1579.6	1577.3
172.5°	1588.7	1590.4	1592.2	1592.0	1589.7	1587.4	1585.1	1582.8
175°	1594.7	1596.5	1598.3	1597.9	1595.3	1592.8	1590.2	1587.6
177.5°	1595.3	1596.8	1598.3	1598.0	1596.2	1594.3	1592.5	1590.6
180°	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4

(END OF REPORT)