

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: P331994-840

Luminaire Tested: **S123DIP-S775D1195U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331994-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D1195U840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8082.3 lumens
Efficiency: N/A
Efficacy: 142.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

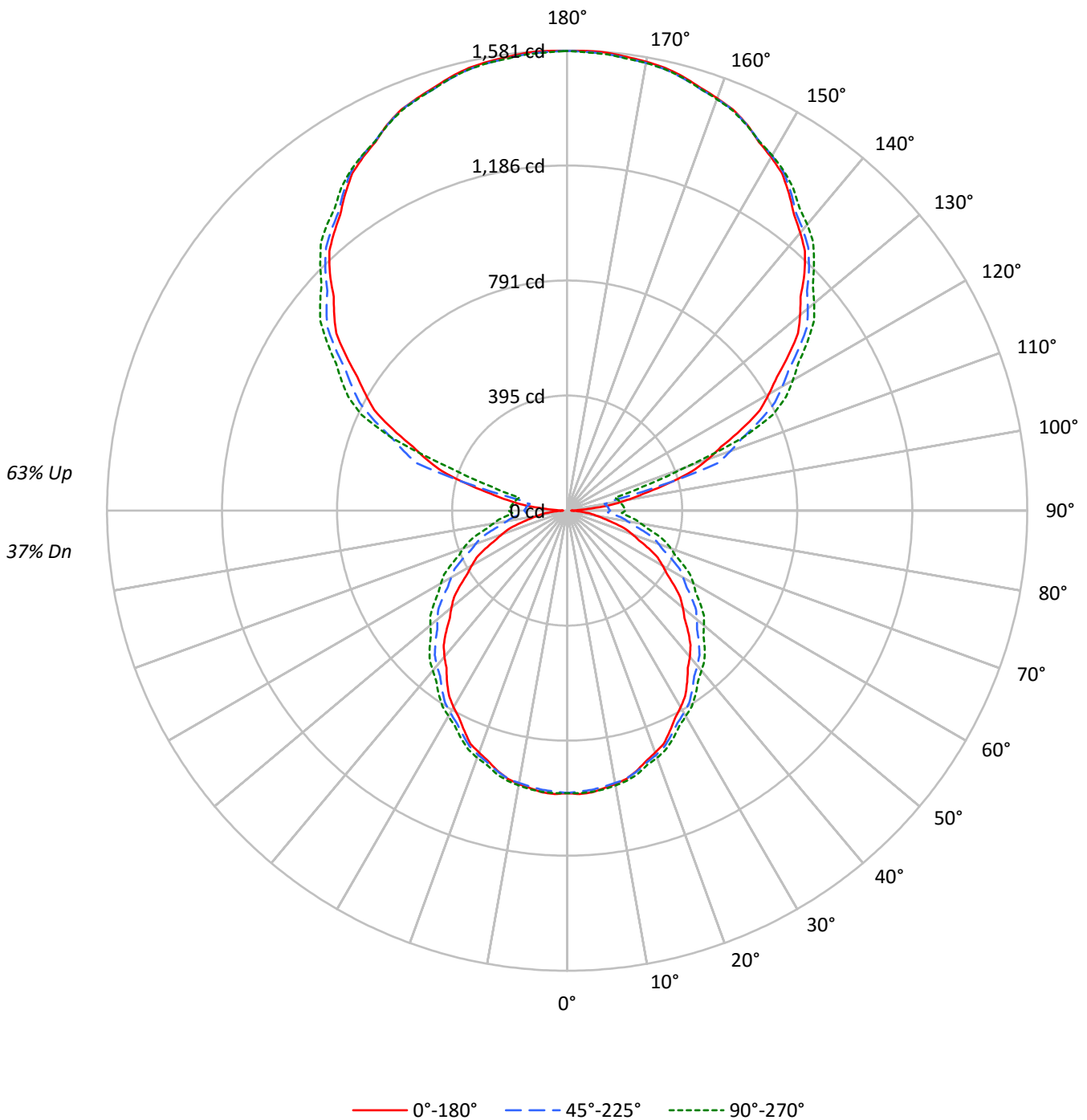
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331994-840

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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	82	85	81	78	74	65	63	61	51	49	48	38	37	36	30
2	85	78	71	66	77	70	65	60	57	53	50	44	42	39	33	31	29	24
3	78	68	61	55	70	62	55	50	50	45	41	39	36	33	29	27	25	20
4	71	60	52	46	64	54	48	42	44	39	35	35	31	28	26	23	21	17
5	65	53	45	39	58	48	41	36	39	34	30	31	27	24	23	20	18	15
6	60	48	39	34	54	43	36	31	35	30	26	28	24	21	21	18	16	13
7	55	43	35	29	50	39	32	27	32	27	23	25	21	18	19	16	14	11
8	51	39	31	26	46	35	29	24	29	24	20	23	19	16	17	15	13	10
9	47	35	28	23	43	32	26	21	26	21	18	21	17	15	16	13	11	9
10	44	32	25	20	40	30	23	19	24	19	16	19	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10449	10449	10449
5°	10481	10185	10191
10°	10387	9951	9901
15°	10253	9685	9584
20°	10061	9380	9236
25°	9826	9030	8869
30°	9583	8714	8498
35°	9312	8382	8201
40°	9054	8079	7884
45°	8767	7788	7630
50°	8484	7501	7350
55°	8172	7206	7099
60°	7867	6907	6840
65°	7553	6588	6534
70°	7082	6231	6219
75°	6487	5819	5899
80°	5804	5417	5533
85°	5167	5142	5320



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	1.1
10°-20°	262.3	3.2
20°-30°	392.3	4.9
30°-40°	468.5	5.8
40°-50°	490.2	6.1
50°-60°	460.0	5.7
60°-70°	384.2	4.8
70°-80°	274.9	3.4
80°-90°	168.3	2.1
90°-100°	160.3	2.0
100°-110°	349.2	4.3
110°-120°	707.8	8.8
120°-130°	865.8	10.7
130°-140°	907.2	11.2
140°-150°	839.0	10.4
150°-160°	674.6	8.3
160°-170°	435.4	5.4
170°-180°	150.0	1.9
0°-30°	746.7	9.2
0°-40°	1215.2	15.0
0°-60°	2165.4	26.8
0°-90°	2992.9	37.0
90°-120°	1217.3	15.1
90°-150°	3829.4	47.4
90°-180°	5089.0	63.0
0°-180°	8082.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	972	969	963	971	971	92
15°	925	928	927	937	937	260
25°	835	846	849	862	863	385
35°	719	736	750	765	770	450
45°	588	613	640	659	668	453
55°	448	483	521	549	558	401
65°	310	351	398	428	440	306
75°	168	218	271	304	318	180
85°	52	105	161	195	207	54
90°	15	79	148	187	201	13
95°	83	80	141	180	193	98
105°	358	391	336	169	170	379
115°	661	682	730	765	780	653
125°	928	938	972	996	1007	829
135°	1153	1160	1175	1197	1200	887
145°	1329	1336	1339	1349	1354	832
155°	1463	1461	1462	1467	1461	674
165°	1543	1539	1538	1547	1539	436
175°	1579	1574	1574	1582	1573	150
180°	1579	1579	1579	1579	1579	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	974.9	974.3	973.8	973.2	972.7	971.6	970.2	968.7	967.1	965.6	967.1
5°	971.8	971.3	970.8	970.4	969.9	969.0	967.6	966.1	964.7	963.3	965.2
7.5°	962.2	962.3	962.4	962.5	962.6	962.0	960.6	959.3	957.9	956.5	958.9
10°	953.8	954.2	954.7	955.2	955.6	955.3	954.1	953.0	951.8	950.6	953.0
12.5°	943.6	944.3	944.9	945.6	946.2	946.2	945.4	944.6	943.8	943.0	945.1
15°	925.2	925.9	926.7	927.4	928.1	928.3	928.1	927.9	927.6	927.4	929.7
17.5°	902.0	903.4	904.8	906.2	907.6	908.3	908.2	908.1	908.0	907.9	910.0
20°	885.0	886.5	887.9	889.3	890.7	891.6	892.1	892.6	893.0	893.5	895.6
22.5°	867.3	868.7	870.1	871.5	872.9	873.9	874.6	875.3	876.0	876.6	879.3
25°	835.4	837.7	840.0	842.4	844.8	846.3	847.0	847.7	848.4	849.1	852.1
27.5°	803.2	805.9	808.6	811.2	814.0	816.0	817.5	819.0	820.5	822.0	824.7
30°	780.3	783.5	786.5	789.5	792.5	795.1	796.9	798.8	800.7	802.5	805.4
32.5°	755.0	758.4	761.8	765.3	768.7	771.6	774.1	776.6	779.0	781.4	784.5
35°	719.0	722.8	726.6	730.3	734.1	737.5	740.5	743.6	746.7	749.7	753.3
37.5°	681.0	685.2	689.4	693.7	697.9	701.9	705.7	709.4	713.2	716.9	720.9
40°	655.6	659.8	664.1	668.3	672.5	677.0	681.7	686.4	691.1	695.8	699.7
42.5°	627.6	632.9	638.0	643.2	648.3	653.4	658.2	663.2	668.0	673.0	677.3
45°	587.9	593.6	599.2	604.8	610.5	616.2	622.1	627.9	633.9	639.7	644.2
47.5°	546.2	552.7	559.1	565.4	571.8	578.3	585.1	591.8	598.5	605.2	610.3
50°	519.2	525.7	532.3	539.0	545.5	552.4	559.8	567.0	574.3	581.6	586.9
52.5°	490.4	497.4	504.3	511.3	518.3	525.7	533.8	541.8	549.9	557.8	563.5
55°	448.4	456.1	463.8	471.6	479.4	487.5	495.9	504.4	512.8	521.3	527.7
57.5°	407.3	415.4	423.4	431.5	439.7	448.3	457.6	466.9	476.1	485.3	491.7
60°	378.6	387.0	395.5	403.9	412.4	421.4	431.1	440.7	450.3	460.0	466.6
62.5°	351.4	360.1	368.8	377.4	386.1	395.5	405.7	415.9	426.1	436.3	442.8
65°	309.8	319.0	328.1	337.3	346.5	356.2	366.6	376.9	387.3	397.6	404.7
67.5°	267.5	277.2	287.0	296.7	306.4	316.6	327.1	337.6	348.1	358.7	366.4
70°	237.9	248.0	258.1	268.2	278.3	289.0	300.3	311.5	322.9	334.2	341.6
72.5°	210.9	221.0	231.1	241.2	251.3	262.2	273.8	285.5	297.1	308.7	316.5
75°	168.1	179.2	190.3	201.3	212.3	223.7	235.4	247.2	258.9	270.7	278.4
77.5°	130.9	142.1	153.2	164.3	175.4	186.9	198.8	210.7	222.5	234.3	242.5
80°	104.7	116.2	127.7	139.3	150.8	162.6	174.8	187.0	199.2	211.5	219.4
82.5°	81.8	93.5	105.2	116.9	128.7	140.7	153.1	165.5	177.9	190.4	198.3
85°	51.8	63.5	75.3	87.1	98.8	110.9	123.4	135.8	148.2	160.8	168.7
87.5°	28.4	40.6	52.8	65.0	77.3	89.7	102.4	115.0	127.6	140.4	148.6
90°	14.9	29.1	43.1	57.3	71.4	86.1	101.5	116.9	132.3	147.6	156.6
92.5°	34.7	44.3	54.0	63.7	73.3	85.3	99.7	114.0	128.5	142.8	152.2
95°	83.2	81.7	80.2	78.7	77.1	83.5	98.0	112.3	126.6	141.1	150.2
97.5°	154.2	157.6	161.2	164.6	168.1	165.9	158.1	150.4	142.6	134.8	143.9
100°	207.8	220.6	233.3	246.0	258.7	250.1	220.4	190.5	160.6	130.7	139.6
102.5°	268.9	279.4	289.9	300.4	311.0	299.3	265.5	231.8	197.9	164.1	164.3
105°	358.1	366.6	375.1	383.6	392.1	389.7	376.4	362.9	349.6	336.3	296.7
107.5°	451.1	458.3	465.3	472.4	479.5	489.7	503.0	516.2	529.6	542.9	515.3
110°	513.2	519.5	525.8	532.1	538.5	547.8	560.0	572.3	584.5	596.8	594.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	573.3	578.7	584.0	589.4	594.7	603.3	615.2	627.1	638.9	650.9	656.9
115°	661.2	665.5	669.9	674.3	678.7	686.3	697.1	707.9	718.7	729.5	737.7
117.5°	747.1	750.7	754.4	758.1	761.7	768.1	777.3	786.4	795.6	804.7	812.3
120°	799.7	803.2	806.8	810.3	813.7	819.8	828.4	836.9	845.5	853.9	861.4
122.5°	854.1	856.7	859.2	861.7	864.3	869.8	878.2	886.5	894.8	903.2	909.9
125°	927.7	929.8	931.9	933.9	936.0	941.0	948.9	956.7	964.6	972.5	978.0
127.5°	1000.0	1001.8	1003.7	1005.5	1007.3	1011.8	1018.7	1025.5	1032.4	1039.4	1044.8
130°	1045.0	1046.9	1048.7	1050.6	1052.5	1056.2	1062.0	1067.7	1073.5	1079.2	1084.7
132.5°	1087.3	1089.4	1091.5	1093.5	1095.5	1098.8	1103.5	1108.0	1112.7	1117.2	1122.6
135°	1153.1	1154.4	1155.8	1157.1	1158.4	1160.8	1164.5	1168.1	1171.7	1175.4	1180.4
137.5°	1209.2	1211.0	1212.7	1214.6	1216.4	1218.3	1220.3	1222.3	1224.4	1226.4	1231.3
140°	1245.9	1247.5	1249.0	1250.6	1252.1	1253.6	1255.2	1256.7	1258.2	1259.6	1264.1
142.5°	1280.6	1282.0	1283.3	1284.8	1286.2	1287.3	1288.2	1289.1	1290.0	1291.0	1294.9
145°	1329.2	1330.8	1332.4	1333.9	1335.5	1336.7	1337.2	1337.7	1338.2	1338.7	1341.1
147.5°	1373.9	1375.1	1376.3	1377.5	1378.7	1379.6	1380.1	1380.6	1381.1	1381.6	1382.7
150°	1402.1	1402.8	1403.6	1404.4	1405.2	1405.8	1406.3	1406.8	1407.4	1408.0	1408.5
152.5°	1427.4	1427.7	1428.2	1428.5	1428.9	1429.2	1429.5	1429.9	1430.2	1430.5	1431.4
155°	1463.1	1462.6	1462.0	1461.5	1461.0	1460.9	1461.1	1461.4	1461.7	1461.9	1463.2
157.5°	1490.8	1490.7	1490.7	1490.6	1490.6	1490.4	1490.2	1489.9	1489.7	1489.3	1491.0
160°	1507.6	1507.4	1507.1	1506.9	1506.6	1506.3	1506.1	1505.8	1505.6	1505.3	1506.9
162.5°	1523.6	1523.0	1522.3	1521.6	1520.9	1520.5	1520.1	1519.9	1519.6	1519.3	1521.2
165°	1542.9	1542.1	1541.3	1540.5	1539.7	1539.2	1538.9	1538.6	1538.4	1538.1	1540.2
167.5°	1557.9	1556.8	1555.8	1554.8	1553.7	1553.2	1553.2	1553.2	1553.2	1553.2	1555.3
170°	1566.3	1565.3	1564.3	1563.2	1562.2	1561.7	1561.7	1561.7	1561.7	1561.7	1563.7
172.5°	1572.0	1570.7	1569.4	1568.2	1566.9	1566.4	1566.6	1566.8	1567.0	1567.2	1569.3
175°	1579.2	1577.9	1576.6	1575.3	1574.0	1573.5	1573.8	1574.0	1574.3	1574.5	1576.4
177.5°	1581.1	1580.0	1579.0	1578.0	1576.9	1576.5	1576.7	1576.9	1577.1	1577.3	1579.0
180°	1579.2	1579.2	1579.2	1579.2	1579.2	1579.2	1579.2	1579.2	1579.2	1579.2	1579.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	968.7	970.2	971.6	972.3	972.1	971.9	971.7	971.6
5°	967.0	969.0	970.8	971.6	971.4	971.2	971.0	970.7
7.5°	961.2	963.6	965.9	966.9	966.6	966.4	966.1	965.8
10°	955.3	957.7	960.0	961.0	960.5	960.0	959.6	959.1
12.5°	947.4	949.5	951.6	952.5	952.0	951.6	951.1	950.6
15°	932.0	934.4	936.8	937.8	937.6	937.4	937.1	936.9
17.5°	912.1	914.2	916.4	917.3	917.0	916.6	916.3	915.9
20°	897.8	899.9	902.0	903.1	903.4	903.6	903.8	904.1
22.5°	881.9	884.6	887.3	888.6	888.5	888.3	888.2	888.0
25°	855.3	858.3	861.3	862.8	862.8	862.8	862.8	862.8
27.5°	827.3	829.9	832.5	833.9	834.1	834.4	834.6	834.8
30°	808.2	811.0	813.9	815.3	815.3	815.3	815.3	815.3
32.5°	787.4	790.4	793.5	795.3	795.8	796.4	796.9	797.5
35°	756.8	760.3	763.8	766.1	767.0	767.9	768.8	769.8
37.5°	724.9	728.9	732.9	735.3	736.0	736.8	737.5	738.3
40°	703.8	707.7	711.8	714.2	715.2	716.1	717.0	718.0
42.5°	681.7	686.0	690.4	693.3	694.6	695.9	697.2	698.5
45°	648.6	653.1	657.6	660.8	662.7	664.5	666.4	668.3
47.5°	615.3	620.4	625.4	628.6	630.1	631.6	633.0	634.4
50°	592.4	597.7	603.2	606.7	608.3	610.0	611.7	613.3
52.5°	569.1	574.7	580.3	584.1	586.1	588.1	590.2	592.2
55°	534.0	540.4	546.6	550.8	552.7	554.5	556.4	558.4
57.5°	498.2	504.5	510.9	515.2	517.5	519.7	521.8	524.0
60°	473.1	479.7	486.3	490.9	493.4	496.0	498.7	501.2
62.5°	449.5	456.1	462.6	467.1	469.5	471.9	474.3	476.7
65°	411.7	418.7	425.8	430.5	432.8	435.2	437.6	439.9
67.5°	374.1	381.8	389.5	394.4	396.3	398.3	400.3	402.2
70°	349.2	356.7	364.3	369.1	371.5	373.9	376.2	378.6
72.5°	324.2	331.8	339.6	344.7	347.0	349.3	351.6	354.1
75°	286.2	294.0	301.7	307.0	309.8	312.7	315.5	318.3
77.5°	250.6	258.8	267.0	272.2	274.4	276.5	278.7	280.8
80°	227.4	235.4	243.5	248.6	251.0	253.3	255.7	258.0
82.5°	206.3	214.3	222.3	227.4	229.8	232.2	234.5	236.8
85°	176.7	184.7	192.7	197.8	200.2	202.6	204.9	207.2
87.5°	156.7	164.9	173.1	178.4	180.9	183.4	185.8	188.2
90°	165.7	174.7	183.8	189.8	192.6	195.5	198.3	201.2
92.5°	161.7	171.2	180.7	186.6	189.0	191.6	194.0	196.5
95°	159.3	168.3	177.5	183.2	185.6	187.9	190.3	192.6
97.5°	153.0	162.1	171.2	177.0	179.7	182.3	184.9	187.5
100°	148.6	157.4	166.3	172.1	174.7	177.3	179.9	182.5
102.5°	164.4	164.6	164.8	166.2	169.1	171.9	174.7	177.5
105°	257.1	217.5	177.9	159.6	162.2	164.8	167.4	170.1
107.5°	487.8	460.2	432.6	402.5	369.8	337.1	304.4	271.7
110°	591.8	589.4	586.8	567.8	532.5	497.1	461.7	426.3



TEST NUMBER: P331994-840

CATALOG NUMBER: S123DIP-S775D1195U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	663.1	669.1	675.2	675.3	669.5	663.7	657.9	652.1
115°	746.0	754.3	762.4	768.1	771.0	774.0	776.9	779.7
117.5°	820.0	827.7	835.4	840.3	842.3	844.3	846.4	848.4
120°	869.0	876.5	883.9	888.5	890.1	891.8	893.4	895.0
122.5°	916.6	923.3	930.0	934.2	936.0	938.0	939.8	941.6
125°	983.4	988.9	994.3	998.0	1000.3	1002.4	1004.6	1006.7
127.5°	1050.3	1055.8	1061.3	1064.6	1065.6	1066.7	1067.7	1068.8
130°	1090.3	1095.7	1101.3	1104.4	1105.3	1106.2	1107.1	1108.0
132.5°	1127.8	1133.2	1138.5	1141.6	1142.5	1143.4	1144.2	1145.1
135°	1185.4	1190.4	1195.5	1198.1	1198.5	1198.9	1199.3	1199.7
137.5°	1236.4	1241.3	1246.3	1249.1	1249.7	1250.4	1251.0	1251.7
140°	1268.8	1273.3	1277.9	1280.5	1281.1	1281.8	1282.4	1283.1
142.5°	1299.0	1302.9	1306.9	1309.1	1309.6	1310.0	1310.5	1310.9
145°	1343.5	1345.9	1348.3	1350.0	1350.9	1351.9	1352.8	1353.7
147.5°	1383.8	1384.9	1385.9	1386.3	1386.0	1385.6	1385.3	1384.9
150°	1409.0	1409.5	1410.0	1410.1	1409.8	1409.5	1409.2	1408.9
152.5°	1432.3	1433.3	1434.2	1434.1	1433.0	1431.9	1430.8	1429.7
155°	1464.5	1465.8	1467.1	1466.9	1465.4	1463.9	1462.3	1460.8
157.5°	1492.5	1494.0	1495.6	1495.4	1493.4	1491.3	1489.2	1487.2
160°	1508.4	1510.0	1511.6	1511.5	1509.6	1507.8	1505.9	1504.1
162.5°	1523.0	1524.7	1526.5	1526.5	1524.9	1523.3	1521.7	1520.0
165°	1542.4	1544.4	1546.5	1546.6	1544.8	1543.0	1541.2	1539.3
167.5°	1557.3	1559.4	1561.6	1561.6	1559.4	1557.3	1555.3	1553.2
170°	1565.8	1567.9	1569.9	1569.9	1567.9	1565.8	1563.7	1561.7
172.5°	1571.5	1573.5	1575.6	1575.5	1573.2	1570.9	1568.6	1566.3
175°	1578.2	1580.0	1581.9	1581.7	1579.6	1577.5	1575.5	1573.4
177.5°	1580.6	1582.4	1584.0	1583.8	1581.8	1579.6	1577.5	1575.5
180°	1579.2	1579.2	1579.2	1579.2	1579.2	1579.2	1579.2	1579.2

(END OF REPORT)