

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: P331995-935

Luminaire Tested: **S123DIP-S775D1195U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331995-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D1195U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6313.3 lumens
Efficiency: N/A
Efficacy: 111.0 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: General Diffuse

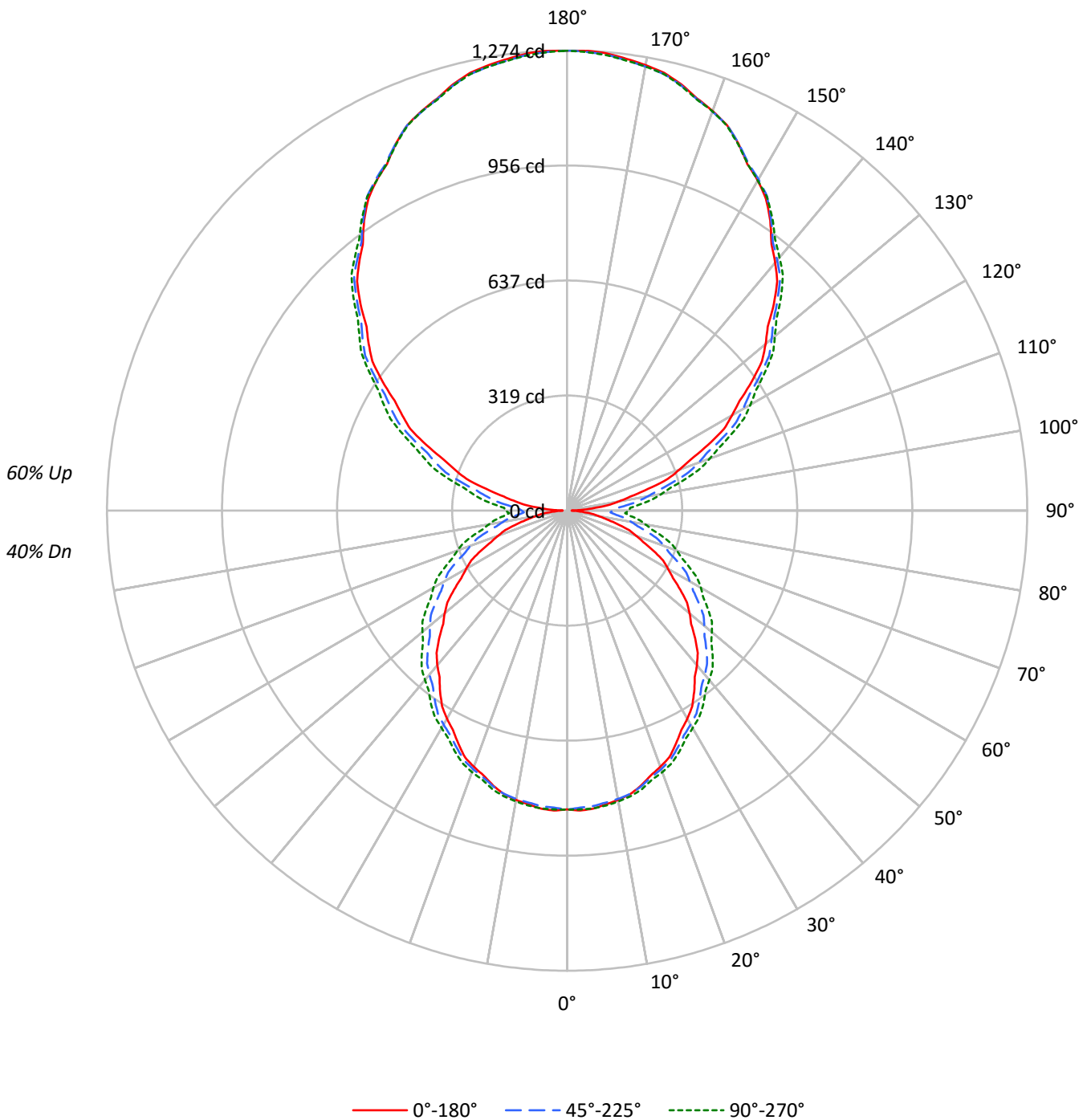
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331995-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-D1

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	95	90	86	82	86	82	79	75	67	64	62	53	51	50	40	39	38	32
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	32	26
3	78	68	61	55	71	62	56	51	51	46	42	41	37	34	31	28	26	22
4	71	60	52	46	65	55	48	43	45	40	36	36	32	29	27	25	23	19
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	25	22	19	16
6	60	48	40	34	54	44	37	31	36	31	27	29	25	22	22	19	17	14
7	55	43	35	30	50	40	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	26	47	36	29	24	30	24	21	24	20	17	19	16	13	11
9	48	36	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	33	25	21	41	30	23	19	25	20	16	20	16	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8908	8908	8908
5°	8936	8684	8689
10°	8856	8484	8441
15°	8741	8257	8171
20°	8579	7997	7875
25°	8377	7698	7561
30°	8171	7430	7245
35°	7939	7146	6992
40°	7720	6888	6722
45°	7475	6640	6505
50°	7232	6394	6267
55°	6967	6143	6052
60°	6707	5889	5832
65°	6441	5617	5571
70°	6040	5312	5303
75°	5534	4961	5030
80°	4951	4618	4718
85°	4409	4384	4537



TEST NUMBER: P331995-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	1.2
10°-20°	223.7	3.5
20°-30°	334.5	5.3
30°-40°	399.5	6.3
40°-50°	418.0	6.6
50°-60°	392.2	6.2
60°-70°	327.6	5.2
70°-80°	234.4	3.7
80°-90°	143.5	2.3
90°-100°	170.7	2.7
100°-110°	312.8	5.0
110°-120°	465.4	7.4
120°-130°	580.1	9.2
130°-140°	635.4	10.1
140°-150°	616.1	9.8
150°-160°	516.7	8.2
160°-170°	343.9	5.4
170°-180°	120.4	1.9
0°-30°	636.6	10.1
0°-40°	1036.1	16.4
0°-60°	1846.2	29.2
0°-90°	2551.7	40.4
90°-120°	948.8	15.0
90°-150°	2780.5	44.0
90°-180°	3762.0	59.6
0°-180°	6313.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	828	826	821	828	828	79
15°	789	791	791	799	799	222
25°	712	721	724	735	736	328
35°	613	627	639	652	656	383
45°	501	523	545	562	570	386
55°	382	412	444	468	476	342
65°	264	300	339	365	375	261
75°	143	186	231	260	271	153
85°	44	89	137	166	177	46
90°	13	67	126	159	172	12
95°	69	112	163	194	204	74
105°	232	257	304	328	339	248
115°	430	444	474	496	503	425
125°	625	629	652	666	669	557
135°	809	814	823	835	838	623
145°	980	982	984	990	990	612
155°	1122	1122	1122	1126	1119	516
165°	1222	1219	1218	1224	1218	344
175°	1270	1267	1266	1272	1266	121
180°	1274	1274	1274	1274	1274	



TEST NUMBER: P331995-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	831.2	830.7	830.3	829.7	829.3	828.4	827.2	825.9	824.6	823.3	824.6
5°	828.5	828.1	827.7	827.3	826.9	826.1	824.9	823.7	822.5	821.3	822.9
7.5°	820.4	820.4	820.5	820.6	820.7	820.2	819.0	817.9	816.7	815.5	817.5
10°	813.2	813.6	814.0	814.4	814.8	814.5	813.5	812.5	811.5	810.5	812.5
12.5°	804.5	805.1	805.6	806.2	806.8	806.8	806.1	805.4	804.7	804.0	805.8
15°	788.8	789.5	790.1	790.7	791.3	791.4	791.3	791.1	790.8	790.7	792.6
17.5°	769.0	770.3	771.5	772.6	773.8	774.4	774.3	774.2	774.1	774.0	775.8
20°	754.6	755.8	757.0	758.2	759.4	760.2	760.6	761.0	761.4	761.8	763.6
22.5°	739.4	740.6	741.8	743.0	744.2	745.1	745.7	746.2	746.8	747.3	749.7
25°	712.2	714.2	716.2	718.2	720.2	721.5	722.1	722.7	723.3	723.9	726.5
27.5°	684.8	687.1	689.4	691.6	694.0	695.7	697.0	698.3	699.6	700.9	703.1
30°	665.3	668.0	670.5	673.1	675.7	677.9	679.4	681.1	682.7	684.2	686.6
32.5°	643.7	646.6	649.5	652.5	655.4	657.9	660.0	662.1	664.2	666.2	668.8
35°	613.0	616.2	619.5	622.7	625.9	628.8	631.4	634.0	636.6	639.2	642.2
37.5°	580.6	584.2	587.8	591.4	595.0	598.4	601.7	604.9	608.0	611.2	614.7
40°	559.0	562.6	566.2	569.8	573.3	577.2	581.2	585.2	589.2	593.2	596.6
42.5°	535.1	539.6	544.0	548.4	552.8	557.1	561.2	565.4	569.6	573.8	577.5
45°	501.3	506.1	510.8	515.7	520.5	525.4	530.4	535.4	540.4	545.4	549.2
47.5°	465.7	471.2	476.6	482.1	487.5	493.1	498.9	504.5	510.3	516.0	520.3
50°	442.6	448.2	453.8	459.5	465.1	471.0	477.3	483.5	489.7	495.8	500.4
52.5°	418.1	424.0	430.0	435.9	441.9	448.2	455.1	461.9	468.8	475.6	480.4
55°	382.3	388.8	395.5	402.1	408.7	415.6	422.8	430.1	437.2	444.4	449.9
57.5°	347.2	354.1	361.0	367.9	374.9	382.2	390.1	398.0	405.9	413.8	419.2
60°	322.8	329.9	337.2	344.4	351.6	359.3	367.6	375.7	383.9	392.2	397.8
62.5°	299.6	307.0	314.4	321.8	329.2	337.2	345.9	354.6	363.3	372.0	377.5
65°	264.2	272.0	279.7	287.6	295.4	303.7	312.5	321.3	330.2	339.0	345.0
67.5°	228.1	236.3	244.7	253.0	261.2	269.9	278.9	287.8	296.8	305.8	312.4
70°	202.9	211.5	220.1	228.7	237.3	246.4	256.1	265.6	275.3	284.9	291.3
72.5°	179.8	188.4	197.0	205.6	214.2	223.5	233.4	243.4	253.3	263.2	269.8
75°	143.4	152.7	162.2	171.6	181.0	190.7	200.7	210.8	220.8	230.8	237.4
77.5°	111.6	121.1	130.6	140.1	149.6	159.4	169.5	179.6	189.7	199.8	206.7
80°	89.3	99.1	108.9	118.7	128.5	138.6	149.0	159.5	169.9	180.3	187.1
82.5°	69.7	79.7	89.7	99.7	109.7	119.9	130.5	141.1	151.7	162.3	169.1
85°	44.2	54.2	64.2	74.2	84.2	94.5	105.2	115.8	126.4	137.1	143.9
87.5°	24.2	34.6	45.0	55.4	65.9	76.5	87.3	98.1	108.8	119.7	126.7
90°	12.7	24.8	36.8	48.8	60.9	73.4	86.5	99.7	112.8	125.9	133.5
92.5°	35.2	45.5	56.0	66.3	76.7	87.7	99.4	111.2	122.8	134.5	141.9
95°	69.0	78.4	87.6	97.0	106.4	116.9	128.5	140.1	151.7	163.2	170.4
97.5°	113.7	121.9	130.1	138.3	146.5	155.9	166.6	177.3	188.0	198.6	205.6
100°	144.1	151.9	159.6	167.4	175.1	184.2	194.5	204.8	215.2	225.5	232.0
102.5°	179.4	186.1	192.6	199.1	205.8	214.3	224.8	235.3	245.8	256.4	262.7
105°	232.3	237.5	242.8	248.1	253.3	261.2	271.8	282.5	293.1	303.7	309.4
107.5°	292.8	297.2	301.5	305.9	310.2	316.9	325.9	334.8	343.9	352.8	358.9
110°	330.5	334.6	338.6	342.7	346.7	353.0	361.4	369.9	378.3	386.8	393.0



TEST NUMBER: P331995-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	370.6	373.8	377.0	380.2	383.5	389.0	396.7	404.6	412.3	420.1	426.2
115°	429.6	432.7	435.8	438.9	442.0	446.9	453.7	460.4	467.2	474.0	479.0
117.5°	489.9	491.8	493.8	495.7	497.7	501.7	507.9	514.1	520.3	526.4	531.2
120°	526.8	529.2	531.5	533.8	536.1	540.1	545.5	551.0	556.6	562.1	566.5
122.5°	566.0	567.5	569.0	570.5	572.0	575.7	581.3	587.0	592.8	598.5	602.4
125°	624.9	625.6	626.3	627.0	627.6	630.6	636.0	641.4	646.7	652.1	655.4
127.5°	680.2	681.4	682.6	683.8	685.0	687.9	692.2	696.5	700.8	705.1	707.8
130°	717.0	718.6	720.1	721.7	723.3	725.7	729.1	732.5	735.7	739.1	742.0
132.5°	753.0	754.8	756.6	758.3	760.0	762.2	765.0	767.7	770.4	773.1	775.7
135°	809.1	810.2	811.4	812.5	813.6	815.2	817.2	819.2	821.1	823.1	825.9
137.5°	860.9	861.9	862.9	863.8	864.8	866.2	868.0	869.8	871.6	873.4	875.6
140°	896.2	897.3	898.5	899.6	900.7	901.6	902.5	903.3	904.1	904.9	907.8
142.5°	929.0	930.0	931.0	931.9	932.9	933.6	934.1	934.6	935.1	935.6	938.1
145°	980.2	980.5	980.8	981.0	981.3	981.7	982.4	983.0	983.7	984.4	985.8
147.5°	1024.2	1025.0	1025.8	1026.6	1027.4	1028.1	1028.7	1029.3	1029.9	1030.6	1031.0
150°	1055.4	1055.8	1056.3	1056.7	1057.2	1057.7	1058.1	1058.5	1058.9	1059.4	1059.4
152.5°	1081.0	1081.7	1082.3	1082.9	1083.5	1083.9	1084.2	1084.5	1084.8	1085.0	1085.4
155°	1121.5	1121.5	1121.5	1121.5	1121.5	1121.5	1121.8	1122.0	1122.2	1122.4	1123.3
157.5°	1155.8	1155.5	1155.3	1155.0	1154.8	1154.7	1154.9	1155.1	1155.3	1155.5	1156.4
160°	1177.4	1177.0	1176.6	1176.1	1175.7	1175.4	1175.4	1175.4	1175.4	1175.4	1176.6
162.5°	1196.6	1196.0	1195.4	1194.8	1194.2	1193.9	1194.1	1194.3	1194.5	1194.6	1195.8
165°	1221.5	1220.8	1220.1	1219.4	1218.8	1218.5	1218.5	1218.5	1218.5	1218.5	1219.8
167.5°	1241.3	1240.4	1239.5	1238.6	1237.7	1237.3	1237.5	1237.7	1237.9	1238.0	1239.4
170°	1252.5	1251.5	1250.7	1249.8	1248.9	1248.4	1248.4	1248.4	1248.4	1248.4	1250.0
172.5°	1261.3	1260.4	1259.5	1258.6	1257.7	1257.3	1257.3	1257.3	1257.3	1257.3	1258.7
175°	1270.5	1269.6	1268.7	1267.8	1267.0	1266.4	1266.4	1266.4	1266.4	1266.4	1267.8
177.5°	1274.3	1273.6	1272.9	1272.1	1271.4	1271.1	1271.1	1271.1	1271.1	1271.1	1272.1
180°	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5



TEST NUMBER: P331995-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	825.9	827.2	828.4	829.0	828.8	828.6	828.5	828.4
5°	824.5	826.1	827.7	828.4	828.2	828.0	827.9	827.6
7.5°	819.5	821.6	823.5	824.4	824.1	824.0	823.7	823.5
10°	814.5	816.5	818.5	819.3	818.9	818.5	818.1	817.7
12.5°	807.7	809.5	811.3	812.1	811.7	811.3	810.9	810.5
15°	794.6	796.7	798.7	799.5	799.4	799.2	798.9	798.7
17.5°	777.7	779.5	781.3	782.0	781.8	781.4	781.2	780.9
20°	765.4	767.2	769.0	770.0	770.3	770.4	770.6	770.9
22.5°	751.9	754.2	756.5	757.6	757.5	757.3	757.2	757.1
25°	729.2	731.8	734.3	735.6	735.6	735.6	735.6	735.6
27.5°	705.3	707.6	709.8	711.0	711.2	711.4	711.5	711.7
30°	689.1	691.5	693.9	695.1	695.1	695.1	695.1	695.1
32.5°	671.3	673.9	676.5	678.0	678.5	679.0	679.4	679.9
35°	645.2	648.2	651.2	653.2	653.9	654.7	655.5	656.3
37.5°	618.0	621.5	624.8	626.9	627.5	628.2	628.8	629.5
40°	600.0	603.4	606.8	608.9	609.8	610.5	611.3	612.2
42.5°	581.2	584.9	588.7	591.1	592.2	593.3	594.4	595.6
45°	553.0	556.8	560.7	563.4	565.0	566.5	568.2	569.8
47.5°	524.6	528.9	533.2	536.0	537.2	538.5	539.7	540.9
50°	505.1	509.6	514.3	517.3	518.7	520.0	521.5	522.9
52.5°	485.2	490.0	494.7	498.0	499.7	501.4	503.2	504.9
55°	455.3	460.7	466.1	469.6	471.2	472.8	474.4	476.0
57.5°	424.7	430.2	435.6	439.3	441.2	443.1	444.9	446.8
60°	403.4	409.0	414.6	418.5	420.7	422.9	425.2	427.3
62.5°	383.2	388.8	394.4	398.2	400.3	402.3	404.4	406.4
65°	351.0	357.0	363.0	367.0	369.0	371.0	373.1	375.1
67.5°	318.9	325.5	332.1	336.2	337.9	339.6	341.3	342.9
70°	297.7	304.1	310.6	314.7	316.8	318.7	320.7	322.8
72.5°	276.4	282.9	289.6	293.9	295.8	297.8	299.8	301.9
75°	244.0	250.6	257.3	261.7	264.2	266.6	269.0	271.4
77.5°	213.7	220.7	227.6	232.0	233.9	235.7	237.6	239.4
80°	193.9	200.7	207.6	212.0	214.0	215.9	218.0	220.0
82.5°	175.9	182.7	189.5	193.9	196.0	197.9	199.9	201.9
85°	150.7	157.5	164.3	168.7	170.7	172.7	174.7	176.7
87.5°	133.6	140.6	147.6	152.1	154.3	156.4	158.4	160.5
90°	141.3	149.0	156.7	161.8	164.2	166.7	169.1	171.5
92.5°	149.2	156.6	163.9	168.4	170.0	171.6	173.1	174.8
95°	177.5	184.6	191.7	196.2	198.2	200.3	202.2	204.2
97.5°	212.6	219.6	226.6	231.0	233.0	234.9	236.8	238.7
100°	238.4	245.0	251.4	255.9	258.3	260.8	263.2	265.6
102.5°	269.0	275.3	281.6	285.8	287.7	289.6	291.5	293.4
105°	315.0	320.6	326.1	330.1	332.3	334.6	336.8	339.1
107.5°	365.0	371.1	377.1	380.9	382.5	383.9	385.4	386.9
110°	399.0	405.1	411.2	414.8	416.0	417.2	418.4	419.5



TEST NUMBER: P331995-935

CATALOG NUMBER: S123DIP-S775D1195U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	432.3	438.4	444.5	448.5	450.1	451.9	453.5	455.1
115°	484.0	489.0	494.0	497.3	498.7	500.1	501.4	502.8
117.5°	535.9	540.6	545.4	548.2	549.1	550.1	551.0	551.9
120°	570.8	575.2	579.6	582.3	583.2	584.2	585.1	586.1
122.5°	606.2	610.1	614.0	616.3	617.1	617.9	618.6	619.4
125°	658.8	662.0	665.4	667.3	667.8	668.3	668.8	669.3
127.5°	710.6	713.3	716.0	717.6	717.8	718.2	718.5	718.8
130°	744.9	747.9	750.8	752.1	751.7	751.3	751.0	750.6
132.5°	778.3	780.8	783.4	784.8	785.0	785.1	785.3	785.5
135°	828.5	831.3	834.0	835.6	836.2	836.7	837.3	837.8
137.5°	877.9	880.1	882.4	883.6	883.7	883.8	884.0	884.2
140°	910.5	913.3	916.1	917.2	916.6	916.1	915.5	915.0
142.5°	940.6	943.1	945.6	946.7	946.5	946.2	946.1	945.9
145°	987.1	988.5	989.9	990.6	990.5	990.4	990.2	990.2
147.5°	1031.6	1032.0	1032.5	1032.4	1031.8	1031.2	1030.6	1030.0
150°	1059.4	1059.4	1059.4	1058.9	1058.0	1057.0	1056.1	1055.2
152.5°	1085.7	1086.1	1086.4	1086.1	1085.0	1083.9	1082.9	1081.8
155°	1124.2	1125.1	1126.0	1125.7	1124.1	1122.6	1121.0	1119.4
157.5°	1157.3	1158.2	1159.2	1159.0	1157.8	1156.5	1155.3	1154.0
160°	1177.7	1178.8	1179.9	1180.0	1179.1	1178.2	1177.3	1176.5
162.5°	1196.9	1198.0	1199.1	1198.9	1197.5	1196.1	1194.6	1193.3
165°	1221.2	1222.4	1223.8	1223.7	1222.1	1220.6	1219.0	1217.5
167.5°	1240.8	1242.2	1243.5	1243.5	1242.2	1240.8	1239.4	1238.0
170°	1251.5	1253.2	1254.7	1254.7	1253.2	1251.5	1250.0	1248.4
172.5°	1260.1	1261.5	1262.8	1262.7	1261.1	1259.6	1258.0	1256.5
175°	1269.1	1270.5	1271.8	1271.7	1270.1	1268.6	1267.0	1265.5
177.5°	1273.2	1274.3	1275.3	1275.2	1274.0	1272.7	1271.5	1270.3
180°	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5	1273.5

(END OF REPORT)