

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: P331994-830

Luminaire Tested: **S123DIP-S775D1195U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331994-830
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-S775D1195U830-4F0-1E-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: 7543.5 lumens
Efficiency: N/A
Efficacy: 132.6 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

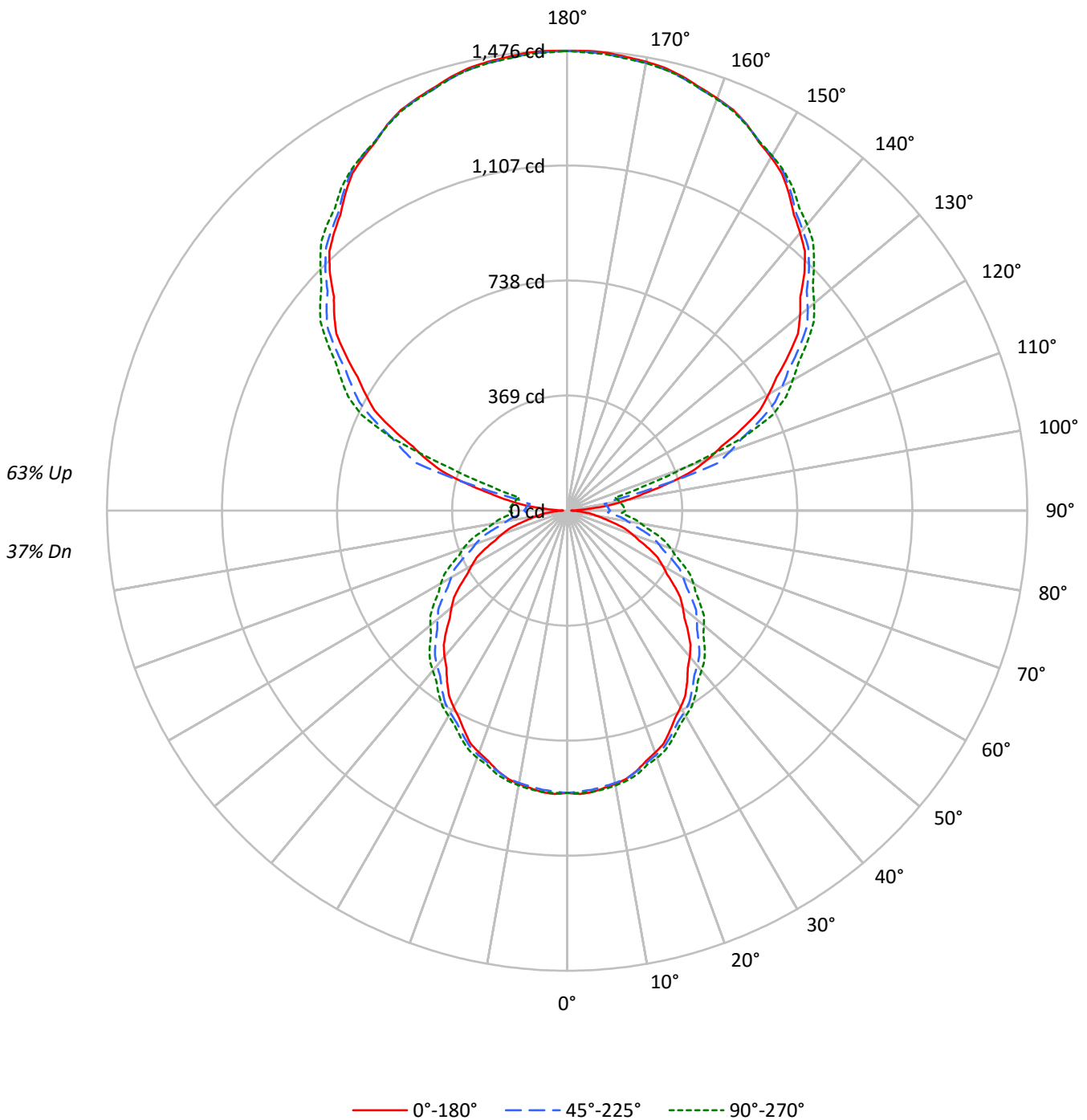
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331994-830

CATALOG NUMBER: S123DIP-S775D1195U830-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331994-830

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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°	9752	9752	9752
5°	9782	9507	9512
10°	9694	9287	9240
15°	9570	9038	8945
20°	9390	8755	8621
25°	9171	8428	8278
30°	8945	8133	7931
35°	8692	7823	7655
40°	8450	7540	7358
45°	8182	7269	7122
50°	7918	7000	6860
55°	7627	6725	6625
60°	7343	6446	6385
65°	7051	6149	6098
70°	6611	5815	5805
75°	6055	5432	5506
80°	5416	5056	5164
85°	4828	4799	4966



TEST NUMBER: P331994-830

CATALOG NUMBER: S123DIP-S775D1195U830-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	1.1
10°-20°	244.8	3.2
20°-30°	366.2	4.9
30°-40°	437.3	5.8
40°-50°	457.5	6.1
50°-60°	429.4	5.7
60°-70°	358.6	4.8
70°-80°	256.6	3.4
80°-90°	157.1	2.1
90°-100°	149.6	2.0
100°-110°	325.9	4.3
110°-120°	660.6	8.8
120°-130°	808.1	10.7
130°-140°	846.8	11.2
140°-150°	783.1	10.4
150°-160°	629.6	8.3
160°-170°	406.3	5.4
170°-180°	140.0	1.9
0°-30°	696.9	9.2
0°-40°	1134.2	15.0
0°-60°	2021.1	26.8
0°-90°	2793.4	37.0
90°-120°	1136.1	15.1
90°-150°	3574.1	47.4
90°-180°	4750.0	63.0
0°-180°	7543.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	907	905	899	906	906	86
15°	864	866	866	875	874	243
25°	780	789	792	805	805	359
35°	671	687	700	714	718	420
45°	549	572	597	615	624	423
55°	418	451	486	512	521	375
65°	289	328	371	400	411	286
75°	157	203	253	284	297	168
85°	48	98	150	182	193	51
90°	14	74	138	174	188	12
95°	78	75	132	168	180	91
105°	334	365	314	158	159	354
115°	617	637	681	714	728	609
125°	866	876	908	930	940	773
135°	1076	1082	1097	1117	1120	828
145°	1241	1247	1249	1259	1264	776
155°	1366	1364	1364	1369	1363	629
165°	1440	1437	1436	1443	1437	407
175°	1474	1469	1470	1476	1468	140
180°	1474	1474	1474	1474	1474	



TEST NUMBER: P331994-830

CATALOG NUMBER: S123DIP-S775D1195U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	909.9	909.4	908.9	908.3	907.9	906.8	905.5	904.1	902.7	901.3	902.7
5°	907.0	906.5	906.1	905.7	905.2	904.4	903.1	901.7	900.4	899.1	900.9
7.5°	898.1	898.1	898.2	898.3	898.4	897.9	896.5	895.3	894.0	892.8	894.9
10°	890.2	890.6	891.1	891.6	891.9	891.6	890.5	889.5	888.3	887.2	889.5
12.5°	880.7	881.4	881.9	882.6	883.2	883.2	882.4	881.7	880.9	880.1	882.1
15°	863.6	864.2	864.9	865.5	866.2	866.4	866.2	866.0	865.7	865.5	867.7
17.5°	841.9	843.2	844.5	845.7	847.1	847.7	847.6	847.5	847.4	847.3	849.3
20°	826.0	827.4	828.7	830.0	831.3	832.2	832.6	833.1	833.5	834.0	835.9
22.5°	809.5	810.8	812.1	813.4	814.7	815.7	816.3	816.9	817.6	818.1	820.7
25°	779.7	781.8	784.0	786.3	788.4	789.9	790.5	791.2	791.8	792.5	795.3
27.5°	749.7	752.1	754.7	757.1	759.7	761.6	763.0	764.4	765.8	767.2	769.7
30°	728.3	731.2	734.1	736.9	739.7	742.1	743.8	745.6	747.3	749.0	751.7
32.5°	704.6	707.8	711.1	714.3	717.5	720.2	722.5	724.8	727.1	729.3	732.2
35°	671.1	674.6	678.2	681.6	685.1	688.3	691.2	694.0	696.9	699.7	703.0
37.5°	635.6	639.5	643.5	647.4	651.4	655.1	658.6	662.1	665.6	669.1	672.9
40°	611.9	615.9	619.8	623.8	627.6	631.9	636.2	640.6	645.0	649.4	653.1
42.5°	585.8	590.7	595.5	600.3	605.1	609.8	614.3	619.0	623.5	628.1	632.2
45°	548.7	554.0	559.2	564.5	569.8	575.1	580.6	586.1	591.6	597.1	601.2
47.5°	509.8	515.9	521.8	527.7	533.7	539.8	546.1	552.3	558.6	564.9	569.6
50°	484.6	490.7	496.8	503.0	509.2	515.6	522.5	529.2	536.0	542.8	547.8
52.5°	457.7	464.2	470.7	477.2	483.7	490.7	498.2	505.7	513.2	520.7	525.9
55°	418.5	425.7	432.9	440.2	447.4	455.0	462.9	470.8	478.6	486.5	492.5
57.5°	380.1	387.7	395.2	402.7	410.4	418.4	427.1	435.7	444.3	453.0	458.9
60°	353.4	361.2	369.1	377.0	384.9	393.3	402.4	411.3	420.3	429.3	435.5
62.5°	328.0	336.1	344.2	352.2	360.3	369.1	378.6	388.1	397.7	407.2	413.3
65°	289.2	297.7	306.2	314.8	323.4	332.4	342.1	351.8	361.5	371.1	377.7
67.5°	249.7	258.7	267.9	276.9	286.0	295.5	305.3	315.1	324.9	334.8	342.0
70°	222.1	231.5	240.9	250.3	259.8	269.8	280.3	290.8	301.3	311.9	318.9
72.5°	196.8	206.2	215.7	225.1	234.5	244.7	255.5	266.5	277.3	288.1	295.4
75°	156.9	167.2	177.6	187.8	198.1	208.8	219.7	230.7	241.7	252.7	259.9
77.5°	122.2	132.6	143.0	153.4	163.7	174.5	185.6	196.6	207.6	218.7	226.3
80°	97.7	108.5	119.2	130.0	140.7	151.7	163.2	174.6	186.0	197.4	204.8
82.5°	76.3	87.3	98.2	109.1	120.1	131.3	142.9	154.5	166.1	177.7	185.1
85°	48.4	59.3	70.3	81.2	92.2	103.5	115.2	126.8	138.4	150.1	157.5
87.5°	26.5	37.9	49.3	60.7	72.1	83.7	95.6	107.4	119.1	131.0	138.6
90°	13.9	27.1	40.2	53.4	66.6	80.4	94.7	109.1	123.5	137.8	146.2
92.5°	32.4	41.4	50.4	59.5	68.4	79.6	93.0	106.4	119.9	133.3	142.0
95°	77.7	76.3	74.8	73.4	71.9	77.9	91.4	104.8	118.2	131.7	140.2
97.5°	143.9	147.1	150.4	153.6	156.9	154.9	147.6	140.3	133.1	125.8	134.3
100°	194.0	205.9	217.7	229.6	241.5	233.5	205.7	177.8	149.9	122.0	130.3
102.5°	251.0	260.8	270.6	280.4	290.3	279.4	247.8	216.3	184.7	153.2	153.4
105°	334.2	342.1	350.1	358.1	366.0	363.7	351.3	338.7	326.3	313.9	276.9
107.5°	421.0	427.7	434.3	440.9	447.5	457.0	469.5	481.8	494.3	506.7	481.0
110°	479.0	484.8	490.8	496.6	502.6	511.2	522.6	534.1	545.5	557.0	554.7



TEST NUMBER: P331994-830

CATALOG NUMBER: S123DIP-S775D1195U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	535.1	540.1	545.1	550.1	555.1	563.1	574.2	585.3	596.3	607.5	613.1
115°	617.1	621.1	625.3	629.3	633.5	640.6	650.6	660.7	670.8	680.9	688.5
117.5°	697.3	700.7	704.1	707.6	711.0	716.9	725.5	734.0	742.5	751.0	758.2
120°	746.4	749.7	753.0	756.3	759.5	765.2	773.2	781.1	789.1	797.0	804.0
122.5°	797.2	799.6	801.9	804.3	806.7	811.8	819.6	827.4	835.2	843.0	849.2
125°	865.8	867.8	869.8	871.7	873.6	878.3	885.6	893.0	900.3	907.7	912.8
127.5°	933.3	935.0	936.8	938.5	940.2	944.3	950.7	957.2	963.6	970.1	975.2
130°	975.3	977.1	978.8	980.5	982.3	985.8	991.2	996.6	1001.9	1007.3	1012.4
132.5°	1014.8	1016.8	1018.7	1020.6	1022.5	1025.6	1029.9	1034.2	1038.5	1042.7	1047.7
135°	1076.2	1077.4	1078.7	1080.0	1081.2	1083.5	1086.8	1090.2	1093.6	1097.0	1101.7
137.5°	1128.6	1130.3	1131.9	1133.6	1135.3	1137.1	1139.0	1140.9	1142.7	1144.6	1149.2
140°	1162.8	1164.3	1165.7	1167.2	1168.7	1170.1	1171.5	1172.9	1174.3	1175.6	1179.9
142.5°	1195.2	1196.6	1197.8	1199.1	1200.4	1201.5	1202.3	1203.2	1204.0	1204.9	1208.6
145°	1240.6	1242.1	1243.6	1245.0	1246.5	1247.5	1248.0	1248.5	1249.0	1249.4	1251.7
147.5°	1282.3	1283.5	1284.6	1285.6	1286.8	1287.6	1288.1	1288.5	1289.0	1289.5	1290.5
150°	1308.6	1309.3	1310.0	1310.8	1311.5	1312.1	1312.6	1313.1	1313.6	1314.1	1314.6
152.5°	1332.3	1332.6	1332.9	1333.2	1333.6	1333.9	1334.2	1334.5	1334.8	1335.1	1336.0
155°	1365.6	1365.1	1364.5	1364.0	1363.6	1363.5	1363.7	1364.0	1364.2	1364.4	1365.6
157.5°	1391.4	1391.3	1391.3	1391.2	1391.2	1391.0	1390.8	1390.5	1390.3	1390.1	1391.6
160°	1407.1	1406.9	1406.7	1406.5	1406.2	1405.9	1405.7	1405.4	1405.2	1405.0	1406.5
162.5°	1422.0	1421.4	1420.8	1420.1	1419.5	1419.1	1418.8	1418.6	1418.3	1418.1	1419.8
165°	1440.0	1439.3	1438.5	1437.8	1437.1	1436.6	1436.3	1436.1	1435.9	1435.6	1437.6
167.5°	1454.1	1453.0	1452.1	1451.1	1450.1	1449.6	1449.6	1449.6	1449.6	1449.6	1451.6
170°	1461.9	1460.9	1460.0	1459.0	1458.0	1457.5	1457.5	1457.5	1457.5	1457.5	1459.4
172.5°	1467.2	1466.0	1464.8	1463.7	1462.4	1462.0	1462.2	1462.4	1462.5	1462.7	1464.7
175°	1473.9	1472.7	1471.5	1470.3	1469.0	1468.6	1468.9	1469.0	1469.3	1469.5	1471.3
177.5°	1475.7	1474.7	1473.8	1472.8	1471.8	1471.4	1471.6	1471.8	1472.0	1472.2	1473.8
180°	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	904.1	905.5	906.8	907.5	907.3	907.1	906.9	906.8
5°	902.6	904.4	906.1	906.8	906.6	906.4	906.3	906.0
7.5°	897.1	899.4	901.5	902.5	902.2	902.0	901.7	901.4
10°	891.6	893.8	896.0	896.9	896.5	896.0	895.6	895.1
12.5°	884.2	886.2	888.2	889.0	888.5	888.2	887.7	887.2
15°	869.9	872.1	874.3	875.2	875.1	874.9	874.6	874.4
17.5°	851.3	853.3	855.3	856.1	855.8	855.5	855.2	854.9
20°	837.9	839.9	841.9	842.9	843.2	843.4	843.6	843.9
22.5°	823.1	825.7	828.1	829.3	829.2	829.1	829.0	828.8
25°	798.2	801.1	803.9	805.3	805.3	805.3	805.3	805.3
27.5°	772.1	774.6	777.0	778.4	778.5	778.7	778.9	779.1
30°	754.3	757.0	759.6	760.9	760.9	760.9	760.9	760.9
32.5°	734.9	737.7	740.6	742.3	742.7	743.3	743.8	744.3
35°	706.3	709.6	712.8	715.0	715.9	716.7	717.6	718.5
37.5°	676.6	680.3	684.0	686.3	686.9	687.7	688.3	689.1
40°	656.9	660.5	664.3	666.6	667.5	668.4	669.2	670.1
42.5°	636.2	640.3	644.4	647.1	648.3	649.5	650.7	652.0
45°	605.4	609.5	613.8	616.7	618.5	620.2	622.0	623.8
47.5°	574.3	579.0	583.7	586.7	588.1	589.5	590.8	592.1
50°	552.9	557.9	563.0	566.3	567.8	569.3	570.9	572.4
52.5°	531.1	536.4	541.6	545.2	547.1	548.9	550.8	552.7
55°	498.4	504.4	510.2	514.1	515.9	517.6	519.3	521.1
57.5°	465.0	470.9	476.8	480.9	483.0	485.0	487.0	489.1
60°	441.6	447.7	453.8	458.2	460.5	463.0	465.4	467.8
62.5°	419.5	425.7	431.8	435.9	438.2	440.5	442.7	444.9
65°	384.3	390.8	397.4	401.8	404.0	406.1	408.4	410.6
67.5°	349.1	356.4	363.5	368.1	369.9	371.7	373.6	375.4
70°	325.9	332.9	340.0	344.5	346.8	348.9	351.1	353.4
72.5°	302.6	309.7	317.0	321.7	323.9	326.0	328.2	330.5
75°	267.1	274.4	281.6	286.5	289.2	291.8	294.5	297.1
77.5°	233.9	241.6	249.2	254.0	256.1	258.1	260.1	262.1
80°	212.3	219.7	227.2	232.1	234.2	236.4	238.7	240.8
82.5°	192.6	200.0	207.5	212.3	214.5	216.7	218.9	221.0
85°	164.9	172.4	179.8	184.6	186.8	189.1	191.2	193.4
87.5°	146.3	153.9	161.6	166.5	168.8	171.2	173.4	175.7
90°	154.7	163.1	171.5	177.1	179.7	182.5	185.1	187.8
92.5°	150.9	159.8	168.6	174.2	176.4	178.8	181.1	183.4
95°	148.6	157.1	165.7	171.0	173.2	175.4	177.6	179.7
97.5°	142.8	151.3	159.8	165.2	167.7	170.1	172.6	175.0
100°	138.6	146.9	155.2	160.6	163.1	165.5	167.9	170.3
102.5°	153.4	153.6	153.8	155.1	157.8	160.4	163.1	165.7
105°	240.0	203.0	166.1	148.9	151.4	153.8	156.3	158.7
107.5°	455.2	429.5	403.8	375.7	345.2	314.6	284.1	253.5
110°	552.3	550.1	547.7	530.0	497.0	463.9	430.9	397.8



TEST NUMBER: P331994-830

CATALOG NUMBER: S123DIP-S775D1195U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	618.9	624.5	630.2	630.3	624.9	619.4	614.1	608.6
115°	696.3	704.0	711.6	716.9	719.6	722.4	725.1	727.7
117.5°	765.3	772.5	779.7	784.3	786.2	788.1	789.9	791.8
120°	811.1	818.0	825.0	829.2	830.8	832.4	833.9	835.4
122.5°	855.5	861.8	868.0	871.9	873.6	875.4	877.1	878.8
125°	917.8	922.9	928.0	931.5	933.6	935.6	937.6	939.6
127.5°	980.2	985.4	990.5	993.6	994.6	995.6	996.6	997.6
130°	1017.6	1022.7	1027.8	1030.8	1031.6	1032.5	1033.3	1034.2
132.5°	1052.6	1057.6	1062.6	1065.5	1066.3	1067.1	1067.9	1068.7
135°	1106.4	1111.1	1115.8	1118.2	1118.6	1119.0	1119.4	1119.7
137.5°	1154.0	1158.6	1163.2	1165.8	1166.4	1167.1	1167.6	1168.3
140°	1184.2	1188.5	1192.7	1195.1	1195.7	1196.4	1196.9	1197.6
142.5°	1212.4	1216.1	1219.7	1221.8	1222.3	1222.7	1223.1	1223.5
145°	1254.0	1256.2	1258.4	1260.0	1260.8	1261.8	1262.6	1263.5
147.5°	1291.6	1292.6	1293.5	1293.9	1293.6	1293.3	1293.0	1292.6
150°	1315.0	1315.5	1316.0	1316.1	1315.8	1315.5	1315.2	1314.9
152.5°	1336.8	1337.8	1338.6	1338.5	1337.5	1336.4	1335.4	1334.4
155°	1366.9	1368.1	1369.3	1369.1	1367.7	1366.3	1364.8	1363.4
157.5°	1393.0	1394.4	1395.9	1395.7	1393.8	1391.9	1390.0	1388.1
160°	1407.9	1409.3	1410.8	1410.7	1409.0	1407.3	1405.5	1403.8
162.5°	1421.4	1423.1	1424.7	1424.7	1423.2	1421.7	1420.2	1418.7
165°	1439.5	1441.4	1443.4	1443.5	1441.8	1440.1	1438.4	1436.7
167.5°	1453.5	1455.5	1457.5	1457.5	1455.5	1453.5	1451.6	1449.6
170°	1461.4	1463.4	1465.3	1465.3	1463.4	1461.4	1459.4	1457.5
172.5°	1466.7	1468.6	1470.6	1470.5	1468.3	1466.2	1464.1	1461.9
175°	1473.0	1474.7	1476.4	1476.2	1474.3	1472.3	1470.5	1468.5
177.5°	1475.3	1476.9	1478.4	1478.2	1476.3	1474.3	1472.3	1470.5
180°	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9

(END OF REPORT)