

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: P331987-927

Luminaire Tested: **S123DIP-S775D1025U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331987-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D1025U927-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5500.7 lumens
Efficiency: N/A
Efficacy: 105.8 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

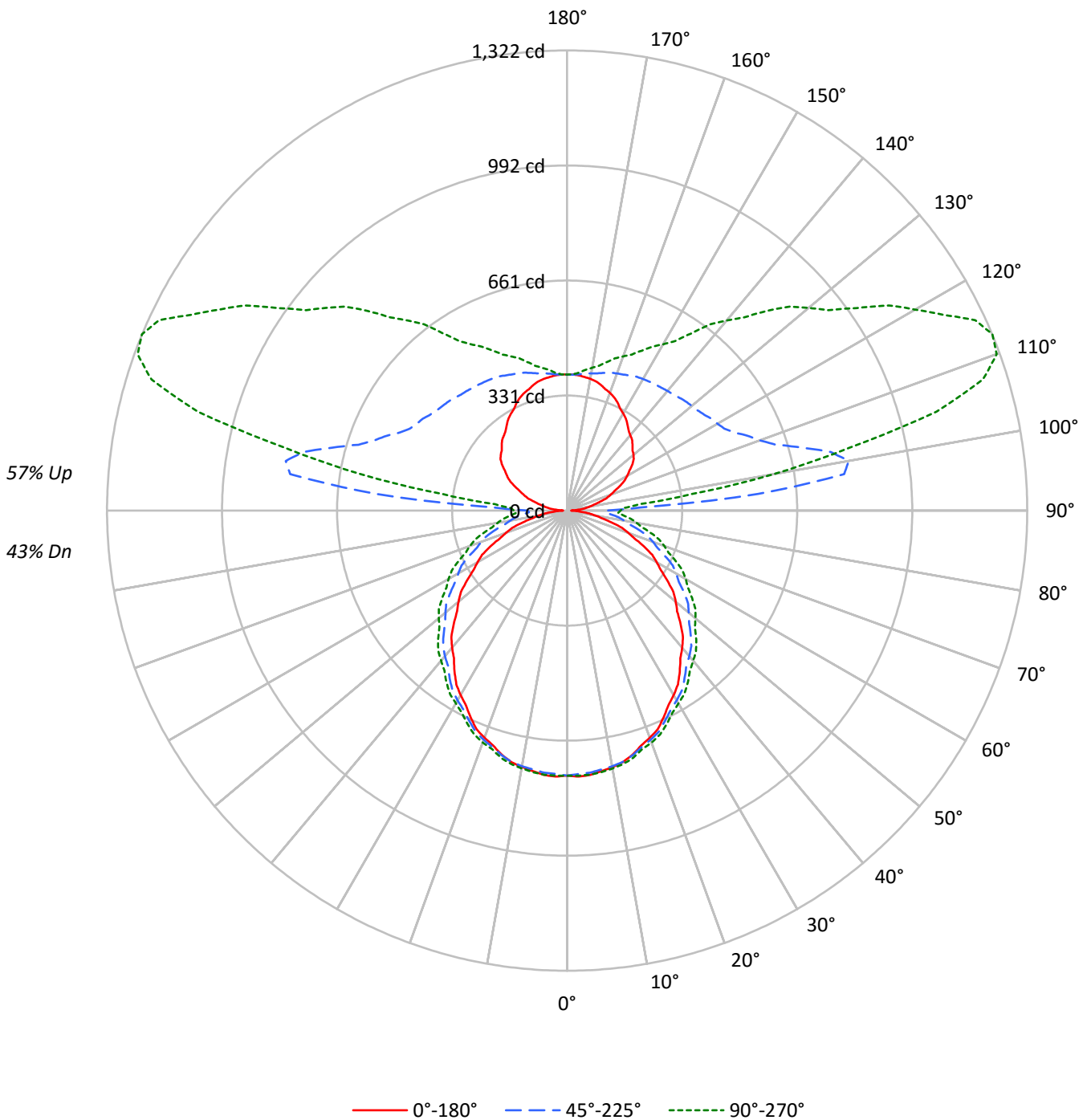
Input Watts (W): 52
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331987-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P331987-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-D4

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	96	96	96	96	79	79	79	64	64	64	49	49	49	43
1	95	91	86	83	87	83	79	76	68	65	63	55	53	51	42	41	40	34
2	86	79	72	67	78	72	66	62	59	55	52	47	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	32	30	28	23
4	72	61	52	46	65	55	48	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	26	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	20	17	19	16	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8196	8196	8196
5°	8222	7990	7994
10°	8148	7806	7766
15°	8043	7597	7518
20°	7893	7358	7245
25°	7708	7084	6957
30°	7517	6836	6666
35°	7305	6575	6434
40°	7102	6337	6184
45°	6877	6109	5986
50°	6655	5883	5766
55°	6409	5652	5569
60°	6171	5417	5366
65°	5924	5168	5126
70°	5555	4887	4879
75°	5090	4566	4628
80°	4551	4249	4341
85°	4050	4032	4175



TEST NUMBER: P331987-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.2	1.3
10°-20°	205.8	3.7
20°-30°	307.8	5.6
30°-40°	367.5	6.7
40°-50°	384.5	7.0
50°-60°	360.9	6.6
60°-70°	301.4	5.5
70°-80°	215.6	3.9
80°-90°	131.6	2.4
90°-100°	298.1	5.4
100°-110°	674.8	12.3
110°-120°	645.1	11.7
120°-130°	505.6	9.2
130°-140°	391.0	7.1
140°-150°	286.4	5.2
150°-160°	198.1	3.6
160°-170°	116.4	2.1
170°-180°	37.9	0.7
0°-30°	585.7	10.6
0°-40°	953.3	17.3
0°-60°	1698.6	30.9
0°-90°	2347.3	42.7
90°-120°	1618.0	29.4
90°-150°	2801.0	50.9
90°-180°	3153.0	57.3
0°-180°	5500.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	761	761	761	761	761	
5°	762	760	756	762	761	72
15°	726	728	728	735	735	204
25°	655	663	666	676	677	302
35°	564	577	588	600	604	353
45°	461	481	502	517	524	356
55°	352	379	409	430	438	315
65°	243	276	312	336	345	240
75°	132	171	212	239	250	141
85°	41	82	126	153	163	43
90°	12	61	114	143	153	9
95°	36	129	551	244	208	36
105°	98	163	698	1196	1099	104
115°	166	217	530	1129	1294	165
125°	228	270	480	866	1014	202
135°	266	316	458	702	811	205
145°	302	345	442	562	621	189
155°	342	369	428	486	507	157
165°	374	385	410	434	442	105
175°	390	390	393	398	398	37
180°	391	391	391	391	391	



TEST NUMBER: P331987-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	764.8	764.3	763.9	763.4	763.0	762.2	761.0	759.9	758.7	757.5	758.7
5°	762.3	761.9	761.5	761.2	760.8	760.1	759.0	757.9	756.8	755.7	757.2
7.5°	754.8	754.9	754.9	755.0	755.1	754.6	753.5	752.5	751.4	750.4	752.2
10°	748.2	748.5	748.9	749.3	749.6	749.4	748.5	747.6	746.6	745.7	747.6
12.5°	740.2	740.8	741.2	741.8	742.3	742.3	741.6	741.0	740.4	739.7	741.4
15°	725.8	726.4	726.9	727.5	728.0	728.2	728.0	727.9	727.6	727.5	729.3
17.5°	707.6	708.7	709.8	710.8	711.9	712.5	712.4	712.3	712.3	712.2	713.8
20°	694.3	695.4	696.5	697.6	698.7	699.4	699.8	700.2	700.5	700.9	702.6
22.5°	680.3	681.4	682.5	683.7	684.8	685.6	686.1	686.6	687.1	687.6	689.8
25°	655.3	657.1	658.9	660.8	662.7	663.8	664.4	665.0	665.5	666.1	668.4
27.5°	630.1	632.2	634.3	636.4	638.5	640.1	641.3	642.5	643.6	644.8	646.9
30°	612.1	614.6	617.0	619.3	621.7	623.7	625.1	626.6	628.1	629.5	631.8
32.5°	592.2	594.9	597.6	600.3	603.0	605.3	607.2	609.2	611.1	613.0	615.4
35°	564.0	567.0	570.0	572.9	575.8	578.5	580.9	583.3	585.7	588.1	590.9
37.5°	534.2	537.5	540.8	544.2	547.5	550.6	553.6	556.5	559.4	562.4	565.5
40°	514.3	517.6	520.9	524.3	527.5	531.1	534.7	538.4	542.1	545.8	548.9
42.5°	492.3	496.5	500.5	504.5	508.6	512.5	516.3	520.2	524.0	527.9	531.3
45°	461.2	465.6	470.0	474.4	478.9	483.4	488.0	492.6	497.3	501.8	505.3
47.5°	428.5	433.6	438.6	443.5	448.5	453.7	459.0	464.2	469.5	474.8	478.7
50°	407.3	412.4	417.6	422.8	427.9	433.3	439.1	444.8	450.5	456.2	460.4
52.5°	384.7	390.1	395.6	401.1	406.5	412.4	418.7	425.0	431.3	437.6	442.0
55°	351.7	357.7	363.8	369.9	376.0	382.4	389.0	395.7	402.3	408.9	413.9
57.5°	319.5	325.8	332.2	338.5	344.9	351.6	358.9	366.2	373.4	380.7	385.7
60°	297.0	303.6	310.2	316.9	323.5	330.6	338.2	345.7	353.2	360.8	366.0
62.5°	275.7	282.5	289.3	296.0	302.9	310.2	318.2	326.2	334.2	342.2	347.4
65°	243.0	250.3	257.4	264.6	271.8	279.4	287.6	295.6	303.8	311.9	317.4
67.5°	209.8	217.5	225.1	232.7	240.3	248.3	256.6	264.8	273.1	281.4	287.4
70°	186.6	194.6	202.5	210.4	218.3	226.7	235.6	244.4	253.3	262.1	268.0
72.5°	165.4	173.3	181.3	189.2	197.1	205.7	214.8	223.9	233.1	242.2	248.3
75°	131.9	140.5	149.2	157.9	166.5	175.5	184.7	193.9	203.1	212.4	218.4
77.5°	102.7	111.5	120.2	128.9	137.6	146.6	156.0	165.2	174.5	183.8	190.2
80°	82.1	91.2	100.2	109.2	118.3	127.5	137.1	146.7	156.3	165.9	172.1
82.5°	64.2	73.4	82.5	91.7	100.9	110.4	120.1	129.8	139.6	149.3	155.6
85°	40.6	49.8	59.1	68.3	77.5	87.0	96.8	106.5	116.3	126.1	132.4
87.5°	22.4	31.8	41.4	51.0	60.5	70.1	80.0	89.9	99.7	109.6	115.7
90°	12.4	23.0	33.6	45.0	55.6	66.4	78.2	90.0	101.7	113.5	119.0
92.5°	20.0	32.8	47.6	61.9	76.7	97.1	127.1	170.3	212.9	210.0	186.2
95°	36.0	45.6	61.5	82.1	109.9	148.8	225.1	351.9	490.6	551.0	468.2
97.5°	54.0	61.2	74.5	92.8	119.5	160.4	233.2	374.7	599.5	802.8	859.1
100°	66.0	72.6	84.1	101.1	126.0	164.0	227.8	353.3	569.7	821.0	982.1
102.5°	78.6	85.3	95.5	111.3	133.6	168.8	226.8	334.5	528.0	775.9	984.3
105°	98.4	105.1	114.3	128.3	147.7	178.4	229.0	318.4	475.8	698.0	930.1
107.5°	118.6	124.7	133.0	146.2	164.0	192.3	237.4	312.6	440.6	628.6	839.6
110°	133.1	138.8	146.0	158.0	174.8	202.3	245.3	312.8	426.0	589.2	783.0



TEST NUMBER: P331987-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	147.0	152.1	158.8	170.2	186.4	212.8	252.9	315.7	416.1	561.2	732.7
115°	166.3	171.6	178.6	188.7	204.4	230.1	266.8	321.7	409.0	530.3	671.5
117.5°	186.2	191.2	196.5	205.1	221.5	245.1	281.1	330.3	405.0	509.3	631.9
120°	199.4	202.7	207.6	216.4	232.3	255.6	290.2	337.4	404.3	499.0	610.8
122.5°	211.4	214.3	218.7	227.8	242.6	266.8	300.4	344.1	405.8	491.2	592.8
125°	227.8	229.4	234.2	242.9	257.9	281.9	315.0	355.1	407.9	480.5	568.9
127.5°	241.0	243.2	248.8	257.5	273.9	297.4	328.5	364.2	411.4	472.6	547.2
130°	249.2	251.4	258.3	267.6	284.1	307.1	336.9	370.7	413.9	467.4	535.0
132.5°	254.8	257.9	265.5	276.9	293.4	315.6	344.0	376.4	415.1	463.4	523.2
135°	265.8	268.7	277.3	288.9	305.4	327.6	354.2	383.1	416.8	457.5	507.5
137.5°	276.1	279.2	287.6	300.1	316.4	336.7	361.4	388.2	417.4	451.8	493.8
140°	282.3	286.3	294.2	306.8	322.7	342.7	366.2	390.5	417.9	448.5	485.3
142.5°	289.9	293.1	301.5	312.8	328.4	346.9	369.3	392.5	417.6	444.6	477.3
145°	302.1	304.3	311.2	322.9	336.1	354.3	374.8	396.2	418.3	442.0	468.8
147.5°	313.6	315.1	322.0	332.2	345.2	360.8	379.5	398.7	418.3	439.0	461.1
150°	321.9	322.7	328.9	339.2	350.3	364.6	382.7	399.3	418.3	436.5	456.2
152.5°	330.0	330.2	336.5	345.5	355.4	369.0	384.6	400.6	416.4	433.3	451.2
155°	342.4	342.4	347.1	355.1	363.8	374.8	388.2	400.9	414.3	427.8	443.6
157.5°	352.2	352.8	356.6	363.6	371.0	379.5	390.3	401.7	411.7	422.9	435.1
160°	359.8	359.8	363.0	369.2	374.8	382.7	392.2	401.7	410.4	419.1	429.4
162.5°	365.5	365.5	368.0	373.0	378.0	384.6	392.8	401.1	407.9	415.3	423.7
165°	374.0	373.2	374.8	378.7	381.9	387.5	393.8	399.3	404.1	409.6	415.9
167.5°	380.5	379.5	380.3	383.3	385.6	389.0	393.6	398.1	400.3	403.9	408.5
170°	384.3	382.7	383.5	385.9	387.5	389.0	393.0	396.2	397.8	400.1	404.1
172.5°	386.8	385.9	386.0	387.8	388.7	389.7	393.0	395.5	395.9	397.0	399.7
175°	389.8	389.0	388.2	389.8	389.8	390.6	392.2	393.8	393.0	393.0	394.6
177.5°	391.3	390.6	390.0	390.6	390.6	390.6	391.3	392.5	391.3	390.6	391.3
180°	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6



TEST NUMBER: P331987-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	759.9	761.0	762.2	762.7	762.6	762.4	762.2	762.2
5°	758.6	760.1	761.5	762.2	762.0	761.8	761.7	761.4
7.5°	754.0	755.9	757.7	758.5	758.3	758.1	757.9	757.6
10°	749.4	751.2	753.0	753.8	753.4	753.0	752.7	752.3
12.5°	743.1	744.8	746.5	747.2	746.8	746.5	746.1	745.7
15°	731.1	733.0	734.8	735.6	735.5	735.3	735.1	734.9
17.5°	715.5	717.2	718.8	719.5	719.3	719.0	718.7	718.5
20°	704.3	705.9	707.6	708.4	708.7	708.8	709.0	709.2
22.5°	691.8	694.0	696.0	697.0	697.0	696.8	696.7	696.6
25°	670.9	673.3	675.7	676.8	676.8	676.8	676.8	676.8
27.5°	649.0	651.0	653.1	654.2	654.3	654.5	654.7	654.8
30°	634.0	636.2	638.4	639.5	639.5	639.5	639.5	639.5
32.5°	617.7	620.0	622.4	623.8	624.2	624.7	625.1	625.6
35°	593.7	596.4	599.1	600.9	601.7	602.4	603.1	603.9
37.5°	568.6	571.8	574.9	576.8	577.3	578.0	578.5	579.2
40°	552.1	555.2	558.3	560.2	561.0	561.7	562.4	563.2
42.5°	534.7	538.1	541.6	543.8	544.9	545.9	546.9	548.0
45°	508.8	512.3	515.9	518.3	519.8	521.3	522.8	524.3
47.5°	482.7	486.6	490.6	493.1	494.2	495.4	496.5	497.6
50°	464.7	468.9	473.2	475.9	477.2	478.5	479.8	481.1
52.5°	446.4	450.8	455.2	458.2	459.8	461.4	463.0	464.5
55°	418.9	423.9	428.8	432.1	433.6	435.0	436.5	438.0
57.5°	390.8	395.8	400.8	404.2	405.9	407.7	409.3	411.1
60°	371.1	376.3	381.4	385.1	387.1	389.1	391.2	393.2
62.5°	352.6	357.7	362.9	366.4	368.3	370.2	372.1	373.9
65°	323.0	328.4	334.0	337.7	339.5	341.4	343.3	345.1
67.5°	293.4	299.5	305.5	309.3	310.9	312.4	314.0	315.5
70°	273.9	279.8	285.7	289.5	291.4	293.3	295.1	297.0
72.5°	254.3	260.3	266.4	270.4	272.2	274.0	275.8	277.7
75°	224.5	230.6	236.7	240.8	243.0	245.3	247.5	249.7
77.5°	196.6	203.0	209.5	213.5	215.2	216.9	218.6	220.3
80°	178.4	184.7	191.0	195.0	196.9	198.7	200.6	202.4
82.5°	161.8	168.1	174.4	178.4	180.3	182.1	183.9	185.8
85°	138.6	144.9	151.1	155.2	157.0	158.9	160.7	162.6
87.5°	122.2	128.6	135.0	139.4	141.1	143.1	145.0	146.8
90°	126.0	133.1	140.1	145.8	146.9	149.5	152.1	153.1
92.5°	167.2	159.6	159.5	159.4	159.6	158.9	161.4	161.7
95°	378.2	292.2	256.0	231.3	218.2	212.9	209.1	207.9
97.5°	796.8	661.0	564.5	473.6	417.1	383.3	363.8	358.9
100°	1015.1	956.4	869.3	760.6	682.5	626.7	597.7	600.3
102.5°	1084.9	1088.0	1039.3	971.6	911.3	867.4	843.5	827.2
105°	1100.5	1184.7	1204.9	1187.8	1153.0	1124.7	1101.1	1098.8
107.5°	1031.9	1165.3	1239.5	1270.9	1273.2	1264.7	1257.7	1252.1
110°	968.8	1119.1	1223.6	1282.1	1305.7	1313.4	1313.4	1313.3



TEST NUMBER: P331987-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	905.8	1059.1	1175.4	1249.7	1291.7	1313.0	1320.6	1322.5
115°	822.2	964.2	1084.9	1174.0	1234.8	1271.1	1288.3	1293.8
117.5°	759.9	883.0	991.8	1082.1	1145.4	1186.7	1210.9	1217.7
120°	726.5	837.5	936.6	1019.3	1083.0	1128.6	1148.8	1154.9
122.5°	699.5	800.2	892.2	969.1	1025.9	1067.1	1089.3	1096.5
125°	662.9	753.0	832.7	898.6	950.5	986.6	1007.7	1014.5
127.5°	630.3	710.8	782.9	843.0	889.3	920.3	939.4	945.7
130°	609.6	684.3	751.9	807.9	850.9	880.5	898.2	905.6
132.5°	590.2	659.0	722.0	775.5	816.2	845.9	861.8	867.5
135°	563.8	623.2	677.9	725.2	764.9	789.5	804.6	811.0
137.5°	539.6	588.4	635.6	676.7	710.1	735.1	748.1	752.6
140°	525.2	568.3	609.0	644.8	675.8	698.9	712.5	712.6
142.5°	511.2	548.3	583.7	615.0	641.5	662.0	674.3	674.5
145°	495.6	523.2	549.9	573.9	594.5	611.8	618.9	621.2
147.5°	482.9	504.1	524.9	541.8	557.5	569.3	576.0	577.3
150°	474.4	492.7	509.2	524.4	536.7	545.7	550.9	551.2
152.5°	467.5	483.2	497.9	510.4	519.8	527.9	530.8	530.9
155°	457.0	469.7	481.6	491.1	498.2	504.5	506.0	506.8
157.5°	446.0	456.5	465.7	473.2	479.3	484.1	485.4	485.2
160°	439.7	448.4	456.2	461.8	467.3	472.1	472.1	471.3
162.5°	432.1	439.5	446.8	451.7	455.3	459.4	459.4	458.6
165°	422.2	427.0	432.5	436.5	439.7	442.8	442.0	442.0
167.5°	413.7	417.3	420.5	423.3	424.8	427.0	426.2	426.2
170°	408.1	410.4	413.5	415.1	415.9	417.5	416.7	416.7
172.5°	403.0	404.7	407.3	408.2	408.4	410.0	408.5	407.9
175°	396.2	397.0	398.5	398.5	398.5	399.3	398.5	397.8
177.5°	391.9	392.5	393.2	393.2	392.5	393.2	391.9	391.9
180°	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6

(END OF REPORT)