

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: P331990-927

Luminaire Tested: **S123DIP-S775D1025U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331990-927
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-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5452.1 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

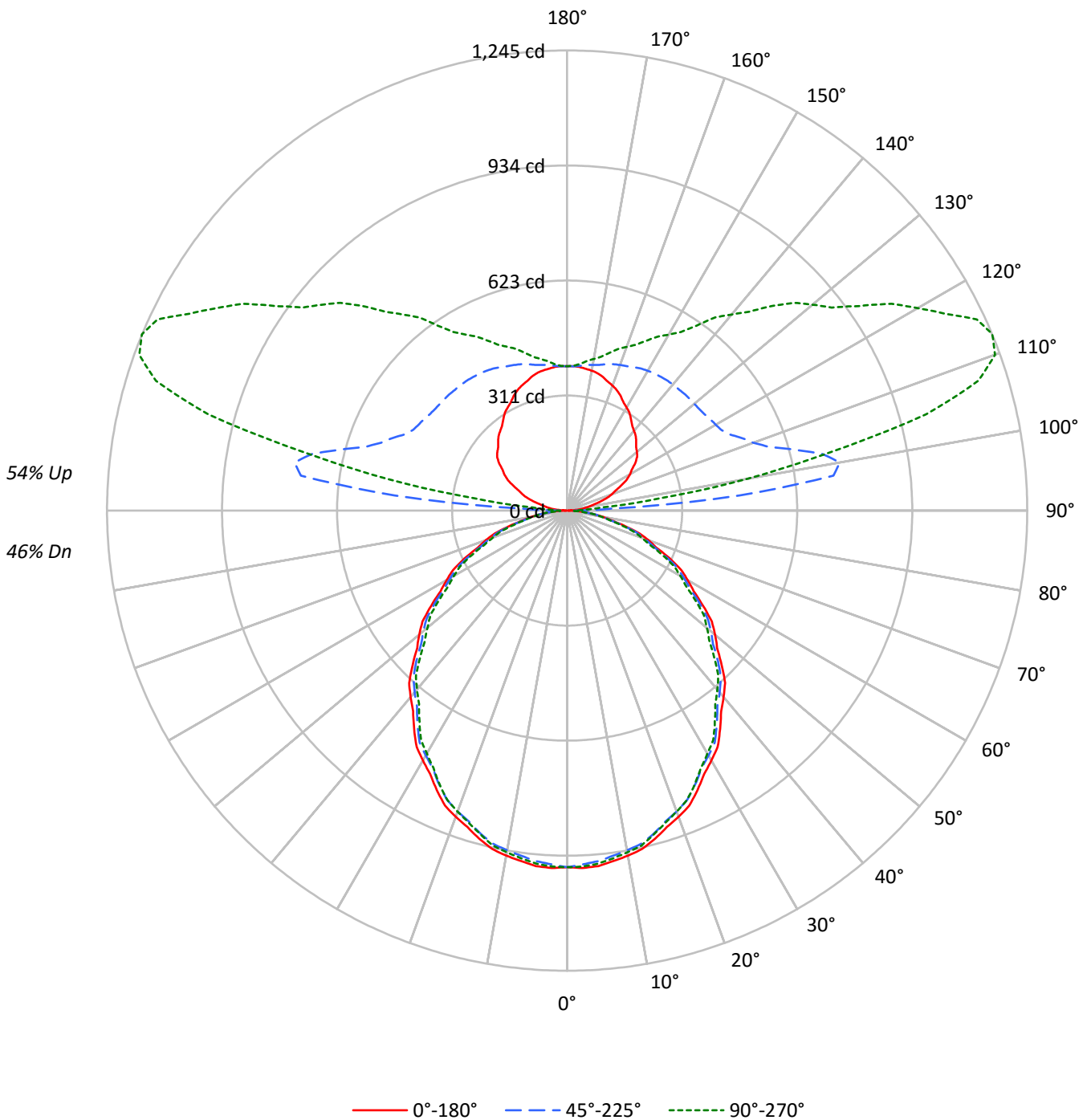
Input Watts (W): 52
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331990-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-F4

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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	81	81	81	66	66	66	53	53	53	46				
1	97	93	89	85	89	85	82	79	71	69	66	58	57	55	46	45	44	39				
2	88	81	75	69	81	74	69	65	62	58	55	51	48	46	41	39	37	32				
3	80	71	64	58	73	65	59	54	55	50	46	45	42	39	36	34	32	27				
4	74	63	55	49	67	58	51	46	49	43	39	40	36	33	32	29	27	23				
5	67	56	48	42	62	52	44	39	44	38	34	36	32	29	29	26	24	20				
6	62	50	42	36	57	46	39	34	39	34	29	33	28	25	26	23	21	18				
7	57	45	37	32	53	42	35	30	35	30	26	30	25	22	24	21	19	16				
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	17	14				
9	50	37	30	25	45	35	28	23	30	24	21	25	21	18	20	17	15	13				
10	46	34	27	22	42	32	25	21	27	22	19	23	19	16	19	16	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10384	10384	10384
5°	10432	10289	10361
10°	10363	10200	10263
15°	10242	10085	10104
20°	10100	9919	9929
25°	9911	9723	9704
30°	9701	9506	9434
35°	9483	9276	9155
40°	9254	9021	8882
45°	9003	8788	8573
50°	8751	8500	8264
55°	8422	8203	7955
60°	8088	7858	7608
65°	7796	7480	7246
70°	7361	7046	6735
75°	6729	6488	6209
80°	6069	5808	5759
85°	5323	5125	4915



TEST NUMBER: P331990-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	1.7
10°-20°	256.6	4.7
20°-30°	379.0	7.0
30°-40°	442.7	8.1
40°-50°	445.1	8.2
50°-60°	391.0	7.2
60°-70°	291.3	5.3
70°-80°	166.0	3.0
80°-90°	50.7	0.9
90°-100°	217.4	4.0
100°-110°	615.6	11.3
110°-120°	605.5	11.1
120°-130°	483.0	8.9
130°-140°	380.8	7.0
140°-150°	284.2	5.2
150°-160°	198.1	3.6
160°-170°	116.4	2.1
170°-180°	37.9	0.7
0°-30°	726.5	13.3
0°-40°	1169.2	21.4
0°-60°	2005.3	36.8
0°-90°	2513.2	46.1
90°-120°	1438.5	26.4
90°-150°	2586.5	47.4
90°-180°	2939.0	53.9
0°-180°	5452.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	966	961	952	960	959	91
15°	919	915	905	911	907	259
25°	834	829	819	819	817	384
35°	722	716	706	701	697	451
45°	591	588	577	568	563	456
55°	449	447	437	428	424	402
65°	306	302	294	287	284	302
75°	162	158	156	152	149	173
85°	43	42	42	40	40	47
90°	2	10	20	22	23	4
95°	27	87	469	137	92	29
105°	92	136	636	1112	1006	97
115°	162	202	486	1066	1223	160
125°	225	266	454	822	965	200
135°	264	315	448	677	782	204
145°	301	345	442	556	611	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: P331990-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	968.0	967.4	966.9	966.2	965.7	964.6	962.9	961.3	959.6	958.1	959.5
5°	965.5	964.6	963.7	962.7	961.8	960.4	958.3	956.3	954.3	952.2	954.1
7.5°	956.1	955.1	954.2	953.3	952.4	950.9	948.7	946.7	944.5	942.5	944.1
10°	948.1	947.1	946.3	945.3	944.4	942.8	940.3	937.9	935.6	933.2	934.9
12.5°	937.5	936.7	936.0	935.2	934.4	932.9	930.7	928.4	926.1	923.8	925.1
15°	919.1	918.3	917.6	916.9	916.1	914.6	912.1	909.7	907.4	905.0	906.4
17.5°	897.6	896.7	895.7	894.8	893.8	892.2	889.8	887.3	884.9	882.6	883.6
20°	881.7	880.6	879.6	878.5	877.3	875.5	873.1	870.8	868.4	865.9	866.7
22.5°	863.8	862.7	861.6	860.5	859.4	857.6	855.2	852.9	850.5	848.0	848.7
25°	834.5	833.4	832.3	831.2	830.0	828.3	825.9	823.5	821.1	818.7	818.9
27.5°	803.1	802.0	801.0	799.9	798.8	797.0	794.4	791.9	789.3	786.6	786.8
30°	780.5	779.6	778.7	777.8	776.8	775.1	772.5	769.9	767.4	764.8	764.8
32.5°	758.0	756.8	755.5	754.3	753.1	751.5	749.5	747.5	745.5	743.5	742.5
35°	721.7	720.6	719.5	718.4	717.2	715.5	713.0	710.7	708.3	705.9	704.8
37.5°	684.4	683.1	681.7	680.2	678.9	677.0	674.5	672.1	669.6	667.3	665.9
40°	658.6	657.5	656.4	655.3	654.2	652.4	649.7	647.2	644.6	642.0	640.6
42.5°	632.7	631.4	630.2	629.0	627.7	625.8	623.2	620.6	618.1	615.4	614.0
45°	591.4	590.7	589.9	589.2	588.4	586.9	584.5	582.1	579.7	577.3	575.1
47.5°	550.4	549.4	548.3	547.2	546.1	544.5	542.2	540.0	537.7	535.5	533.3
50°	522.6	521.7	520.7	519.8	518.9	517.2	514.8	512.5	510.0	507.6	505.6
52.5°	493.4	492.7	492.1	491.5	490.8	489.3	486.7	484.2	481.6	479.1	477.4
55°	448.8	448.5	448.4	448.2	448.0	446.7	444.3	442.0	439.5	437.1	435.1
57.5°	406.3	405.7	405.0	404.4	403.8	402.5	400.6	398.6	396.7	394.8	393.0
60°	375.7	375.6	375.4	375.2	375.0	373.8	371.6	369.4	367.2	365.0	363.3
62.5°	348.6	348.1	347.6	347.1	346.7	345.3	343.1	340.9	338.7	336.4	334.8
65°	306.1	305.1	304.2	303.3	302.4	301.0	299.1	297.3	295.5	293.7	292.2
67.5°	261.1	260.3	259.5	258.6	257.9	256.7	255.4	254.0	252.5	251.2	249.9
70°	233.9	232.8	231.7	230.6	229.5	228.4	227.3	226.2	225.1	223.9	222.7
72.5°	205.4	204.5	203.7	203.0	202.2	201.1	199.9	198.6	197.3	196.1	195.0
75°	161.8	161.0	160.3	159.5	158.8	158.1	157.6	157.0	156.5	156.0	155.0
77.5°	123.1	122.7	122.3	121.9	121.4	121.0	120.3	119.6	119.0	118.3	117.6
80°	97.9	97.4	96.8	96.3	95.7	95.2	94.8	94.5	94.1	93.7	93.6
82.5°	73.4	73.2	73.1	73.0	72.9	72.8	72.7	72.6	72.6	72.5	72.2
85°	43.1	42.8	42.4	42.1	41.7	41.5	41.5	41.5	41.5	41.5	41.1
87.5°	17.6	17.4	17.3	17.3	17.2	17.3	17.6	17.9	18.2	18.5	18.2
90°	1.6	3.2	4.8	7.1	8.7	10.3	12.7	15.1	17.4	19.8	19.0
92.5°	9.8	14.6	21.2	27.3	34.0	45.7	66.4	100.4	133.8	121.6	91.7
95°	26.9	29.2	37.9	51.4	71.9	102.8	170.0	287.8	417.5	468.9	380.3
97.5°	45.9	46.7	53.5	65.1	85.4	118.7	183.0	315.8	532.0	726.7	777.4
100°	58.5	59.3	64.9	75.9	94.9	125.7	181.1	298.1	506.0	748.8	904.6
102.5°	71.8	73.2	78.1	88.6	105.7	134.0	183.6	282.9	468.1	707.7	910.9
105°	91.7	94.1	98.9	108.4	123.3	147.9	190.6	272.0	421.4	635.7	862.7
107.5°	112.9	115.3	119.9	129.2	143.3	166.0	203.5	271.2	391.7	572.2	778.2
110°	128.1	130.5	134.4	143.1	156.5	178.7	214.3	274.4	380.3	536.1	725.1



TEST NUMBER: P331990-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.0	144.4	148.4	157.0	170.5	192.0	225.1	280.7	374.0	512.1	678.9
115°	162.1	165.2	170.0	177.9	191.4	212.7	242.7	291.0	371.6	486.3	623.1
117.5°	182.2	185.8	189.8	197.0	212.1	231.9	261.6	304.6	373.0	471.1	589.4
120°	196.1	198.4	202.4	210.3	225.4	245.1	273.6	314.7	375.6	464.1	571.7
122.5°	208.1	210.5	214.4	223.0	237.4	258.4	286.2	324.2	380.0	459.7	557.1
125°	225.4	227.0	231.7	240.3	255.4	276.8	304.4	339.2	386.7	453.9	538.5
127.5°	238.5	240.8	246.7	255.6	272.2	293.5	320.3	351.6	394.3	451.1	522.0
130°	246.7	249.1	256.2	265.7	282.3	303.6	329.7	359.8	399.3	449.2	513.2
132.5°	253.0	256.0	263.8	275.2	291.8	312.5	337.9	367.4	403.1	448.5	504.9
135°	264.1	267.3	276.0	287.8	304.4	325.7	350.3	377.2	408.8	447.6	494.2
137.5°	274.6	277.9	286.4	299.0	315.5	335.3	358.9	384.4	412.6	445.8	484.9
140°	281.5	285.4	293.3	306.0	321.9	341.6	364.6	388.2	415.1	445.2	479.2
142.5°	289.1	292.4	301.0	312.4	328.1	346.7	369.0	392.1	417.0	443.9	474.1
145°	301.3	303.6	310.8	322.7	336.0	354.3	374.8	396.2	418.3	442.0	467.3
147.5°	313.6	315.1	322.0	332.2	345.2	360.8	379.5	398.7	418.3	439.0	460.7
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: P331990-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	961.0	962.5	963.9	964.6	964.5	964.3	964.2	964.0
5°	955.9	957.7	959.6	960.4	960.0	959.6	959.3	958.9
7.5°	945.8	947.5	949.1	949.8	949.6	949.4	949.1	949.0
10°	936.5	938.1	939.8	940.5	940.1	939.7	939.4	939.0
12.5°	926.3	927.5	928.8	929.2	929.0	928.8	928.6	928.4
15°	907.9	909.3	910.9	911.0	909.9	908.8	907.8	906.7
17.5°	884.6	885.7	886.7	887.0	886.6	886.2	885.8	885.4
20°	867.4	868.2	868.9	869.0	868.5	867.9	867.4	866.8
22.5°	849.2	849.9	850.4	850.3	849.7	849.0	848.3	847.6
25°	819.0	819.3	819.4	819.3	818.7	818.2	817.6	817.1
27.5°	787.0	787.1	787.3	787.0	786.3	785.6	784.9	784.2
30°	764.8	764.8	764.8	764.1	762.9	761.5	760.3	759.0
32.5°	741.5	740.5	739.4	738.6	737.8	737.1	736.4	735.8
35°	703.7	702.6	701.5	700.4	699.5	698.6	697.7	696.7
37.5°	664.6	663.2	661.9	661.0	660.4	659.8	659.2	658.6
40°	639.1	637.6	636.1	635.0	634.3	633.5	632.8	632.1
42.5°	612.5	611.0	609.6	608.5	607.8	607.0	606.3	605.5
45°	572.9	570.7	568.5	566.9	566.0	565.1	564.1	563.2
47.5°	531.2	529.0	526.8	525.3	524.5	523.7	522.9	522.0
50°	503.6	501.5	499.6	498.0	496.9	495.7	494.6	493.5
52.5°	475.6	473.9	472.1	470.8	469.7	468.6	467.5	466.4
55°	433.1	431.0	429.0	427.5	426.6	425.7	424.8	423.9
57.5°	391.2	389.4	387.6	386.2	385.1	384.0	382.9	381.9
60°	361.6	360.0	358.3	357.0	356.1	355.2	354.3	353.4
62.5°	333.1	331.4	329.8	328.7	328.0	327.4	326.8	326.1
65°	290.7	289.2	287.7	286.7	286.1	285.6	285.0	284.5
67.5°	248.6	247.3	246.0	244.9	244.2	243.4	242.6	241.9
70°	221.4	220.1	218.8	217.7	216.7	215.9	214.9	214.0
72.5°	193.8	192.7	191.5	190.7	190.2	189.7	189.3	188.8
75°	154.1	153.2	152.3	151.5	151.0	150.4	149.9	149.3
77.5°	117.0	116.4	115.7	115.5	115.5	115.5	115.5	115.5
80°	93.4	93.2	93.0	92.9	92.9	92.9	92.9	92.9
82.5°	71.9	71.5	71.1	70.9	70.8	70.7	70.5	70.3
85°	40.7	40.4	40.0	39.8	39.8	39.8	39.8	39.8
87.5°	18.2	18.3	18.3	18.5	18.4	18.5	18.7	18.5
90°	19.8	20.6	21.4	22.9	22.1	22.9	23.7	22.9
92.5°	66.5	52.8	46.7	42.5	41.1	38.7	39.5	38.1
95°	284.6	193.0	151.1	122.6	107.6	100.4	94.9	91.7
97.5°	709.6	568.4	466.4	371.8	313.5	277.9	256.5	249.7
100°	932.3	868.2	775.7	663.5	583.6	525.9	495.0	495.8
102.5°	1006.3	1004.2	950.3	879.2	817.0	771.3	745.5	727.3
105°	1027.9	1107.1	1122.0	1101.5	1065.1	1035.1	1009.8	1005.8
107.5°	965.7	1094.1	1163.3	1191.5	1192.2	1182.0	1173.5	1166.2
110°	906.2	1051.7	1151.3	1206.7	1228.8	1235.2	1233.6	1232.0



TEST NUMBER: P331990-927

CATALOG NUMBER: S123DIP-S775D1025U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	847.3	996.0	1107.6	1178.8	1219.3	1238.9	1244.9	1245.2
115°	769.4	907.0	1023.2	1109.4	1168.7	1203.5	1219.3	1223.3
117.5°	713.0	831.7	936.0	1023.5	1085.4	1125.2	1148.0	1153.3
120°	683.2	790.0	884.9	964.7	1027.1	1071.4	1090.4	1095.2
122.5°	659.8	756.5	844.4	918.5	974.1	1013.9	1034.7	1040.8
125°	628.7	714.9	790.8	854.0	904.6	939.4	959.2	964.7
127.5°	601.4	678.3	746.8	804.3	849.4	879.2	897.0	902.1
130°	584.4	655.5	719.5	773.3	815.2	843.8	860.3	866.6
132.5°	568.5	634.0	693.6	744.9	784.3	812.7	827.4	831.9
135°	547.2	603.3	654.7	699.8	738.6	762.2	776.5	782.0
137.5°	527.8	573.8	618.1	657.1	689.7	713.8	725.7	729.4
140°	516.3	556.7	594.6	628.7	658.7	680.8	693.5	692.7
142.5°	505.6	540.3	573.1	602.7	628.4	647.9	659.3	658.5
145°	492.7	518.7	544.0	567.0	586.7	603.3	609.7	611.2
147.5°	482.0	502.7	523.2	539.5	554.4	565.7	571.7	572.4
150°	474.4	492.7	509.2	524.3	536.1	544.8	549.5	549.5
152.5°	467.5	483.2	497.9	510.3	519.7	527.8	530.6	530.6
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)