

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: P331988-927

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331988-927  
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-S775D1025U927-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1025 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5758.8 lumens  
Efficiency: N/A  
Efficacy: 110.7 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

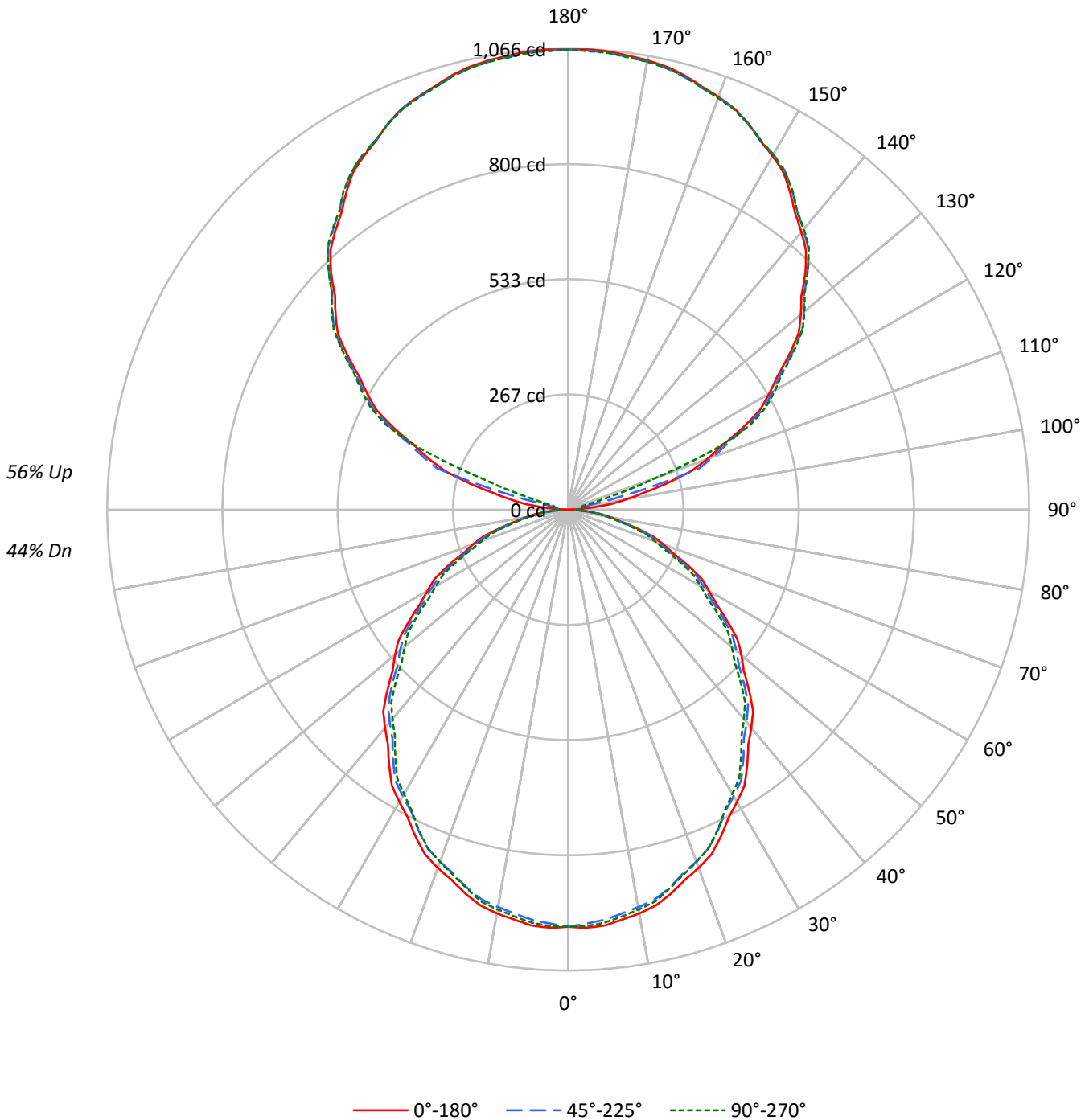
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44
1	96	92	88	85	88	84	81	78	70	67	65	57	55	53	44	43	42	37
2	88	80	74	69	80	74	68	64	61	57	54	50	47	45	39	37	36	31
3	80	71	63	57	73	65	58	53	54	49	45	44	40	38	35	32	30	26
4	73	62	55	49	67	57	50	45	48	43	39	39	35	32	31	28	26	22
5	67	55	47	41	61	51	44	39	43	37	33	35	31	28	28	25	23	19
6	62	50	42	36	56	46	39	34	38	33	29	32	28	24	25	22	20	17
7	57	45	37	31	52	41	34	29	35	29	25	29	25	22	23	20	18	15
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	27	22	18	22	18	16	18	15	13	11

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.9	1.6
10°-20°	256.6	4.5
20°-30°	379.0	6.6
30°-40°	442.7	7.7
40°-50°	445.1	7.7
50°-60°	391.0	6.8
60°-70°	291.3	5.1
70°-80°	166.0	2.9
80°-90°	50.6	0.9
90°-100°	38.7	0.7
100°-110°	184.4	3.2
110°-120°	443.0	7.7
120°-130°	564.1	9.8
130°-140°	602.7	10.5
140°-150°	563.6	9.8
150°-160°	454.6	7.9
160°-170°	293.4	5.1
170°-180°	101.1	1.8
0°-30°	726.5	12.6
0°-40°	1169.2	20.3
0°-60°	2005.3	34.8
0°-90°	2513.2	43.6
90°-120°	666.1	11.6
90°-150°	2396.5	41.6
90°-180°	3246.0	56.4
0°-180°	5758.8	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°	1	9	19	22	24	5
95°	48	18	24	30	30	60
105°	236	240	173	41	35	250
115°	442	447	454	462	465	436
125°	623	629	633	634	636	556
135°	776	780	784	786	784	597
145°	895	900	902	904	904	560
155°	986	985	985	989	984	454
165°	1040	1038	1037	1042	1037	294
175°	1064	1061	1061	1066	1060	101
180°	1064	1064	1064	1064	1064	



TEST NUMBER: P331988-927

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

**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°	17.4	17.3	17.2	17.1	17.0	17.2	17.4	17.7	18.1	18.4	18.4
90°	0.8	2.5	4.3	6.1	7.8	9.8	12.1	14.4	16.7	19.0	19.6
92.5°	14.7	14.2	13.7	13.2	12.8	13.4	15.1	16.8	18.5	20.3	21.4
95°	48.2	41.0	33.8	26.6	19.4	16.8	18.7	20.7	22.6	24.5	25.7
97.5°	97.0	93.7	90.5	87.2	84.0	76.0	63.5	50.8	38.1	25.4	26.9
100°	133.6	137.1	140.7	144.2	147.7	135.7	108.3	80.9	53.5	26.1	27.5
102.5°	175.4	177.9	180.5	183.0	185.5	171.8	141.9	111.9	82.0	52.0	47.7
105°	235.6	237.6	239.5	241.5	243.4	236.4	220.6	204.8	189.0	173.2	142.0
107.5°	299.2	300.8	302.3	303.9	305.4	307.4	309.9	312.4	314.9	317.4	294.6
110°	341.6	343.0	344.4	345.8	347.2	348.9	350.8	352.8	354.7	356.6	350.8



TEST NUMBER: P331988-927

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

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	382.1	383.3	384.6	385.9	387.1	388.7	390.7	392.6	394.5	396.5	396.6
115°	442.0	443.1	444.1	445.2	446.2	447.6	449.1	450.7	452.3	453.8	455.7
117.5°	500.0	501.4	502.6	504.0	505.3	506.3	507.1	507.9	508.7	509.5	511.0
120°	536.1	537.7	539.2	540.8	542.4	543.5	544.0	544.5	545.1	545.6	547.0
122.5°	572.8	574.1	575.4	576.7	578.0	579.0	579.6	580.4	581.0	581.6	582.7
125°	623.1	624.5	625.9	627.3	628.7	629.8	630.5	631.1	631.8	632.6	633.0
127.5°	671.8	673.2	674.6	676.0	677.4	678.5	679.4	680.2	681.0	681.9	682.5
130°	702.2	703.5	705.0	706.4	707.8	708.8	709.6	710.3	710.9	711.6	712.3
132.5°	731.3	732.7	734.0	735.5	736.9	737.8	738.4	738.9	739.6	740.1	740.8
135°	775.7	776.7	777.8	778.9	779.9	780.8	781.5	782.2	782.9	783.6	784.1
137.5°	813.7	815.0	816.3	817.7	819.0	819.8	820.2	820.6	821.0	821.4	822.2
140°	838.9	840.0	841.1	842.1	843.2	844.0	844.5	845.0	845.6	846.1	846.8
142.5°	862.4	863.4	864.4	865.5	866.6	867.4	867.9	868.4	868.9	869.5	870.1
145°	895.1	896.4	897.5	898.8	900.0	900.8	901.2	901.5	901.8	902.2	902.5
147.5°	925.9	926.8	927.6	928.4	929.2	929.7	930.1	930.4	930.8	931.1	931.5
150°	944.9	945.5	945.9	946.5	947.0	947.5	947.8	948.2	948.5	948.9	949.2
152.5°	961.9	962.3	962.5	962.7	963.0	963.2	963.4	963.6	963.8	964.0	964.6
155°	986.0	985.6	985.3	985.0	984.6	984.5	984.7	984.8	985.1	985.2	986.1
157.5°	1004.6	1004.6	1004.6	1004.6	1004.6	1004.4	1004.2	1004.1	1003.9	1003.7	1004.8
160°	1016.1	1015.9	1015.7	1015.6	1015.3	1015.2	1015.0	1014.9	1014.6	1014.5	1015.6
162.5°	1026.8	1026.4	1025.9	1025.5	1025.0	1024.7	1024.5	1024.3	1024.1	1024.0	1025.2
165°	1039.8	1039.3	1038.7	1038.2	1037.7	1037.4	1037.1	1037.0	1036.8	1036.6	1038.0
167.5°	1049.9	1049.2	1048.5	1047.8	1047.1	1046.7	1046.7	1046.7	1046.7	1046.7	1048.1
170°	1055.6	1054.9	1054.2	1053.5	1052.8	1052.4	1052.4	1052.4	1052.4	1052.4	1053.8
172.5°	1059.4	1058.6	1057.7	1056.9	1056.1	1055.7	1055.8	1056.0	1056.1	1056.2	1057.6
175°	1064.3	1063.4	1062.6	1061.7	1060.8	1060.4	1060.6	1060.8	1061.0	1061.1	1062.4
177.5°	1065.6	1064.9	1064.1	1063.4	1062.8	1062.5	1062.6	1062.8	1062.9	1063.0	1064.1
180°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3



TEST NUMBER: P331988-927

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

**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°	18.4	18.4	18.4	18.4	18.5	18.5	18.6	18.7
90°	20.4	21.1	21.8	22.3	22.7	23.1	23.4	23.7
92.5°	22.5	23.6	24.7	25.4	25.6	25.8	26.1	26.2
95°	26.9	28.2	29.5	30.0	30.0	30.0	30.0	30.0
97.5°	28.3	29.7	31.1	31.8	32.1	32.2	32.4	32.6
100°	28.9	30.3	31.7	32.5	32.7	32.9	33.0	33.2
102.5°	43.3	39.0	34.6	32.6	32.9	33.2	33.5	33.8
105°	111.0	79.9	48.8	33.4	33.7	34.1	34.5	34.8
107.5°	271.8	249.0	226.2	203.0	179.6	156.1	132.7	109.2
110°	345.0	339.2	333.4	318.0	292.8	267.7	242.6	217.5





TEST NUMBER: P331988-927

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

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	396.6	396.8	396.9	394.3	389.0	383.7	378.3	373.0
115°	457.4	459.1	460.9	462.2	462.8	463.5	464.2	464.9
117.5°	512.4	513.7	515.2	515.9	516.1	516.2	516.3	516.5
120°	548.4	549.8	551.2	551.9	551.9	551.9	551.9	551.9
122.5°	583.6	584.6	585.6	586.1	586.3	586.5	586.5	586.7
125°	633.3	633.6	634.0	634.3	634.7	635.0	635.4	635.7
127.5°	683.0	683.6	684.1	684.3	683.9	683.6	683.2	682.9
130°	713.0	713.8	714.5	714.6	714.3	713.9	713.6	713.2
132.5°	741.5	742.2	742.9	743.0	742.5	742.0	741.6	741.1
135°	784.7	785.2	785.7	785.7	785.2	784.7	784.1	783.6
137.5°	823.1	823.9	824.7	825.0	824.7	824.3	823.9	823.6
140°	847.5	848.2	848.9	849.1	848.7	848.3	848.0	847.6
142.5°	870.6	871.2	871.7	871.7	871.2	870.8	870.3	869.8
145°	902.9	903.2	903.6	903.8	903.8	903.8	903.8	903.8
147.5°	931.8	932.2	932.6	932.3	931.5	930.7	929.9	929.1
150°	949.6	949.9	950.3	950.1	949.7	949.1	948.6	948.1
152.5°	965.3	965.9	966.5	966.5	965.7	964.9	964.1	963.2
155°	987.0	987.9	988.7	988.6	987.6	986.6	985.5	984.4
157.5°	1005.8	1006.9	1008.0	1007.8	1006.4	1005.0	1003.7	1002.3
160°	1016.6	1017.6	1018.7	1018.6	1017.4	1016.1	1014.9	1013.7
162.5°	1026.4	1027.5	1028.7	1028.8	1027.7	1026.6	1025.6	1024.5
165°	1039.4	1040.8	1042.3	1042.4	1041.1	1039.9	1038.6	1037.4
167.5°	1049.6	1051.0	1052.3	1052.3	1051.0	1049.6	1048.1	1046.7
170°	1055.3	1056.7	1058.0	1058.0	1056.7	1055.3	1053.8	1052.4
172.5°	1059.1	1060.4	1061.8	1061.8	1060.3	1058.7	1057.2	1055.6
175°	1063.6	1064.9	1066.0	1066.0	1064.5	1063.2	1061.8	1060.3
177.5°	1065.2	1066.4	1067.5	1067.4	1066.0	1064.6	1063.2	1061.8
180°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3

(END OF REPORT)