

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: P332165-927

Luminaire Tested: **S123DIW-S775D1030U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332165-927  
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: S123DIW-S775D1030U927-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1030 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

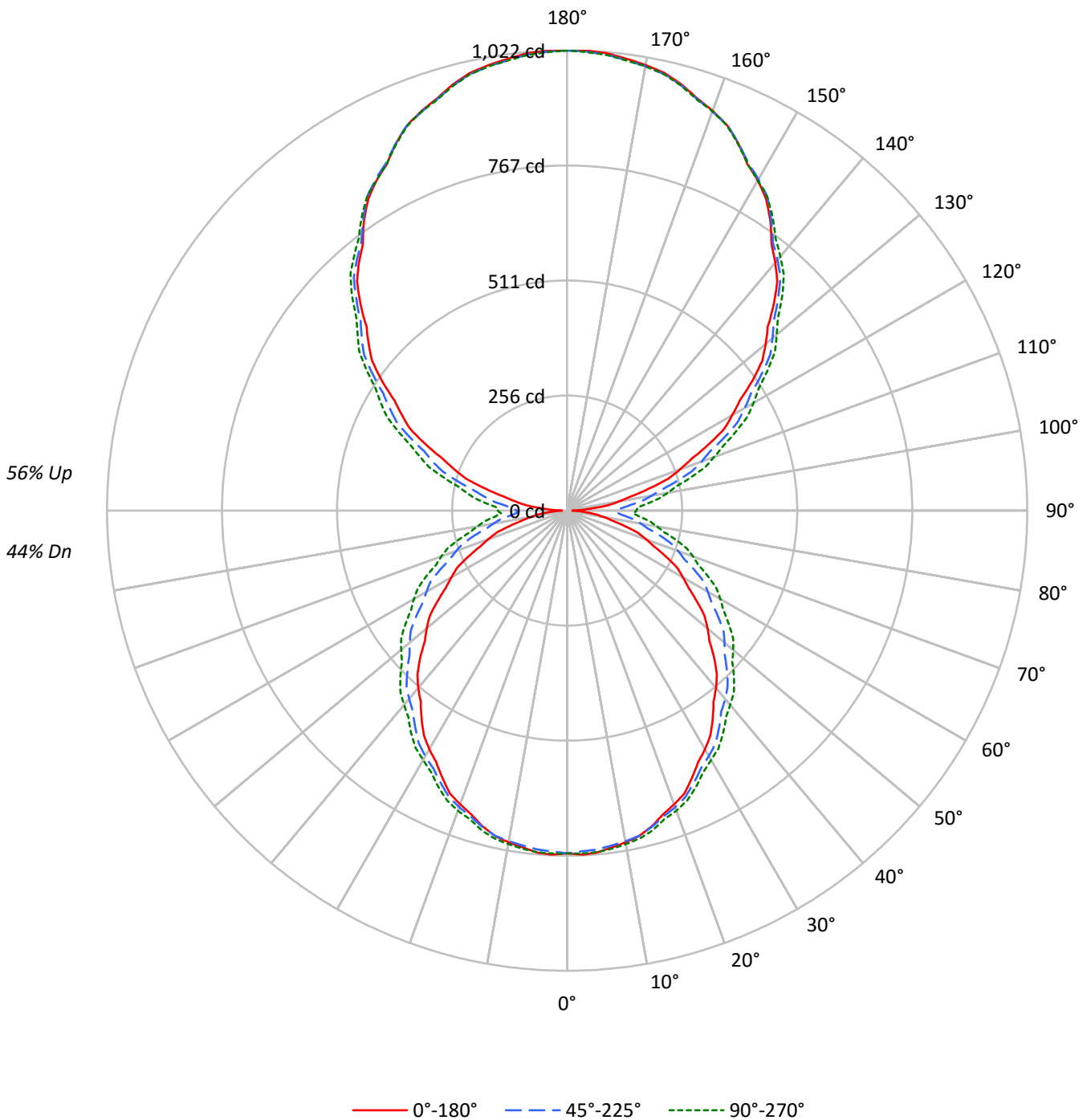
Lumens per Lamp: N/A  
Luminaire Lumens: 5392.5 lumens  
Efficiency: N/A  
Efficacy: 102.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 52.6  
Input Voltage (V): 120  
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



TEST NUMBER: P332165-927

CATALOG NUMBER: S123DIW-S775D1030U927-4F0-1E-UDD-D1

### Luminous Intensity Polar Plot





TEST NUMBER: P332165-927

CATALOG NUMBER: S123DIW-S775D1030U927-4F0-1E-UDD-D1

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

**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: P332165-927

CATALOG NUMBER: S123DIW-S775D1030U927-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.2	1.3
10°-20°	205.8	3.8
20°-30°	307.8	5.7
30°-40°	367.5	6.8
40°-50°	384.5	7.1
50°-60°	360.9	6.7
60°-70°	301.4	5.6
70°-80°	215.6	4.0
80°-90°	131.6	2.4
90°-100°	147.3	2.7
100°-110°	258.5	4.8
110°-120°	378.4	7.0
120°-130°	468.3	8.7
130°-140°	511.1	9.5
140°-150°	494.6	9.2
150°-160°	414.5	7.7
160°-170°	275.9	5.1
170°-180°	96.6	1.8
0°-30°	585.7	10.9
0°-40°	953.3	17.7
0°-60°	1698.6	31.5
0°-90°	2347.3	43.5
90°-120°	784.2	14.5
90°-150°	2258.1	41.9
90°-180°	3045.0	56.5
0°-180°	5392.5	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	60	113	143	154	10
95°	56	95	142	169	179	60
105°	187	210	252	274	284	200
115°	345	358	386	406	412	342
125°	502	505	527	540	543	448
135°	649	654	662	673	676	500
145°	787	787	790	795	796	491
155°	900	900	900	903	898	414
165°	980	978	978	982	977	276
175°	1019	1016	1016	1020	1015	97
180°	1022	1022	1022	1022	1022	



TEST NUMBER: P332165-927

CATALOG NUMBER: S123DIW-S775D1030U927-4F0-1E-UDD-D1

**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°	22.3	31.8	41.3	50.9	60.4	70.1	79.9	89.8	99.7	109.6	116.0
90°	11.6	22.4	33.2	44.0	54.8	66.1	77.9	89.5	101.2	113.0	119.9
92.5°	29.5	38.9	48.2	57.6	67.0	76.9	87.5	98.1	108.7	119.2	126.0
95°	56.5	64.9	73.4	81.8	90.2	99.7	110.1	120.6	131.0	141.5	147.9
97.5°	92.2	99.7	107.1	114.5	121.9	130.5	140.1	149.7	159.4	169.1	175.4
100°	116.6	123.6	130.6	137.5	144.5	152.7	162.0	171.4	180.8	190.1	196.0
102.5°	144.8	150.8	156.8	162.7	168.7	176.3	185.8	195.4	204.9	214.4	220.1
105°	187.2	192.0	196.8	201.5	206.4	213.5	223.0	232.6	242.1	251.6	256.7
107.5°	235.7	239.6	243.6	247.6	251.5	257.6	265.8	273.9	282.1	290.3	295.8
110°	265.8	269.5	273.1	276.9	280.5	286.2	294.0	301.7	309.4	317.1	322.7



TEST NUMBER: P332165-927

CATALOG NUMBER: S123DIW-S775D1030U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	297.9	300.9	303.8	306.7	309.7	314.7	321.9	329.0	336.2	343.3	348.8
115°	345.2	348.0	350.7	353.5	356.2	360.8	367.0	373.3	379.6	385.9	390.5
117.5°	393.6	395.3	397.0	398.7	400.4	404.2	410.0	415.7	421.4	427.2	431.6
120°	423.0	425.1	427.1	429.0	431.0	434.6	439.8	445.0	450.2	455.3	459.5
122.5°	454.6	455.8	457.1	458.3	459.5	462.9	468.2	473.5	478.9	484.2	487.8
125°	501.7	502.2	502.7	503.3	503.8	506.6	511.6	516.6	521.6	526.6	529.7
127.5°	546.0	546.9	547.9	548.8	549.9	552.3	556.3	560.4	564.4	568.5	571.1
130°	575.5	576.8	578.0	579.2	580.5	582.7	585.8	589.0	592.2	595.3	598.1
132.5°	604.4	605.8	607.2	608.6	610.0	612.0	614.5	617.0	619.6	622.2	624.6
135°	649.4	650.2	651.1	652.0	652.9	654.3	656.1	657.9	659.8	661.6	664.2
137.5°	690.9	691.7	692.4	693.2	693.9	695.1	696.6	698.2	699.9	701.5	703.6
140°	719.1	720.0	720.9	721.8	722.7	723.5	724.2	725.0	725.7	726.4	729.0
142.5°	745.4	746.2	746.9	747.7	748.5	749.0	749.5	749.9	750.4	750.8	753.0
145°	786.6	786.7	786.9	787.0	787.3	787.6	788.1	788.7	789.2	789.7	791.0
147.5°	821.7	822.3	822.9	823.6	824.3	824.8	825.3	825.9	826.3	826.8	827.3
150°	846.7	847.1	847.4	847.8	848.1	848.5	848.8	849.2	849.5	849.9	849.9
152.5°	867.3	867.8	868.2	868.8	869.3	869.6	869.8	870.1	870.3	870.4	870.8
155°	899.7	899.7	899.7	899.7	899.7	899.8	899.9	900.2	900.3	900.5	901.2
157.5°	927.3	927.1	926.9	926.6	926.5	926.4	926.5	926.7	926.9	926.9	927.7
160°	944.6	944.3	943.9	943.6	943.2	943.0	943.0	943.0	943.0	943.0	943.9
162.5°	960.0	959.6	959.0	958.5	958.1	957.8	958.0	958.1	958.3	958.5	959.3
165°	979.9	979.4	978.9	978.3	977.8	977.6	977.6	977.6	977.6	977.6	978.6
167.5°	995.9	995.1	994.4	993.7	993.0	992.7	992.8	993.0	993.2	993.2	994.3
170°	1004.8	1004.1	1003.4	1002.7	1002.0	1001.6	1001.6	1001.6	1001.6	1001.6	1002.8
172.5°	1011.9	1011.1	1010.4	1009.7	1009.0	1008.7	1008.7	1008.7	1008.7	1008.7	1009.8
175°	1019.3	1018.6	1017.9	1017.2	1016.4	1016.1	1016.1	1016.1	1016.1	1016.1	1017.2
177.5°	1022.3	1021.8	1021.2	1020.6	1020.0	1019.8	1019.8	1019.8	1019.8	1019.8	1020.6
180°	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7



TEST NUMBER: P332165-927

CATALOG NUMBER: S123DIW-S775D1030U927-4F0-1E-UDD-D1

**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°	122.3	128.7	135.1	139.3	141.2	143.1	145.0	146.9
90°	127.0	134.0	140.9	145.5	147.7	149.9	152.1	154.3
92.5°	132.6	139.3	146.0	150.1	151.5	153.0	154.6	156.0
95°	154.4	160.8	167.2	171.3	173.2	175.1	176.9	178.7
97.5°	181.7	188.0	194.3	198.4	200.2	201.9	203.7	205.5
100°	201.9	207.8	213.7	217.7	219.9	222.1	224.3	226.5
102.5°	225.9	231.6	237.3	241.1	242.9	244.6	246.4	248.2
105°	262.0	267.1	272.3	275.8	277.9	279.9	281.9	283.9
107.5°	301.3	306.8	312.3	315.8	317.2	318.6	320.0	321.4
110°	328.1	333.7	339.1	342.5	343.6	344.7	345.8	347.0





TEST NUMBER: P332165-927

CATALOG NUMBER: S123DIW-S775D1030U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	354.3	359.8	365.4	368.8	370.4	371.9	373.5	375.1
115°	395.1	399.7	404.3	407.2	408.5	409.8	411.1	412.4
117.5°	435.9	440.3	444.7	447.3	448.2	449.2	450.1	451.1
120°	463.5	467.5	471.7	474.1	475.1	476.0	476.9	477.8
122.5°	491.4	495.0	498.7	500.9	501.7	502.5	503.3	504.1
125°	532.8	536.0	539.2	541.1	541.6	542.2	542.8	543.4
127.5°	573.8	576.4	579.0	580.6	581.0	581.5	581.9	582.3
130°	600.9	603.6	606.4	607.8	607.6	607.5	607.4	607.2
132.5°	627.2	629.6	632.2	633.5	633.8	634.1	634.4	634.7
135°	666.9	669.5	672.1	673.7	674.2	674.8	675.3	675.9
137.5°	705.8	708.0	710.1	711.3	711.6	711.9	712.1	712.3
140°	731.6	734.2	736.8	737.9	737.6	737.3	737.0	736.6
142.5°	755.3	757.6	759.9	761.0	761.0	761.0	760.9	760.9
145°	792.3	793.6	795.0	795.6	795.6	795.6	795.7	795.7
147.5°	827.7	828.1	828.5	828.6	828.2	827.8	827.4	827.0
150°	849.9	849.9	849.9	849.5	848.9	848.2	847.5	846.8
152.5°	871.0	871.3	871.6	871.3	870.4	869.7	868.8	867.9
155°	901.9	902.6	903.3	903.1	901.8	900.6	899.4	898.1
157.5°	928.4	929.2	929.9	929.9	928.8	927.9	926.9	925.8
160°	944.8	945.7	946.6	946.7	945.9	945.2	944.5	943.8
162.5°	960.2	961.1	962.0	961.9	960.8	959.6	958.5	957.3
165°	979.7	980.7	981.8	981.8	980.5	979.2	977.9	976.8
167.5°	995.5	996.6	997.7	997.7	996.6	995.5	994.3	993.2
170°	1004.1	1005.4	1006.6	1006.6	1005.4	1004.1	1002.8	1001.6
172.5°	1010.9	1012.0	1013.1	1013.0	1011.8	1010.5	1009.2	1008.1
175°	1018.2	1019.3	1020.3	1020.3	1019.0	1017.7	1016.5	1015.3
177.5°	1021.4	1022.3	1023.2	1023.1	1022.1	1021.1	1020.1	1019.1
180°	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7	1021.7

(END OF REPORT)