

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: P332322-927

Luminaire Tested: **S123RDIP-S775D1025U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332322-927
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: S123RDIP-S775D1025U927-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5102.5 lumens
Efficiency: N/A
Efficacy: 98.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

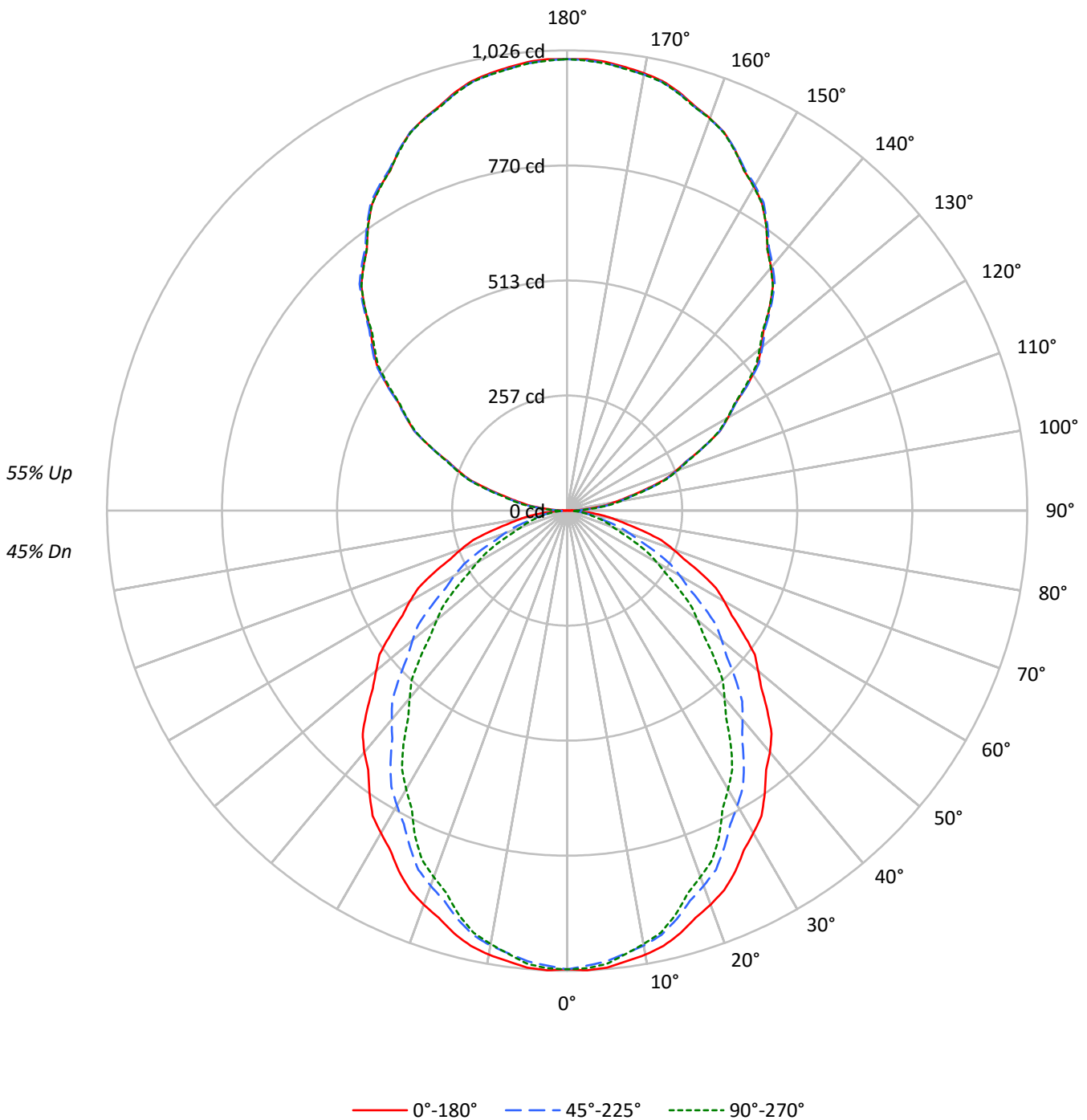
Input Watts (W): 52
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332322-927

CATALOG NUMBER: S123RDIP-S775D1025U927-4F0-1E-UDD-F1

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	52	52	52	45				
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44	39				
2	89	81	75	70	81	75	70	65	63	59	56	51	49	47	41	39	38	33				
3	81	72	65	59	74	66	60	55	56	51	47	46	42	40	37	34	32	28				
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28	24				
5	68	57	49	43	62	53	46	40	44	39	35	37	33	30	30	27	25	21				
6	63	51	43	37	57	47	40	35	40	35	31	33	29	26	27	24	22	19				
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	20	17				
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	18	15				
9	50	38	31	26	46	36	29	24	30	25	22	26	22	19	21	18	16	14				
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	14	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11009	11009	11009
5°	11051	10899	10962
10°	10989	10762	10726
15°	10871	10510	10399
20°	10709	10195	9958
25°	10542	9841	9526
30°	10320	9434	8918
35°	10093	9025	8360
40°	9884	8543	7669
45°	9608	8068	7046
50°	9306	7529	6348
55°	8997	6912	5697
60°	8714	6250	4982
65°	8344	5535	4266
70°	7884	4648	3446
75°	7207	3656	3244
80°	6428	3242	2982
85°	5434	2865	2655



TEST NUMBER: P332322-927

CATALOG NUMBER: S123RDIP-S775D1025U927-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.0	1.9
10°-20°	267.2	5.2
20°-30°	384.8	7.5
30°-40°	433.4	8.5
40°-50°	414.6	8.1
50°-60°	339.6	6.7
60°-70°	229.1	4.5
70°-80°	115.3	2.3
80°-90°	33.5	0.7
90°-100°	65.6	1.3
100°-110°	196.3	3.8
110°-120°	333.8	6.5
120°-130°	439.1	8.6
130°-140°	493.6	9.7
140°-150°	485.2	9.5
150°-160°	408.4	8.0
160°-170°	271.9	5.3
170°-180°	95.2	1.9
0°-30°	748.0	14.7
0°-40°	1181.5	23.2
0°-60°	1935.6	37.9
0°-90°	2313.5	45.3
90°-120°	595.7	11.7
90°-150°	2013.5	39.5
90°-180°	2789.0	54.7
0°-180°	5102.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1023	1023	1023	1023	1023	
5°	1023	1018	1009	1016	1014	97
15°	976	966	943	939	933	275
25°	888	866	829	812	802	408
35°	768	737	687	652	636	481
45°	631	592	530	484	463	487
55°	479	437	368	322	304	430
65°	328	281	217	178	168	324
75°	173	133	88	80	78	185
85°	44	27	23	22	22	49
90°	1	9	19	22	24	5
95°	47	52	58	62	62	52
105°	178	180	187	187	188	191
115°	336	338	337	338	337	332
125°	492	494	493	489	486	438
135°	638	643	642	639	637	492
145°	774	776	778	777	774	483
155°	886	886	887	890	885	408
165°	966	963	963	967	962	272
175°	1004	1001	1001	1005	1000	95
180°	1007	1007	1007	1007	1007	



TEST NUMBER: P332322-927

CATALOG NUMBER: S123RDIP-S775D1025U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1026.0	1025.5	1024.8	1024.3	1023.7	1022.5	1020.7	1019.0	1017.2	1015.4	1017.1
5°	1022.8	1021.8	1020.9	1020.0	1019.1	1017.5	1015.3	1013.0	1010.8	1008.7	1010.3
7.5°	1013.3	1012.3	1011.3	1010.3	1009.3	1007.3	1004.5	1001.6	998.8	995.9	996.8
10°	1005.4	1004.0	1002.7	1001.5	1000.1	997.8	994.5	991.3	987.9	984.6	984.8
12.5°	994.0	992.6	991.2	989.8	988.3	985.6	981.5	977.5	973.4	969.3	969.2
15°	975.5	973.4	971.4	969.4	967.3	963.8	958.6	953.5	948.2	943.1	942.2
17.5°	952.0	949.7	947.4	945.0	942.6	938.2	931.6	925.0	918.5	912.0	910.0
20°	934.9	931.8	928.9	926.0	923.1	918.1	911.0	904.0	897.1	890.0	887.6
22.5°	915.6	912.2	908.8	905.4	902.0	896.6	889.1	881.7	874.3	866.8	863.8
25°	887.6	883.0	878.3	873.7	869.1	862.5	854.1	845.6	837.1	828.6	824.7
27.5°	853.5	848.4	843.4	838.3	833.2	825.9	816.5	807.1	797.6	788.1	782.8
30°	830.3	824.7	819.3	813.7	808.2	800.3	790.0	779.6	769.3	759.0	752.7
32.5°	807.1	800.8	794.6	788.3	782.0	773.4	762.5	751.6	740.7	729.8	722.9
35°	768.1	761.4	754.8	748.2	741.6	732.5	721.1	709.6	698.2	686.8	678.9
37.5°	728.6	721.2	713.8	706.5	699.1	689.4	677.2	665.0	652.8	640.6	631.5
40°	703.4	695.3	687.1	679.1	671.0	660.4	647.3	634.2	621.1	608.0	598.4
42.5°	674.9	666.8	658.6	650.5	642.5	631.6	618.1	604.5	591.0	577.5	567.0
45°	631.2	623.0	614.7	606.3	598.0	586.8	572.6	558.4	544.2	530.0	519.5
47.5°	587.6	578.5	569.4	560.3	551.2	539.6	525.4	511.1	496.9	482.8	471.3
50°	555.7	547.1	538.4	529.7	521.1	509.3	494.4	479.4	464.5	449.6	438.2
52.5°	527.2	517.8	508.4	499.0	489.6	477.5	462.7	448.0	433.2	418.4	406.5
55°	479.4	470.4	461.4	452.3	443.3	430.9	415.3	399.7	384.0	368.3	357.6
57.5°	435.3	425.5	415.7	405.8	395.9	383.2	367.4	351.6	335.9	320.2	310.1
60°	404.8	394.7	384.5	374.4	364.2	351.5	336.2	320.9	305.6	290.3	280.4
62.5°	374.2	364.1	353.9	343.8	333.7	321.0	305.7	290.4	275.1	259.8	250.4
65°	327.6	317.5	307.4	297.2	287.1	274.8	260.5	246.1	231.7	217.3	208.3
67.5°	281.1	270.8	260.5	250.3	240.0	228.0	214.2	200.4	186.6	172.9	166.1
70°	250.5	240.6	230.6	220.6	210.7	199.2	186.3	173.5	160.6	147.7	141.2
72.5°	220.0	210.2	200.3	190.5	180.8	170.0	158.3	146.6	134.8	123.1	117.8
75°	173.3	164.5	155.7	146.8	138.0	128.5	118.4	108.2	98.1	87.9	86.1
77.5°	130.9	122.9	114.9	106.9	98.9	91.7	85.1	78.6	72.1	65.5	64.6
80°	103.7	96.1	88.6	81.0	73.4	67.7	63.8	60.0	56.2	52.3	51.7
82.5°	77.8	71.3	64.7	58.2	51.7	47.5	45.7	43.9	42.1	40.3	39.8
85°	44.0	39.9	35.9	31.8	27.7	25.4	24.9	24.3	23.8	23.2	22.9
87.5°	16.1	14.8	13.5	12.3	11.0	10.6	11.1	11.5	12.0	12.4	12.4
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°	19.2	20.4	21.5	22.7	23.9	25.2	26.5	27.7	29.1	30.3	30.9
95°	46.7	47.8	49.1	50.4	51.6	52.9	54.3	55.7	57.1	58.5	59.3
97.5°	82.9	83.8	84.7	85.6	86.5	87.5	88.5	89.5	90.5	91.6	92.4
100°	107.6	108.6	109.6	110.7	111.8	112.7	113.6	114.5	115.3	116.2	116.8
102.5°	136.0	136.7	137.3	137.9	138.6	139.4	140.6	141.7	142.9	144.1	144.6
105°	177.9	178.2	178.6	179.0	179.4	180.3	181.9	183.5	185.1	186.6	186.6
107.5°	226.6	226.9	227.0	227.3	227.5	227.9	228.5	229.2	229.8	230.4	231.0
110°	257.0	257.4	257.7	258.0	258.4	258.7	259.1	259.4	259.8	260.2	260.9



TEST NUMBER: P332322-927

CATALOG NUMBER: S123RDIP-S775D1025U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	288.6	288.8	289.1	289.2	289.5	289.6	289.7	289.8	289.9	289.9	290.7
115°	336.0	336.6	337.2	337.6	338.2	338.3	337.9	337.5	337.2	336.8	337.1
117.5°	383.8	384.2	384.5	384.9	385.2	385.2	384.8	384.3	383.8	383.3	383.3
120°	413.6	414.6	415.7	416.8	417.8	417.9	417.0	416.1	415.3	414.4	414.2
122.5°	444.6	445.4	446.1	446.9	447.7	447.8	447.3	446.9	446.5	446.0	445.5
125°	491.9	492.4	492.9	493.5	493.9	494.1	493.7	493.4	493.0	492.7	491.9
127.5°	535.5	536.6	537.7	538.8	540.0	540.3	540.0	539.6	539.2	538.8	537.8
130°	564.6	566.0	567.4	568.8	570.2	570.7	570.1	569.6	569.1	568.5	567.8
132.5°	593.7	595.1	596.5	597.9	599.4	599.8	599.4	599.0	598.7	598.3	597.5
135°	638.2	639.2	640.2	641.3	642.4	642.8	642.6	642.5	642.3	642.1	641.4
137.5°	679.3	680.2	681.0	681.9	682.8	683.4	683.9	684.4	684.8	685.2	684.5
140°	707.7	708.6	709.5	710.3	711.2	711.8	711.9	712.1	712.3	712.5	712.3
142.5°	733.6	734.5	735.5	736.3	737.2	737.8	738.1	738.4	738.7	739.0	738.9
145°	774.1	774.5	774.8	775.2	775.5	776.0	776.5	777.1	777.6	778.1	777.9
147.5°	809.6	810.2	810.9	811.5	812.1	812.7	813.2	813.7	814.1	814.7	814.7
150°	834.2	834.6	835.0	835.3	835.7	836.0	836.4	836.7	837.1	837.4	837.4
152.5°	854.5	855.0	855.5	856.0	856.4	856.8	857.1	857.2	857.5	857.7	857.9
155°	886.5	886.5	886.5	886.5	886.5	886.5	886.7	886.8	887.1	887.2	888.0
157.5°	913.6	913.5	913.2	913.0	912.8	912.8	912.9	913.1	913.2	913.3	914.1
160°	930.7	930.3	930.0	929.7	929.3	929.2	929.2	929.2	929.2	929.2	930.0
162.5°	945.9	945.4	944.9	944.4	944.0	943.8	943.9	944.0	944.2	944.4	945.2
165°	965.5	965.0	964.5	963.9	963.5	963.1	963.1	963.1	963.1	963.1	964.2
167.5°	981.2	980.5	979.8	979.1	978.3	978.1	978.3	978.3	978.5	978.7	979.8
170°	990.1	989.4	988.6	987.9	987.2	986.9	986.9	986.9	986.9	986.9	988.1
172.5°	997.0	996.3	995.6	994.9	994.2	993.8	993.8	993.8	993.8	993.8	994.9
175°	1004.2	1003.5	1002.8	1002.2	1001.5	1001.1	1001.1	1001.1	1001.1	1001.1	1002.2
177.5°	1007.3	1006.7	1006.2	1005.6	1005.0	1004.7	1004.7	1004.7	1004.7	1004.7	1005.6
180°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6



TEST NUMBER: P332322-927

CATALOG NUMBER: S123RDIP-S775D1025U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1018.7	1020.3	1021.9	1022.6	1022.3	1022.0	1021.7	1021.4
5°	1011.9	1013.6	1015.3	1015.9	1015.6	1015.2	1014.8	1014.5
7.5°	997.8	998.6	999.6	999.7	999.1	998.5	997.8	997.2
10°	985.0	985.2	985.3	985.0	984.0	983.1	982.2	981.3
12.5°	969.1	969.0	968.9	968.3	967.3	966.1	965.1	964.0
15°	941.3	940.3	939.4	938.3	937.1	935.7	934.5	933.2
17.5°	908.0	906.1	904.1	902.2	900.2	898.3	896.4	894.5
20°	885.3	882.8	880.4	878.1	875.9	873.7	871.5	869.3
22.5°	860.9	857.9	854.8	852.3	850.2	848.2	846.1	844.1
25°	820.9	817.1	813.2	810.2	808.2	806.1	804.1	802.1
27.5°	777.4	772.1	766.7	762.4	759.3	756.2	753.1	750.0
30°	746.5	740.1	733.9	729.3	726.4	723.4	720.4	717.5
32.5°	716.1	709.2	702.3	697.4	694.3	691.2	688.1	685.0
35°	671.0	663.1	655.1	649.5	646.2	642.9	639.5	636.2
37.5°	622.5	613.5	604.5	598.0	593.9	589.8	585.7	581.6
40°	588.8	579.2	569.7	562.8	558.5	554.3	550.0	545.8
42.5°	556.5	546.1	535.6	528.5	524.7	520.9	517.1	513.3
45°	509.1	498.5	488.0	480.5	476.1	471.7	467.3	462.9
47.5°	459.9	448.5	437.0	429.4	425.4	421.4	417.6	413.6
50°	426.7	415.3	403.9	396.0	391.8	387.5	383.3	379.1
52.5°	394.7	382.8	370.9	363.1	359.3	355.5	351.6	347.8
55°	346.9	336.2	325.5	318.3	314.7	310.9	307.3	303.6
57.5°	300.0	289.9	279.8	273.1	270.1	266.9	263.7	260.6
60°	270.4	260.5	250.5	244.0	240.8	237.7	234.6	231.4
62.5°	241.1	231.7	222.4	216.0	212.7	209.5	206.2	202.9
65°	199.2	190.2	181.2	175.6	173.6	171.6	169.6	167.5
67.5°	159.4	152.7	145.8	141.4	139.3	137.0	134.9	132.7
70°	134.8	128.3	121.8	117.6	115.6	113.5	111.5	109.5
72.5°	112.6	107.3	102.0	98.9	98.1	97.3	96.4	95.5
75°	84.2	82.4	80.6	79.5	79.1	78.7	78.3	78.0
77.5°	63.5	62.5	61.6	60.8	60.5	60.1	59.7	59.4
80°	51.2	50.6	50.1	49.6	49.2	48.9	48.5	48.1
82.5°	39.2	38.7	38.1	37.8	37.7	37.6	37.5	37.5
85°	22.5	22.1	21.8	21.5	21.5	21.5	21.5	21.5
87.5°	12.4	12.4	12.4	12.4	12.3	12.2	12.1	12.0
90°	20.4	21.1	21.8	22.3	22.7	23.1	23.4	23.7
92.5°	31.5	32.1	32.6	32.8	32.6	32.4	32.2	31.9
95°	59.9	60.6	61.3	61.7	61.7	61.7	61.7	61.7
97.5°	93.2	94.0	94.8	95.1	95.1	95.1	95.0	94.9
100°	117.3	117.8	118.4	118.8	119.1	119.5	119.9	120.2
102.5°	145.1	145.7	146.2	146.4	146.3	146.2	146.2	146.2
105°	186.6	186.6	186.6	186.8	187.1	187.5	187.8	188.2
107.5°	231.6	232.1	232.7	232.8	232.7	232.4	232.2	232.0
110°	261.6	262.3	263.0	263.2	262.8	262.4	262.1	261.7



TEST NUMBER: P332322-927

CATALOG NUMBER: S123RDIP-S775D1025U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	291.6	292.4	293.3	293.7	293.6	293.5	293.4	293.3
115°	337.2	337.4	337.5	337.5	337.4	337.2	337.1	336.8
117.5°	383.3	383.3	383.3	382.9	382.5	382.0	381.5	381.0
120°	414.0	413.8	413.7	413.4	413.0	412.7	412.3	412.0
122.5°	445.0	444.7	444.2	443.7	443.2	442.7	442.2	441.7
125°	491.2	490.5	489.8	489.1	488.5	487.7	487.0	486.3
127.5°	536.9	535.9	534.9	534.0	533.2	532.3	531.6	530.8
130°	567.1	566.4	565.8	564.7	563.6	562.3	561.1	559.8
132.5°	596.6	595.8	594.9	594.1	593.1	592.2	591.2	590.3
135°	640.7	640.0	639.3	638.7	638.4	638.0	637.7	637.4
137.5°	683.8	683.1	682.3	681.6	681.0	680.2	679.6	679.0
140°	712.1	711.9	711.8	711.1	709.9	708.6	707.4	706.2
142.5°	738.7	738.6	738.3	737.8	736.8	735.9	734.9	734.0
145°	777.8	777.6	777.4	777.0	776.3	775.5	774.8	774.1
147.5°	814.7	814.7	814.7	814.1	813.1	812.0	811.0	809.9
150°	837.4	837.4	837.4	836.9	835.8	834.8	833.7	832.7
152.5°	858.3	858.5	858.8	858.5	857.5	856.7	855.7	854.8
155°	888.7	889.4	890.0	889.8	888.6	887.3	886.1	884.9
157.5°	914.8	915.5	916.3	916.2	915.2	914.2	913.2	912.2
160°	930.9	931.8	932.6	932.7	932.1	931.4	930.7	929.9
162.5°	946.1	947.0	947.8	947.7	946.6	945.5	944.4	943.3
165°	965.3	966.3	967.3	967.3	966.1	964.8	963.6	962.3
167.5°	980.8	981.9	983.0	983.0	981.9	980.8	979.8	978.7
170°	989.4	990.5	991.8	991.8	990.5	989.4	988.1	986.9
172.5°	996.0	997.1	998.1	998.1	996.9	995.7	994.4	993.2
175°	1003.2	1004.2	1005.4	1005.2	1004.0	1002.7	1001.6	1000.3
177.5°	1006.5	1007.3	1008.1	1008.1	1007.1	1006.1	1005.1	1004.1
180°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6

(END OF REPORT)