

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: P331511-927

Luminaire Tested: **S122DIW-S485D970U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331511-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIW-S485D970U927-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 970 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4633.6 lumens  
Efficiency: N/A  
Efficacy: 102.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

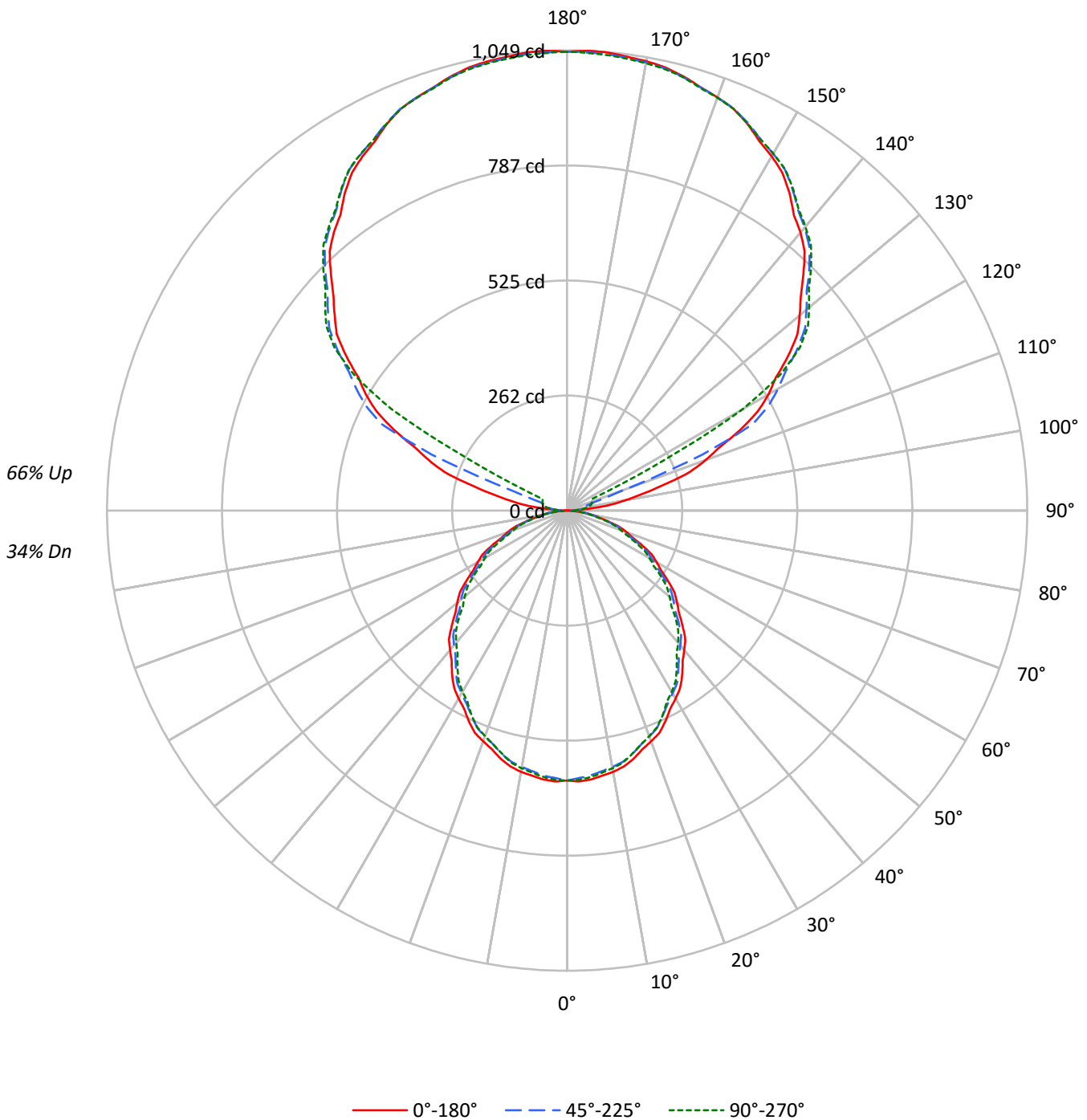
Input Watts (W): 45.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331511-927

CATALOG NUMBER: S122DIW-S485D970U927-4F0-1E-UDD-F

### 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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41
1	94	90	86	83	85	81	78	75	65	63	61	50	49	47	36	36	35
2	86	78	73	67	77	71	66	62	57	53	50	44	42	40	32	31	29
3	78	69	62	56	70	62	56	51	50	46	42	39	36	33	28	27	25
4	71	61	53	47	64	55	49	44	45	40	36	35	31	29	25	23	21
5	65	54	46	40	59	49	42	37	40	35	31	31	27	25	23	21	19
6	60	48	41	35	54	44	37	32	36	31	27	28	24	22	21	18	16
7	56	44	36	31	50	40	33	28	32	27	24	25	22	19	19	16	15
8	52	40	32	27	46	36	29	25	29	24	21	23	20	17	17	15	13
9	48	36	29	24	43	33	26	22	27	22	19	21	18	15	16	14	12
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	12	11

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9935	9935	9935
5°	9972	9828	9887
10°	9914	9729	9778
15°	9790	9603	9593
20°	9617	9414	9402
25°	9444	9180	9180
30°	9221	8968	8889
35°	9014	8712	8584
40°	8753	8456	8292
45°	8499	8200	7996
50°	8219	7935	7654
55°	7927	7626	7344
60°	7601	7259	6991
65°	7255	6896	6575
70°	6812	6453	6146
75°	6201	5939	5795
80°	5504	5337	5058
85°	4483	4279	3835



TEST NUMBER: P331511-927

CATALOG NUMBER: S122DIW-S485D970U927-4F0-1E-UDD-F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.9	1.2
10°-20°	162.8	3.5
20°-30°	239.3	5.2
30°-40°	278.0	6.0
40°-50°	277.7	6.0
50°-60°	242.1	5.2
60°-70°	179.0	3.9
70°-80°	101.4	2.2
80°-90°	29.8	0.6
90°-100°	34.9	0.8
100°-110°	128.0	2.8
110°-120°	342.1	7.4
120°-130°	564.7	12.2
130°-140°	600.5	13.0
140°-150°	558.1	12.0
150°-160°	448.7	9.7
160°-170°	289.2	6.2
170°-180°	99.5	2.1
0°-30°	459.9	9.9
0°-40°	737.9	15.9
0°-60°	1257.7	27.1
0°-90°	1568.0	33.8
90°-120°	504.9	10.9
90°-150°	2228.2	48.1
90°-180°	3066.0	66.2
0°-180°	4633.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	615	615	615	615	615	
5°	615	613	606	611	610	58
15°	586	582	574	577	574	165
25°	530	525	515	516	515	244
35°	457	451	442	438	436	285
45°	372	368	359	353	350	287
55°	282	278	271	264	261	252
65°	190	186	180	175	172	188
75°	99	98	95	92	93	106
85°	24	24	23	21	21	28
90°	1	9	15	19	20	3
95°	49	26	30	33	33	60
105°	230	240	46	54	58	246
115°	435	448	467	133	62	428
125°	615	626	640	645	647	549
135°	762	773	780	787	786	588
145°	883	883	896	900	897	552
155°	973	967	975	979	973	448
165°	1025	1021	1023	1027	1023	289
175°	1048	1043	1045	1049	1042	100
180°	1046	1046	1046	1046	1046	



TEST NUMBER: P331511-927

CATALOG NUMBER: S122DIW-S485D970U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	618.1	617.6	617.1	616.6	616.0	615.2	614.0	612.9	611.7	610.5	611.6
5°	615.3	614.7	614.3	613.7	613.2	612.2	610.8	609.3	607.8	606.4	607.4
7.5°	609.8	609.0	608.2	607.4	606.6	605.5	604.0	602.5	601.0	599.5	600.6
10°	604.7	603.7	602.8	601.9	600.9	599.7	598.1	596.6	595.0	593.4	594.5
12.5°	597.5	596.8	595.9	595.1	594.3	593.1	591.5	589.9	588.4	586.8	587.5
15°	585.7	584.9	584.2	583.4	582.6	581.3	579.6	577.9	576.2	574.5	575.0
17.5°	570.5	569.8	569.0	568.2	567.4	566.2	564.4	562.7	560.9	559.2	559.8
20°	559.7	558.9	558.1	557.3	556.5	555.2	553.3	551.5	549.7	547.9	548.3
22.5°	548.8	547.7	546.6	545.5	544.4	543.0	541.2	539.5	537.7	536.0	536.1
25°	530.1	529.0	528.0	527.0	525.9	524.3	522.0	519.8	517.5	515.3	515.6
27.5°	508.8	507.9	506.9	506.0	505.0	503.7	501.9	500.1	498.4	496.6	496.2
30°	494.6	493.5	492.5	491.5	490.4	488.9	486.9	485.0	483.0	481.0	480.6
32.5°	479.4	478.6	477.8	476.9	476.1	474.6	472.5	470.5	468.4	466.4	465.6
35°	457.3	456.0	454.7	453.4	452.1	450.4	448.3	446.2	444.0	442.0	441.2
37.5°	432.4	431.2	430.1	428.9	427.7	426.1	424.0	421.9	419.8	417.7	416.7
40°	415.3	414.2	413.2	412.2	411.1	409.6	407.4	405.4	403.2	401.2	400.0
42.5°	398.8	397.7	396.6	395.6	394.6	393.0	390.9	388.8	386.7	384.5	383.3
45°	372.2	371.2	370.3	369.4	368.4	367.0	365.0	363.1	361.1	359.1	357.7
47.5°	345.6	344.8	343.9	343.0	342.1	340.7	338.7	336.6	334.5	332.5	331.0
50°	327.2	326.5	325.8	325.2	324.6	323.3	321.5	319.6	317.7	315.9	314.1
52.5°	309.2	308.3	307.4	306.6	305.7	304.4	302.7	301.0	299.2	297.5	296.0
55°	281.6	280.8	280.0	279.2	278.5	277.3	275.7	274.1	272.5	270.9	269.4
57.5°	253.9	253.3	252.6	252.1	251.4	250.3	248.5	246.8	245.0	243.3	241.7
60°	235.4	235.0	234.4	233.9	233.4	232.2	230.4	228.5	226.6	224.8	223.4
62.5°	217.5	216.7	215.8	214.9	214.1	213.0	211.6	210.2	208.7	207.3	206.0
65°	189.9	189.1	188.3	187.5	186.8	185.7	184.4	183.1	181.7	180.5	179.3
67.5°	161.8	161.2	160.6	159.9	159.3	158.4	157.2	156.1	154.9	153.7	152.8
70°	144.3	143.9	143.3	142.8	142.3	141.4	140.2	139.0	137.8	136.7	135.8
72.5°	126.4	125.9	125.3	124.8	124.3	123.7	122.9	122.1	121.4	120.6	119.6
75°	99.4	99.1	98.9	98.6	98.3	97.9	97.2	96.6	95.9	95.2	94.4
77.5°	75.3	74.8	74.4	73.9	73.4	73.1	72.9	72.6	72.3	72.1	71.7
80°	59.2	59.0	58.9	58.8	58.6	58.5	58.1	57.9	57.7	57.4	57.0
82.5°	44.0	44.0	44.0	44.0	43.9	43.8	43.6	43.5	43.3	43.2	42.7
85°	24.2	24.2	24.0	23.8	23.8	23.6	23.4	23.4	23.2	23.1	22.7
87.5°	8.6	8.8	9.0	9.2	9.3	9.4	9.5	9.5	9.6	9.7	9.5
90°	0.8	2.6	4.4	6.3	8.2	9.7	11.1	12.4	13.8	15.1	16.0
92.5°	15.3	15.1	15.0	14.8	14.7	14.9	15.5	16.2	16.9	17.6	18.0
95°	49.2	43.6	38.1	32.6	27.0	24.8	26.0	27.2	28.4	29.5	30.3
97.5°	97.7	82.0	66.4	50.7	35.1	28.6	31.4	34.1	36.8	39.5	40.2
100°	134.0	110.9	87.9	64.9	41.8	31.7	34.5	37.4	40.3	43.2	44.5
102.5°	174.0	169.1	164.2	159.3	154.4	140.1	116.1	92.2	68.3	44.4	46.1
105°	230.1	235.2	240.2	245.3	250.3	229.9	183.9	138.0	92.1	46.2	48.0
107.5°	294.1	298.3	302.3	306.3	310.5	284.9	229.9	174.8	119.7	64.6	62.7
110°	335.3	338.9	342.4	345.9	349.4	326.9	278.3	229.7	181.1	132.5	115.7



TEST NUMBER: P331511-927

CATALOG NUMBER: S122DIW-S485D970U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	374.1	377.2	380.3	383.5	386.6	382.1	370.2	358.1	346.1	334.1	272.7
115°	435.2	438.1	441.0	443.9	446.7	450.2	454.4	458.6	462.9	467.1	389.1
117.5°	489.9	493.1	496.3	499.5	502.7	505.7	508.7	511.5	514.4	517.3	498.4
120°	529.9	532.4	534.9	537.4	540.0	542.7	545.7	548.8	551.8	554.8	556.9
122.5°	563.8	566.4	569.1	571.7	574.4	577.4	580.7	584.0	587.2	590.6	591.8
125°	615.4	617.6	619.8	621.9	624.2	626.9	630.0	633.3	636.4	639.6	640.8
127.5°	662.2	664.6	667.0	669.5	671.8	674.3	676.7	679.1	681.4	683.8	685.6
130°	691.9	694.6	697.3	699.9	702.6	704.9	706.7	708.6	710.4	712.3	714.2
132.5°	722.2	724.5	726.7	729.0	731.3	733.3	735.2	737.0	738.9	740.8	742.4
135°	761.5	764.2	766.9	769.6	772.3	774.4	775.9	777.4	778.9	780.5	782.1
137.5°	801.3	803.2	805.1	807.0	808.8	810.6	812.4	814.0	815.8	817.5	819.2
140°	827.4	828.7	830.0	831.4	832.7	834.3	836.1	838.0	839.9	841.8	843.3
142.5°	849.1	850.3	851.6	852.8	854.0	855.6	857.8	859.9	862.1	864.1	865.5
145°	883.4	883.2	883.0	882.9	882.7	884.1	886.9	889.8	892.6	895.5	896.7
147.5°	913.2	912.5	911.9	911.2	910.6	911.7	914.6	917.3	920.2	923.1	923.9
150°	932.6	931.4	930.2	929.1	927.9	928.6	931.3	934.0	936.7	939.4	940.4
152.5°	949.0	947.6	946.3	945.0	943.6	944.3	946.8	949.4	952.0	954.5	955.5
155°	972.7	971.1	969.6	968.1	966.6	966.9	968.9	970.9	973.0	974.9	976.0
157.5°	991.3	990.1	988.7	987.5	986.2	986.3	987.7	989.1	990.5	991.9	993.1
160°	1002.2	1001.2	1000.2	999.2	998.1	998.1	999.2	1000.2	1001.2	1002.2	1003.2
162.5°	1011.9	1010.9	1009.9	1008.8	1007.9	1007.8	1008.7	1009.6	1010.4	1011.3	1012.4
165°	1024.9	1023.9	1022.9	1021.9	1020.9	1020.6	1021.1	1021.6	1022.2	1022.6	1023.8
167.5°	1034.6	1033.6	1032.6	1031.6	1030.5	1030.3	1030.8	1031.3	1031.7	1032.2	1033.3
170°	1040.1	1039.0	1038.1	1037.0	1036.0	1035.7	1036.0	1036.3	1036.7	1037.0	1038.2
172.5°	1043.7	1042.7	1041.6	1040.7	1039.7	1039.3	1039.7	1040.0	1040.3	1040.7	1041.9
175°	1048.4	1047.2	1046.0	1044.9	1043.7	1043.2	1043.6	1043.9	1044.3	1044.6	1045.8
177.5°	1049.2	1048.2	1047.3	1046.3	1045.4	1045.0	1045.1	1045.2	1045.4	1045.5	1046.5
180°	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1



TEST NUMBER: P331511-927

CATALOG NUMBER: S122DIW-S485D970U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	612.7	613.7	614.7	615.2	615.0	614.7	614.6	614.3
5°	608.6	609.6	610.6	611.0	610.8	610.5	610.2	610.0
7.5°	601.7	602.7	603.8	604.1	603.9	603.6	603.2	603.0
10°	595.5	596.6	597.6	597.9	597.5	597.1	596.8	596.4
12.5°	588.3	589.0	589.7	589.9	589.6	589.4	589.1	588.7
15°	575.5	576.1	576.6	576.5	575.8	575.2	574.6	573.9
17.5°	560.4	561.0	561.7	561.6	560.9	560.4	559.8	559.1
20°	548.7	549.1	549.5	549.4	548.8	548.3	547.8	547.2
22.5°	536.1	536.2	536.3	536.2	535.9	535.6	535.3	535.0
25°	515.9	516.1	516.3	516.3	516.1	515.9	515.6	515.3
27.5°	495.8	495.4	495.0	494.6	493.9	493.3	492.7	492.0
30°	480.2	479.8	479.4	479.0	478.4	477.9	477.4	476.8
32.5°	464.9	464.2	463.5	462.9	462.3	461.8	461.3	460.7
35°	440.4	439.6	438.8	438.1	437.4	436.7	436.1	435.5
37.5°	415.7	414.8	413.8	413.0	412.3	411.7	411.1	410.5
40°	398.8	397.6	396.4	395.5	395.0	394.5	394.0	393.4
42.5°	382.0	380.7	379.4	378.4	377.6	376.9	376.2	375.4
45°	356.2	354.8	353.3	352.4	351.8	351.3	350.8	350.2
47.5°	329.5	327.9	326.4	325.3	324.5	323.8	323.0	322.2
50°	312.3	310.4	308.6	307.3	306.7	306.0	305.3	304.7
52.5°	294.5	292.9	291.4	290.2	289.3	288.4	287.6	286.7
55°	267.8	266.3	264.7	263.6	262.8	262.2	261.6	260.9
57.5°	240.2	238.6	237.1	236.1	235.5	235.0	234.6	234.0
60°	221.9	220.5	219.0	218.1	217.7	217.3	216.9	216.5
62.5°	204.6	203.3	201.9	201.1	200.5	200.0	199.6	199.0
65°	178.1	176.9	175.7	174.8	174.1	173.5	172.9	172.1
67.5°	151.9	150.9	150.0	149.3	148.8	148.2	147.7	147.2
70°	134.8	133.9	133.0	132.3	131.7	131.2	130.7	130.2
72.5°	118.7	117.8	116.9	116.2	115.8	115.3	114.9	114.5
75°	93.6	92.9	92.1	91.8	92.1	92.4	92.6	92.9
77.5°	71.3	70.9	70.5	70.1	69.7	69.4	69.0	68.6
80°	56.6	56.2	55.8	55.5	55.2	55.0	54.7	54.4
82.5°	42.2	41.7	41.2	40.9	40.9	40.8	40.7	40.7
85°	22.3	21.9	21.5	21.2	21.1	21.0	20.8	20.7
87.5°	9.3	9.2	9.0	9.0	9.0	8.9	8.9	8.8
90°	16.8	17.7	18.5	19.1	19.4	19.7	20.1	20.4
92.5°	18.5	18.9	19.3	19.6	19.8	20.0	20.2	20.4
95°	31.2	32.1	32.9	33.2	33.0	32.9	32.7	32.6
97.5°	40.9	41.5	42.2	42.6	42.9	43.0	43.3	43.4
100°	45.9	47.2	48.6	49.4	49.7	50.1	50.4	50.7
102.5°	47.8	49.6	51.3	52.4	52.9	53.4	53.9	54.3
105°	49.9	51.7	53.6	54.8	55.5	56.2	56.9	57.5
107.5°	60.8	59.0	57.1	56.5	57.2	57.8	58.5	59.2
110°	98.8	82.0	65.2	57.1	57.8	58.5	59.1	59.8





TEST NUMBER: P331511-927

CATALOG NUMBER: S122DIW-S485D970U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	211.4	150.0	88.6	58.2	58.8	59.3	59.9	60.4
115°	311.2	233.4	155.5	110.5	98.4	86.3	74.1	62.1
117.5°	479.6	460.8	442.0	412.6	372.8	333.0	293.3	253.4
120°	558.9	560.9	562.9	552.5	529.9	507.2	484.4	461.8
122.5°	593.0	594.2	595.4	593.8	589.4	585.0	580.6	576.2
125°	642.0	643.2	644.4	645.2	645.7	646.2	646.7	647.2
127.5°	687.3	689.0	690.7	691.6	691.7	691.8	691.9	692.0
130°	716.0	717.9	719.7	720.6	720.3	720.2	720.0	719.9
132.5°	743.9	745.5	747.1	747.8	747.6	747.4	747.3	747.1
135°	783.8	785.4	787.1	787.8	787.5	787.1	786.8	786.5
137.5°	820.8	822.4	824.1	824.7	824.1	823.5	822.9	822.4
140°	844.8	846.3	847.8	848.1	847.3	846.4	845.6	844.8
142.5°	866.9	868.3	869.7	869.9	869.1	868.2	867.4	866.6
145°	897.9	899.0	900.2	900.4	899.5	898.7	897.9	897.0
147.5°	924.8	925.7	926.5	926.6	925.9	925.2	924.5	923.8
150°	941.4	942.4	943.4	943.5	942.7	941.8	941.0	940.2
152.5°	956.6	957.5	958.5	958.5	957.4	956.3	955.2	954.1
155°	977.0	977.9	979.0	978.8	977.5	976.1	974.8	973.4
157.5°	994.2	995.4	996.5	996.4	995.1	993.8	992.4	991.2
160°	1004.2	1005.2	1006.2	1006.2	1005.0	1003.8	1002.7	1001.5
162.5°	1013.6	1014.7	1015.9	1015.7	1014.2	1012.8	1011.4	1010.0
165°	1025.0	1026.2	1027.4	1027.4	1026.2	1025.0	1023.8	1022.6
167.5°	1034.5	1035.7	1036.9	1036.7	1035.2	1033.7	1032.2	1030.7
170°	1039.4	1040.5	1041.7	1041.6	1040.1	1038.6	1037.0	1035.5
172.5°	1043.0	1044.2	1045.4	1045.2	1043.7	1042.2	1040.7	1039.2
175°	1046.9	1048.1	1049.3	1049.1	1047.3	1045.7	1044.0	1042.4
177.5°	1047.4	1048.3	1049.2	1049.2	1047.9	1046.7	1045.5	1044.3
180°	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1

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