

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: P331599-927

Luminaire Tested: **S122DIW-S1005D970U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331599-927
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-S1005D970U927-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 970 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6264.1 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

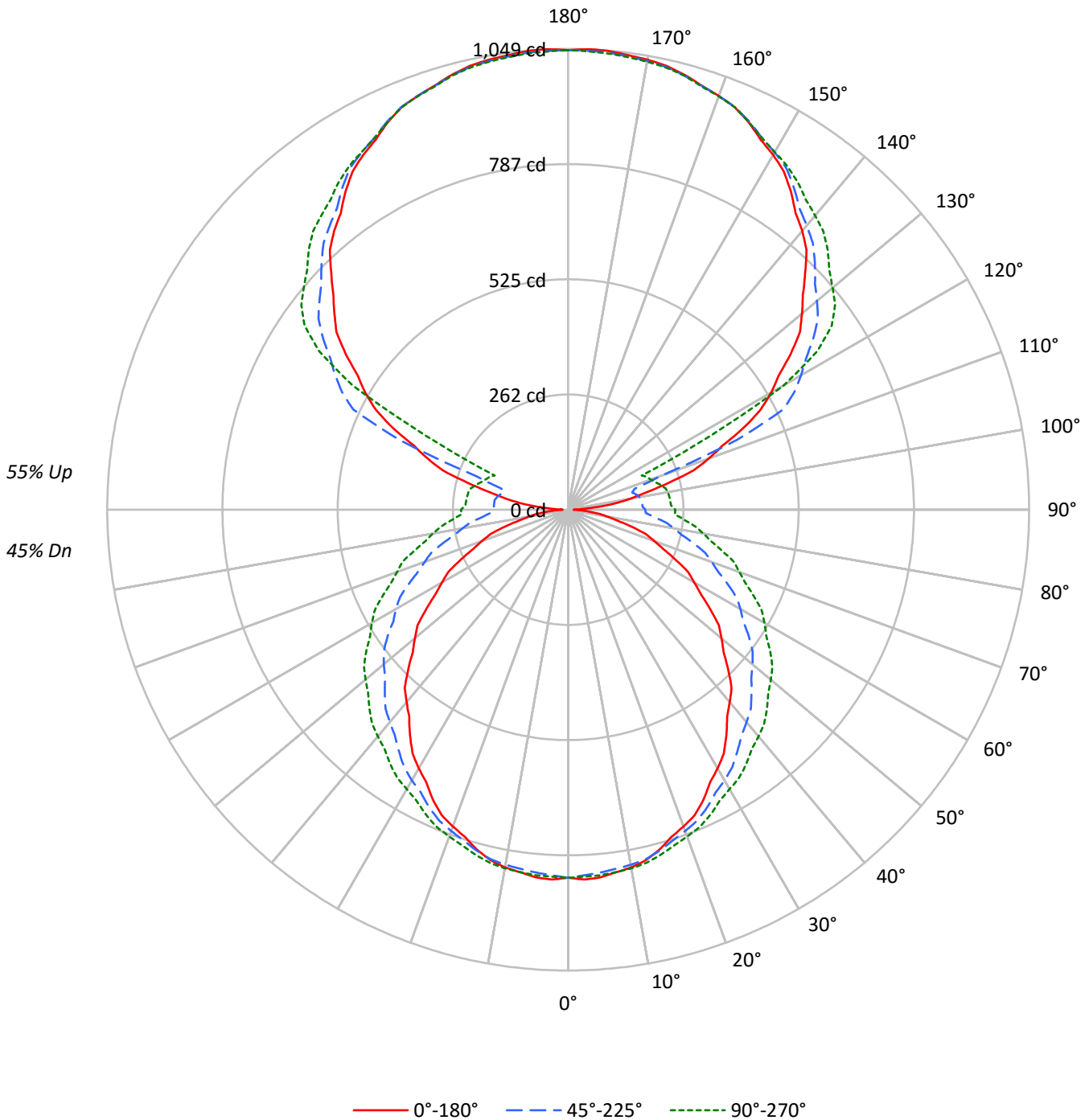
Input Watts (W): 67.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331599-927

CATALOG NUMBER: S122DIW-S1005D970U927-4F0-1E-UDD-D

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	81	81	81	66	66	66	52	52	52	45
1	95	90	86	82	87	83	79	76	69	66	63	56	54	52	44	42	41	35
2	86	78	72	66	79	72	66	61	59	55	51	48	45	42	38	35	34	29
3	78	68	61	54	71	63	56	50	52	47	43	42	38	35	33	30	28	24
4	71	60	52	45	65	55	48	42	46	40	36	37	33	30	29	26	24	20
5	65	53	45	39	60	49	42	36	41	35	31	33	29	25	26	23	20	17
6	60	48	39	33	55	44	36	31	37	31	27	30	25	22	24	20	18	15
7	56	43	35	29	51	40	32	27	33	27	23	27	23	19	21	18	16	13
8	51	39	31	25	47	36	29	24	30	24	20	25	20	17	20	16	14	11
9	48	35	28	23	44	33	26	21	28	22	18	23	18	15	18	15	13	10
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	17	14	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13525	13525	13525
5°	13591	13020	12971
10°	13506	12635	12493
15°	13320	12228	11990
20°	13085	11791	11506
25°	12852	11370	11066
30°	12525	10939	10626
35°	12192	10521	10314
40°	11845	10165	10004
45°	11515	9846	9739
50°	11159	9559	9477
55°	10787	9249	9211
60°	10329	8927	8928
65°	9856	8551	8595
70°	9323	8147	8233
75°	8642	7750	7901
80°	7567	7345	7563
85°	6539	6995	7303



TEST NUMBER: P331599-927

CATALOG NUMBER: S122DIW-S1005D970U927-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	1.3
10°-20°	227.6	3.6
20°-30°	344.9	5.5
30°-40°	420.1	6.7
40°-50°	452.0	7.2
50°-60°	438.9	7.0
60°-70°	383.2	6.1
70°-80°	295.0	4.7
80°-90°	200.6	3.2
90°-100°	171.3	2.7
100°-110°	227.6	3.6
110°-120°	407.9	6.5
120°-130°	601.4	9.6
130°-140°	615.9	9.8
140°-150°	560.8	9.0
150°-160°	448.7	7.2
160°-170°	289.2	4.6
170°-180°	99.5	1.6
0°-30°	651.9	10.4
0°-40°	1072.0	17.1
0°-60°	1962.9	31.3
0°-90°	2841.8	45.4
90°-120°	806.7	12.9
90°-150°	2584.8	41.3
90°-180°	3422.0	54.6
0°-180°	6264.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	838	838	838	838	838	
5°	840	836	829	836	835	80
15°	801	804	804	814	813	226
25°	728	737	748	762	766	335
35°	628	648	671	697	706	392
45°	515	548	590	626	640	397
55°	395	439	501	544	561	353
65°	270	330	401	449	466	268
75°	149	218	295	345	363	158
85°	44	119	197	246	265	47
90°	13	92	175	226	244	10
95°	59	94	169	217	233	68
105°	236	283	151	199	218	253
115°	440	469	540	241	185	433
125°	618	630	681	718	732	551
135°	763	775	794	826	835	589
145°	883	883	896	908	910	553
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: P331599-927

CATALOG NUMBER: S122DIW-S1005D970U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7
2.5°	842.6	841.9	841.2	840.6	840.0	838.8	837.3	835.8	834.3	832.8	833.9
5°	840.1	839.3	838.5	837.7	836.9	835.7	834.1	832.4	830.8	829.2	830.8
7.5°	832.6	832.0	831.5	831.0	830.4	829.6	828.3	827.0	825.9	824.6	826.5
10°	826.8	826.2	825.7	825.1	824.6	823.9	823.2	822.3	821.5	820.7	822.8
12.5°	817.1	817.1	817.3	817.4	817.5	817.2	816.7	816.0	815.5	814.8	817.1
15°	801.3	801.8	802.3	802.9	803.4	803.7	803.7	803.7	803.7	803.7	806.1
17.5°	780.9	782.0	783.2	784.3	785.4	786.4	787.3	788.1	789.0	789.9	792.4
20°	767.3	768.7	770.0	771.3	772.7	773.9	775.0	776.0	777.1	778.2	781.2
22.5°	752.7	754.2	755.8	757.4	759.0	760.5	762.0	763.5	765.0	766.5	769.5
25°	728.4	730.3	732.2	734.1	736.0	738.2	740.5	743.0	745.4	747.8	751.1
27.5°	699.3	702.3	705.4	708.5	711.6	714.5	717.4	720.3	723.1	726.0	730.1
30°	679.9	683.3	686.9	690.4	693.9	697.4	700.9	704.4	707.9	711.5	715.7
32.5°	658.5	662.4	666.4	670.3	674.2	678.3	682.5	686.6	690.8	694.9	699.9
35°	627.6	632.2	636.8	641.4	646.0	650.9	656.0	661.1	666.2	671.4	677.3
37.5°	594.1	599.4	604.8	610.0	615.3	621.2	627.9	634.5	641.2	647.8	654.4
40°	571.8	577.7	583.7	589.6	595.6	602.1	609.4	616.7	624.0	631.3	638.3
42.5°	550.5	556.3	562.3	568.2	574.2	581.3	589.7	598.1	606.4	614.8	622.4
45°	514.8	522.0	529.3	536.6	543.9	552.2	561.7	571.2	580.6	590.0	598.4
47.5°	479.6	487.5	495.4	503.4	511.3	520.8	531.9	542.9	554.0	565.0	573.8
50°	455.3	463.7	472.0	480.4	488.7	499.0	511.1	523.2	535.4	547.6	556.7
52.5°	432.0	440.8	449.6	458.4	467.1	477.9	490.7	503.5	516.3	529.1	538.4
55°	394.6	404.3	414.0	423.7	433.4	445.3	459.3	473.3	487.4	501.4	511.1
57.5°	357.7	368.6	379.5	390.5	401.5	414.1	428.4	442.7	457.0	471.3	481.7
60°	331.4	343.0	354.7	366.2	377.9	391.3	406.7	422.1	437.4	452.8	463.1
62.5°	308.2	320.1	332.2	344.2	356.2	369.9	385.3	400.7	416.1	431.5	442.4
65°	269.5	282.7	296.0	309.2	322.4	337.0	352.9	368.8	384.7	400.6	411.7
67.5°	234.1	247.9	261.7	275.5	289.3	304.4	320.7	337.0	353.2	369.6	380.7
70°	208.8	222.8	236.9	250.9	264.9	280.3	297.1	313.8	330.5	347.2	358.8
72.5°	185.5	199.9	214.4	228.9	243.4	259.0	276.0	292.9	309.9	326.9	338.2
75°	149.3	164.5	179.5	194.6	209.8	225.9	243.2	260.5	277.7	295.0	306.6
77.5°	114.4	130.2	146.0	161.8	177.6	194.2	211.8	229.3	246.8	264.4	276.0
80°	91.0	107.5	124.0	140.5	156.9	173.9	191.4	209.0	226.5	244.0	255.3
82.5°	71.6	87.9	104.1	120.3	136.6	153.6	171.3	189.1	206.8	224.6	235.9
85°	43.7	60.4	77.2	93.9	110.6	127.6	144.9	162.2	179.4	196.7	208.0
87.5°	23.9	40.4	56.9	73.3	89.8	106.7	124.3	141.8	159.3	176.9	188.1
90°	12.9	30.4	47.9	65.4	82.9	100.9	119.5	138.2	156.8	175.4	187.0
92.5°	26.5	40.9	55.3	69.6	84.1	99.9	117.2	134.5	151.8	169.1	180.1
95°	58.9	66.1	73.2	80.3	87.5	99.7	117.0	134.4	151.8	169.1	180.2
97.5°	106.2	101.8	97.4	93.1	88.6	95.6	113.9	132.1	150.4	168.7	179.4
100°	142.5	129.4	116.4	103.3	90.2	92.7	110.7	128.7	146.6	164.5	175.9
102.5°	181.5	185.7	190.0	194.2	198.4	195.9	186.7	177.4	168.2	159.0	170.5
105°	236.1	249.1	261.9	274.8	287.6	278.1	246.3	214.4	182.4	150.6	161.8
107.5°	300.0	310.3	320.7	331.0	341.3	325.7	284.0	242.4	200.7	159.1	166.3
110°	340.2	349.1	358.1	366.9	375.9	362.7	327.3	291.9	256.5	221.1	212.9



TEST NUMBER: P331599-927

CATALOG NUMBER: S122DIW-S1005D970U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	379.0	386.6	394.3	402.0	409.6	413.7	414.2	414.8	415.4	416.0	363.2
115°	440.1	445.9	451.8	457.6	463.4	474.5	490.8	507.2	523.6	539.9	470.1
117.5°	493.5	498.7	503.8	509.0	514.1	523.7	537.8	552.0	566.1	580.2	569.3
120°	533.5	537.1	540.7	544.3	548.0	556.7	570.5	584.2	598.1	611.9	621.5
122.5°	567.4	570.5	573.6	576.7	579.8	588.0	601.5	614.9	628.4	641.8	650.4
125°	617.8	620.0	622.2	624.4	626.6	633.6	645.4	657.3	669.1	680.9	689.4
127.5°	664.6	666.8	668.9	671.1	673.2	679.0	688.3	697.7	707.0	716.4	724.8
130°	694.3	696.7	699.1	701.6	703.9	708.9	716.4	724.0	731.5	739.0	747.3
132.5°	724.5	726.6	728.6	730.6	732.6	736.7	743.0	749.2	755.4	761.6	769.4
135°	762.7	765.4	768.1	770.8	773.5	776.9	781.2	785.4	789.6	793.8	801.1
137.5°	802.6	804.4	806.2	808.0	809.8	812.2	815.2	818.0	820.9	823.8	830.4
140°	828.5	829.7	830.7	831.8	832.9	834.6	837.0	839.4	841.8	844.1	850.0
142.5°	850.3	851.3	852.2	853.2	854.1	855.7	857.9	860.2	862.4	864.6	869.4
145°	883.4	883.2	883.0	882.9	882.7	884.1	886.9	889.8	892.6	895.5	898.3
147.5°	913.2	912.5	911.9	911.2	910.6	911.7	914.6	917.3	920.2	923.1	924.2
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: P331599-927

CATALOG NUMBER: S122DIW-S1005D970U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7
2.5°	835.0	836.1	837.2	837.5	837.0	836.6	836.1	835.8
5°	832.4	834.1	835.7	836.3	836.1	835.8	835.5	835.3
7.5°	828.5	830.4	832.3	833.2	832.9	832.7	832.3	832.1
10°	825.0	827.2	829.3	830.3	830.0	829.7	829.5	829.2
12.5°	819.2	821.3	823.5	824.4	824.2	823.9	823.6	823.4
15°	808.6	811.0	813.4	814.5	814.2	814.0	813.7	813.4
17.5°	795.0	797.5	800.0	801.3	801.3	801.3	801.3	801.3
20°	784.1	787.1	790.0	791.5	791.5	791.5	791.5	791.5
22.5°	772.5	775.5	778.4	780.1	780.5	781.0	781.4	781.9
25°	754.3	757.6	760.8	762.8	763.7	764.5	765.2	766.0
27.5°	734.2	738.3	742.4	744.7	745.4	745.9	746.6	747.1
30°	720.1	724.4	728.7	731.3	732.1	732.8	733.7	734.5
32.5°	704.9	709.8	714.8	718.0	719.5	720.9	722.4	723.8
35°	683.3	689.2	695.1	699.0	700.9	702.8	704.7	706.5
37.5°	661.0	667.6	674.1	678.4	680.4	682.5	684.4	686.4
40°	645.3	652.4	659.3	664.1	666.5	668.9	671.4	673.8
42.5°	630.1	637.8	645.5	650.5	652.9	655.4	657.7	660.2
45°	606.7	615.1	623.4	629.0	631.7	634.4	637.1	639.8
47.5°	582.5	591.2	600.0	605.9	608.8	611.8	614.7	617.7
50°	565.9	575.0	584.2	590.3	593.3	596.2	599.2	602.1
52.5°	547.9	557.2	566.6	572.9	576.1	579.3	582.5	585.7
55°	520.9	530.5	540.3	546.8	550.3	553.9	557.4	560.9
57.5°	492.3	502.7	513.2	520.1	523.7	527.3	530.8	534.4
60°	473.3	483.6	493.8	500.9	504.6	508.4	512.2	515.9
62.5°	453.3	464.1	475.1	482.3	485.8	489.4	493.0	496.5
65°	422.8	433.8	444.9	452.2	455.7	459.1	462.7	466.2
67.5°	391.9	403.1	414.2	421.7	425.3	429.0	432.7	436.3
70°	370.4	382.0	393.6	401.0	404.3	407.5	410.7	414.0
72.5°	349.6	361.0	372.3	380.0	383.9	387.8	391.7	395.5
75°	318.2	329.8	341.4	349.0	352.4	356.0	359.5	363.0
77.5°	287.5	299.0	310.6	318.3	322.0	325.8	329.6	333.4
80°	266.6	278.1	289.4	296.9	300.7	304.4	308.2	312.0
82.5°	247.2	258.6	269.9	277.3	280.9	284.5	288.0	291.6
85°	219.4	230.7	242.0	249.5	253.3	257.1	260.9	264.7
87.5°	199.2	210.4	221.6	228.9	232.4	236.0	239.5	243.0
90°	198.7	210.3	221.9	229.5	233.1	236.7	240.3	243.8
92.5°	191.1	202.1	213.1	220.4	223.8	227.2	230.7	234.1
95°	191.3	202.4	213.5	220.6	223.6	226.7	229.8	232.9
97.5°	190.0	200.7	211.3	218.3	221.7	225.1	228.5	231.9
100°	187.2	198.5	209.8	217.2	220.5	223.8	227.1	230.4
102.5°	182.0	193.5	205.0	212.5	215.9	219.4	222.8	226.2
105°	173.2	184.5	195.7	203.2	206.8	210.5	214.1	217.8
107.5°	173.5	180.6	187.8	193.2	196.9	200.5	204.1	207.8
110°	204.7	196.5	188.3	186.1	189.7	193.4	197.0	200.7



TEST NUMBER: P331599-927

CATALOG NUMBER: S122DIW-S1005D970U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	310.5	257.8	205.0	180.4	183.9	187.4	190.9	194.4
115°	400.3	330.5	260.7	221.3	212.1	203.0	193.8	184.7
117.5°	558.5	547.6	536.8	512.9	475.8	438.7	401.7	364.6
120°	631.1	640.6	650.2	645.2	625.3	605.6	585.9	566.2
122.5°	658.9	667.5	676.0	679.4	677.5	675.6	673.8	671.8
125°	697.8	706.3	714.8	720.4	723.4	726.4	729.3	732.2
127.5°	733.2	741.6	750.0	755.4	757.9	760.4	762.9	765.3
130°	755.7	764.0	772.3	777.4	779.4	781.4	783.5	785.4
132.5°	777.3	785.1	793.0	797.9	799.9	801.9	803.9	805.9
135°	808.5	815.8	823.2	827.8	829.6	831.4	833.2	835.0
137.5°	837.0	843.7	850.2	854.2	855.5	856.7	858.0	859.3
140°	855.8	861.7	867.5	870.8	871.6	872.4	873.1	873.9
142.5°	874.3	879.1	883.9	886.7	887.2	887.8	888.4	888.9
145°	901.1	903.9	906.7	908.3	908.8	909.3	909.8	910.4
147.5°	925.2	926.3	927.4	927.9	927.9	927.8	927.7	927.6
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

(END OF REPORT)