

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: P331512-940

Luminaire Tested: **S122DIW-S485D970U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331512-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D970U940-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4759.0 lumens
Efficiency: N/A
Efficacy: 105.3 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

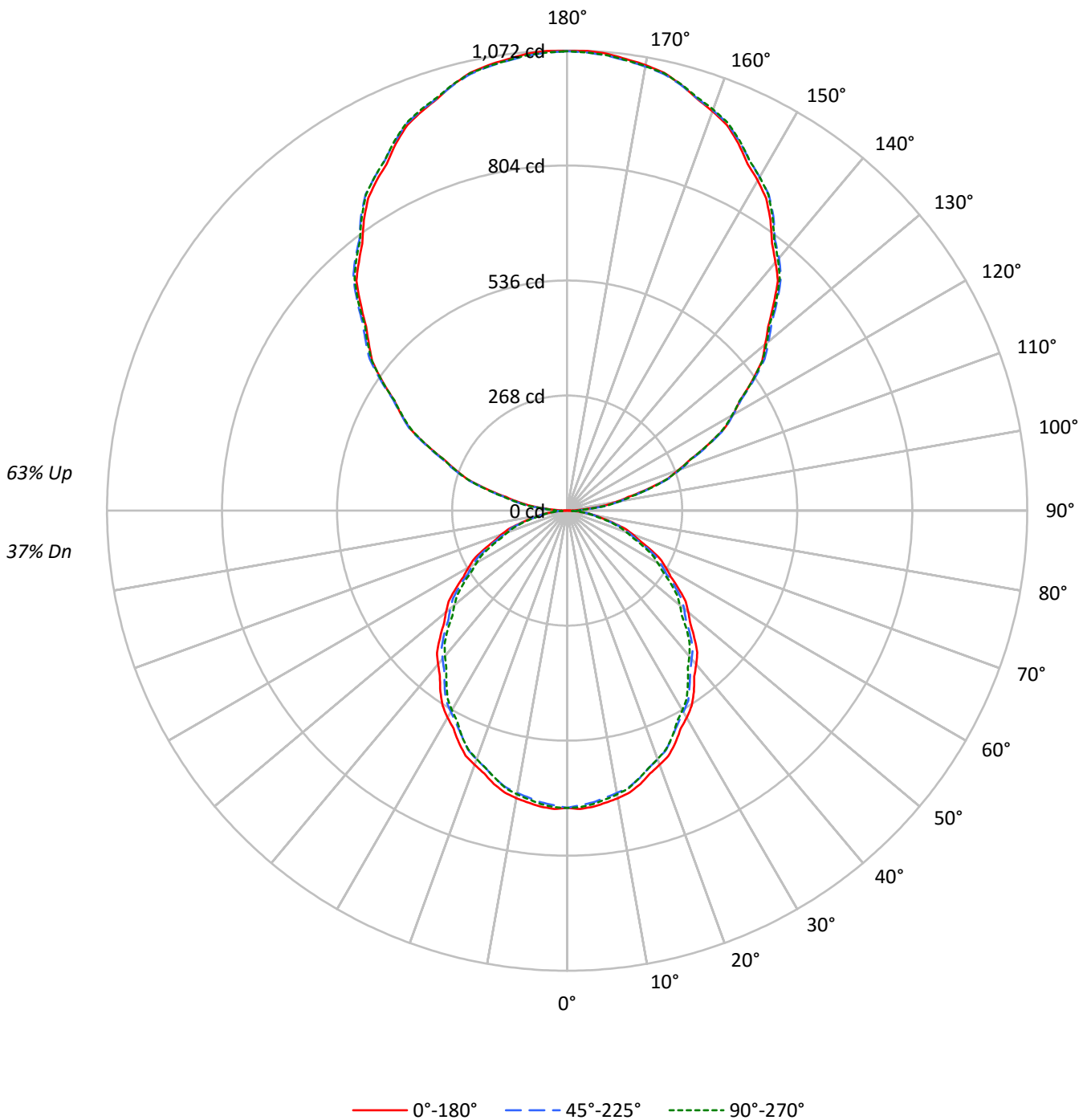
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331512-940

CATALOG NUMBER: S122DIW-S485D970U940-4F0-1E-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	0
RCR																		
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37
1	95	91	87	83	86	82	79	76	67	64	62	52	51	49	39	38	37	31
2	86	79	73	68	78	72	67	62	58	55	52	46	43	41	34	33	31	26
3	79	69	62	57	71	63	57	52	51	47	43	41	37	35	30	28	27	22
4	72	61	54	48	65	56	49	44	46	41	37	36	33	30	27	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17
6	61	49	41	35	55	45	38	33	37	31	28	29	25	23	22	20	18	15
7	56	44	36	31	51	40	33	29	33	28	24	27	23	20	20	18	16	13
8	52	40	32	27	47	37	30	25	30	25	21	24	20	18	19	16	14	12
9	48	36	29	24	44	33	27	22	28	23	19	22	19	16	17	15	13	10
10	45	33	26	22	41	31	24	20	25	21	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11183	11183	11183
5°	11225	11063	11128
10°	11158	10952	11006
15°	11020	10810	10798
20°	10825	10596	10584
25°	10630	10334	10334
30°	10381	10094	10006
35°	10147	9806	9662
40°	9853	9518	9333
45°	9565	9229	9001
50°	9251	8932	8616
55°	8923	8586	8267
60°	8557	8173	7869
65°	8164	7759	7404
70°	7671	7260	6916
75°	6981	6687	6525
80°	6192	6007	5700
85°	5057	4798	4316



TEST NUMBER: P331512-940

CATALOG NUMBER: S122DIW-S485D970U940-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	1.4
10°-20°	183.3	3.9
20°-30°	269.4	5.7
30°-40°	312.9	6.6
40°-50°	312.5	6.6
50°-60°	272.6	5.7
60°-70°	201.5	4.2
70°-80°	114.1	2.4
80°-90°	35.0	0.7
90°-100°	67.8	1.4
100°-110°	210.6	4.4
110°-120°	360.0	7.6
120°-130°	473.5	9.9
130°-140°	531.4	11.2
140°-150°	521.1	10.9
150°-160°	437.0	9.2
160°-170°	289.9	6.1
170°-180°	101.3	2.1
0°-30°	517.7	10.9
0°-40°	830.6	17.5
0°-60°	1415.7	29.7
0°-90°	1766.3	37.1
90°-120°	638.5	13.4
90°-150°	2164.4	45.5
90°-180°	2993.0	62.9
0°-180°	4759.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	693	690	683	688	687	66
15°	659	655	647	649	646	186
25°	597	591	580	581	580	274
35°	515	508	498	494	490	321
45°	419	414	404	397	394	323
55°	317	313	305	297	294	283
65°	214	210	203	197	194	211
75°	112	110	107	104	105	120
85°	27	27	26	24	23	31
90°	1	12	32	30	31	4
95°	47	56	58	58	56	54
105°	194	197	199	200	200	205
115°	361	366	365	364	361	357
125°	526	533	531	528	527	470
135°	680	690	692	691	688	525
145°	826	832	837	838	835	515
155°	944	946	949	953	951	434
165°	1027	1026	1026	1032	1028	289
175°	1068	1066	1064	1070	1065	101
180°	1070	1070	1070	1070	1070	



TEST NUMBER: P331512-940

CATALOG NUMBER: S122DIW-S485D970U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	695.8	695.2	694.6	694.0	693.4	692.5	691.2	689.9	688.6	687.2	688.5
5°	692.6	692.0	691.4	690.8	690.3	689.1	687.5	685.9	684.2	682.6	683.8
7.5°	686.4	685.5	684.7	683.7	682.8	681.5	679.8	678.2	676.5	674.8	676.1
10°	680.6	679.6	678.5	677.5	676.5	675.0	673.2	671.5	669.8	668.0	669.1
12.5°	672.6	671.7	670.7	669.9	669.0	667.6	665.8	664.1	662.3	660.5	661.3
15°	659.3	658.4	657.5	656.7	655.8	654.3	652.4	650.5	648.5	646.7	647.2
17.5°	642.2	641.4	640.5	639.6	638.7	637.3	635.3	633.4	631.4	629.5	630.2
20°	630.0	629.1	628.2	627.3	626.4	625.0	622.9	620.8	618.8	616.7	617.2
22.5°	617.8	616.5	615.3	614.0	612.8	611.2	609.2	607.3	605.3	603.3	603.4
25°	596.7	595.5	594.3	593.2	592.0	590.1	587.6	585.1	582.6	580.1	580.3
27.5°	572.7	571.7	570.6	569.5	568.5	566.9	565.0	562.9	561.0	559.0	558.6
30°	556.8	555.5	554.4	553.2	552.0	550.3	548.0	545.9	543.7	541.4	541.0
32.5°	539.7	538.8	537.8	536.8	535.9	534.2	531.9	529.6	527.3	525.0	524.1
35°	514.8	513.3	511.8	510.3	508.9	506.9	504.6	502.2	499.8	497.5	496.6
37.5°	486.7	485.4	484.1	482.8	481.4	479.7	477.2	474.9	472.5	470.2	469.0
40°	467.5	466.3	465.1	464.0	462.8	461.0	458.6	456.3	453.9	451.6	450.2
42.5°	448.9	447.6	446.5	445.3	444.2	442.4	440.0	437.7	435.2	432.8	431.4
45°	418.9	417.9	416.8	415.8	414.7	413.1	410.9	408.7	406.4	404.2	402.6
47.5°	389.1	388.1	387.1	386.1	385.1	383.5	381.2	378.9	376.6	374.3	372.6
50°	368.3	367.6	366.8	366.0	365.3	363.9	361.9	359.8	357.7	355.6	353.6
52.5°	348.0	347.1	346.1	345.1	344.1	342.7	340.7	338.8	336.8	334.8	333.1
55°	317.0	316.1	315.2	314.3	313.4	312.1	310.3	308.5	306.7	305.0	303.3
57.5°	285.8	285.1	284.4	283.7	283.0	281.7	279.7	277.8	275.8	273.8	272.1
60°	265.0	264.5	263.9	263.2	262.7	261.4	259.3	257.2	255.1	253.1	251.5
62.5°	244.8	243.9	242.9	241.9	241.0	239.8	238.2	236.6	235.0	233.4	231.8
65°	213.7	212.9	212.0	211.1	210.3	209.0	207.6	206.1	204.6	203.1	201.8
67.5°	182.2	181.5	180.7	180.0	179.3	178.3	177.0	175.7	174.3	173.0	172.0
70°	162.5	161.9	161.3	160.7	160.2	159.2	157.8	156.5	155.2	153.8	152.8
72.5°	142.2	141.7	141.1	140.4	139.9	139.2	138.3	137.4	136.6	135.7	134.6
75°	111.9	111.6	111.3	111.0	110.7	110.2	109.4	108.7	108.0	107.2	106.3
77.5°	84.7	84.2	83.7	83.2	82.7	82.3	82.0	81.7	81.4	81.1	80.7
80°	66.6	66.4	66.3	66.2	66.0	65.8	65.5	65.2	64.9	64.6	64.1
82.5°	49.6	49.5	49.5	49.5	49.4	49.3	49.1	49.0	48.8	48.6	48.1
85°	27.3	27.2	27.0	26.8	26.8	26.6	26.4	26.3	26.1	25.9	25.5
87.5°	9.8	10.0	10.3	10.5	10.8	11.2	11.9	12.5	13.1	13.8	13.4
90°	0.9	3.3	5.7	8.1	10.5	13.9	18.4	22.7	27.2	31.6	31.2
92.5°	16.1	17.8	19.6	21.4	23.2	24.5	25.6	26.7	27.6	28.7	28.8
95°	47.0	49.0	51.0	53.0	55.0	56.2	56.6	57.0	57.4	57.8	57.8
97.5°	85.8	87.6	89.3	91.1	92.8	94.2	94.9	95.7	96.4	97.2	97.2
100°	114.7	116.3	117.9	119.5	121.1	122.3	122.8	123.4	124.0	124.7	124.7
102.5°	145.1	146.3	147.6	148.9	150.2	151.2	151.9	152.8	153.5	154.3	154.4
105°	194.2	194.7	195.4	196.0	196.6	197.1	197.5	197.9	198.3	198.7	199.1
107.5°	243.7	244.6	245.4	246.3	247.2	247.6	247.6	247.6	247.6	247.6	247.8
110°	275.4	276.7	277.9	279.1	280.3	280.9	280.9	280.9	280.9	280.9	280.9



TEST NUMBER: P331512-940

CATALOG NUMBER: S122DIW-S485D970U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	310.1	311.4	312.5	313.8	315.0	315.5	315.3	315.1	315.0	314.9	314.3
115°	361.2	362.5	363.6	364.9	366.0	366.5	366.0	365.7	365.2	364.9	364.7
117.5°	412.2	413.8	415.4	417.1	418.7	418.8	417.8	416.6	415.5	414.4	413.9
120°	446.2	447.8	449.4	451.0	452.6	452.6	451.0	449.4	447.8	446.2	446.2
122.5°	477.2	479.2	481.1	483.0	484.9	485.4	484.2	483.1	482.0	480.8	480.4
125°	525.7	527.4	529.2	531.1	532.9	533.5	532.9	532.3	531.6	531.1	530.5
127.5°	572.8	575.1	577.4	579.7	581.9	582.7	582.0	581.3	580.6	579.9	579.1
130°	602.4	605.0	607.6	610.3	612.9	613.9	613.6	613.1	612.8	612.3	612.0
132.5°	635.6	637.8	639.9	642.0	644.2	645.2	645.3	645.4	645.5	645.6	644.7
135°	680.1	682.3	684.5	686.7	688.9	690.2	690.6	691.0	691.4	691.8	691.6
137.5°	726.8	728.7	730.5	732.3	734.1	735.3	735.8	736.3	736.8	737.4	737.2
140°	755.0	756.9	758.7	760.5	762.2	763.7	764.7	765.7	766.7	767.7	767.7
142.5°	784.0	785.8	787.6	789.3	791.2	792.5	793.1	793.8	794.5	795.1	795.3
145°	825.5	826.9	828.3	829.7	831.2	832.4	833.7	834.8	836.1	837.2	837.4
147.5°	862.6	864.2	865.9	867.5	869.2	870.5	871.3	872.1	872.9	873.7	874.1
150°	887.8	889.0	890.2	891.4	892.6	893.7	894.5	895.3	896.1	896.9	897.4
152.5°	910.3	911.4	912.7	913.8	915.1	916.1	917.1	918.0	919.0	920.0	920.7
155°	943.8	944.4	945.0	945.7	946.2	946.8	947.4	948.1	948.6	949.2	950.2
157.5°	972.5	972.9	973.3	973.7	974.1	974.6	974.9	975.3	975.6	976.0	977.3
160°	989.9	990.2	990.7	991.0	991.5	991.8	992.0	992.2	992.4	992.6	993.8
162.5°	1005.8	1005.8	1005.9	1006.0	1006.1	1006.2	1006.5	1006.7	1006.8	1007.0	1008.4
165°	1026.9	1026.7	1026.5	1026.3	1026.1	1026.0	1026.0	1026.0	1026.0	1026.0	1027.4
167.5°	1044.6	1044.0	1043.4	1042.8	1042.2	1041.9	1041.9	1041.8	1041.8	1041.7	1043.1
170°	1054.0	1053.4	1052.8	1052.2	1051.6	1051.2	1051.0	1050.8	1050.6	1050.4	1051.8
172.5°	1060.5	1059.9	1059.3	1058.7	1058.1	1057.7	1057.5	1057.3	1057.1	1056.9	1058.3
175°	1068.4	1067.8	1067.3	1066.7	1066.0	1065.5	1065.1	1064.7	1064.3	1063.9	1065.3
177.5°	1071.7	1071.2	1070.8	1070.2	1069.8	1069.3	1069.1	1068.7	1068.4	1068.1	1069.1
180°	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2



TEST NUMBER: P331512-940

CATALOG NUMBER: S122DIW-S485D970U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	689.6	690.8	692.0	692.5	692.2	692.0	691.8	691.5
5°	685.0	686.2	687.3	687.8	687.5	687.2	686.9	686.6
7.5°	677.3	678.4	679.7	680.0	679.8	679.4	679.0	678.8
10°	670.3	671.5	672.7	673.1	672.6	672.2	671.7	671.3
12.5°	662.2	663.0	663.8	664.1	663.7	663.4	663.1	662.7
15°	647.8	648.5	649.0	648.9	648.2	647.5	646.8	646.0
17.5°	630.8	631.5	632.2	632.1	631.4	630.8	630.1	629.4
20°	617.6	618.0	618.5	618.4	617.8	617.2	616.6	616.0
22.5°	603.5	603.6	603.7	603.6	603.2	602.9	602.5	602.2
25°	580.7	580.9	581.2	581.2	580.9	580.7	580.3	580.1
27.5°	558.1	557.7	557.2	556.7	556.0	555.3	554.6	553.8
30°	540.6	540.1	539.7	539.1	538.5	538.0	537.3	536.7
32.5°	523.3	522.5	521.7	521.0	520.4	519.9	519.2	518.6
35°	495.7	494.8	493.9	493.1	492.4	491.6	490.9	490.2
37.5°	468.0	466.9	465.8	464.8	464.1	463.4	462.7	462.1
40°	448.9	447.5	446.2	445.2	444.6	444.1	443.4	442.8
42.5°	430.0	428.6	427.0	426.0	425.1	424.3	423.5	422.6
45°	401.0	399.4	397.7	396.6	396.0	395.5	394.8	394.2
47.5°	370.9	369.1	367.4	366.1	365.2	364.4	363.6	362.7
50°	351.5	349.4	347.3	345.9	345.2	344.5	343.7	343.0
52.5°	331.4	329.7	328.0	326.6	325.7	324.7	323.7	322.7
55°	301.5	299.7	297.9	296.7	295.9	295.2	294.4	293.7
57.5°	270.4	268.6	266.9	265.7	265.1	264.6	264.0	263.4
60°	249.8	248.2	246.6	245.5	245.0	244.6	244.2	243.7
62.5°	230.3	228.8	227.3	226.3	225.7	225.2	224.6	224.0
65°	200.5	199.1	197.8	196.7	196.0	195.3	194.6	193.8
67.5°	170.9	169.9	168.9	168.1	167.5	166.8	166.3	165.7
70°	151.8	150.7	149.7	148.9	148.3	147.7	147.1	146.5
72.5°	133.7	132.6	131.6	130.8	130.4	129.8	129.4	128.9
75°	105.4	104.6	103.7	103.3	103.7	104.0	104.2	104.6
77.5°	80.3	79.8	79.4	78.9	78.5	78.1	77.7	77.2
80°	63.7	63.2	62.9	62.4	62.2	61.9	61.5	61.3
82.5°	47.5	46.9	46.4	46.0	46.0	45.9	45.8	45.8
85°	25.1	24.6	24.2	23.9	23.7	23.6	23.5	23.3
87.5°	12.9	12.5	12.0	11.8	11.7	11.6	11.5	11.5
90°	30.8	30.4	30.0	29.9	30.1	30.3	30.5	30.7
92.5°	28.9	29.0	29.1	29.1	29.2	29.2	29.2	29.2
95°	57.8	57.8	57.8	57.6	57.2	56.8	56.4	56.0
97.5°	97.2	97.2	97.2	97.2	97.1	97.1	97.0	97.0
100°	124.7	124.7	124.7	124.6	124.3	124.1	123.9	123.8
102.5°	154.6	154.7	154.9	154.9	154.7	154.4	154.3	154.1
105°	199.5	199.9	200.3	200.5	200.5	200.5	200.5	200.5
107.5°	248.0	248.2	248.3	247.9	247.0	246.0	245.1	244.2
110°	280.9	280.9	280.9	280.6	280.0	279.4	278.7	278.2



TEST NUMBER: P331512-940

CATALOG NUMBER: S122DIW-S485D970U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	313.9	313.4	312.9	312.5	312.0	311.6	311.1	310.7
115°	364.4	364.3	364.1	363.6	363.1	362.5	361.9	361.2
117.5°	413.4	413.0	412.4	411.9	411.3	410.7	410.1	409.5
120°	446.2	446.2	446.2	445.9	445.2	444.7	444.1	443.4
122.5°	479.9	479.4	478.9	478.5	478.0	477.6	477.2	476.7
125°	529.9	529.2	528.7	528.2	528.1	527.9	527.6	527.4
127.5°	578.4	577.7	576.9	576.2	575.6	575.0	574.4	573.7
130°	611.5	611.2	610.7	610.1	609.3	608.5	607.7	606.9
132.5°	643.8	642.9	642.0	641.3	640.7	640.0	639.4	638.7
135°	691.4	691.3	691.0	690.6	690.0	689.4	688.8	688.2
137.5°	737.0	736.9	736.7	736.2	735.4	734.6	733.8	733.0
140°	767.7	767.7	767.7	767.3	766.5	765.7	764.9	764.1
142.5°	795.5	795.7	795.8	795.5	794.7	793.9	793.1	792.3
145°	837.7	837.9	838.0	837.8	837.0	836.2	835.4	834.6
147.5°	874.6	875.0	875.5	875.3	874.6	873.8	873.1	872.3
150°	898.0	898.7	899.3	899.3	898.7	898.0	897.4	896.9
152.5°	921.5	922.3	923.0	923.0	922.3	921.5	920.7	920.0
155°	951.3	952.3	953.2	953.4	952.9	952.3	951.6	951.0
157.5°	978.7	980.1	981.4	981.6	980.7	979.7	978.7	977.8
160°	995.0	996.2	997.4	997.6	996.8	996.0	995.2	994.4
162.5°	1009.8	1011.1	1012.5	1012.7	1011.7	1010.8	1009.8	1008.9
165°	1028.9	1030.2	1031.6	1031.8	1030.8	1029.8	1028.9	1027.8
167.5°	1044.6	1046.0	1047.3	1047.5	1046.5	1045.4	1044.4	1043.4
170°	1053.2	1054.6	1056.1	1056.1	1054.9	1053.7	1052.5	1051.3
172.5°	1059.7	1061.1	1062.5	1062.7	1061.4	1060.2	1059.0	1057.8
175°	1066.8	1068.2	1069.5	1069.7	1068.4	1067.3	1066.0	1064.9
177.5°	1070.1	1070.9	1071.9	1071.9	1070.9	1070.1	1069.1	1068.1
180°	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2

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