

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: P332014-930

Luminaire Tested: **S123DIP-S1000D585U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332014-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1000D585U930-4F0-1E-UDD-D4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

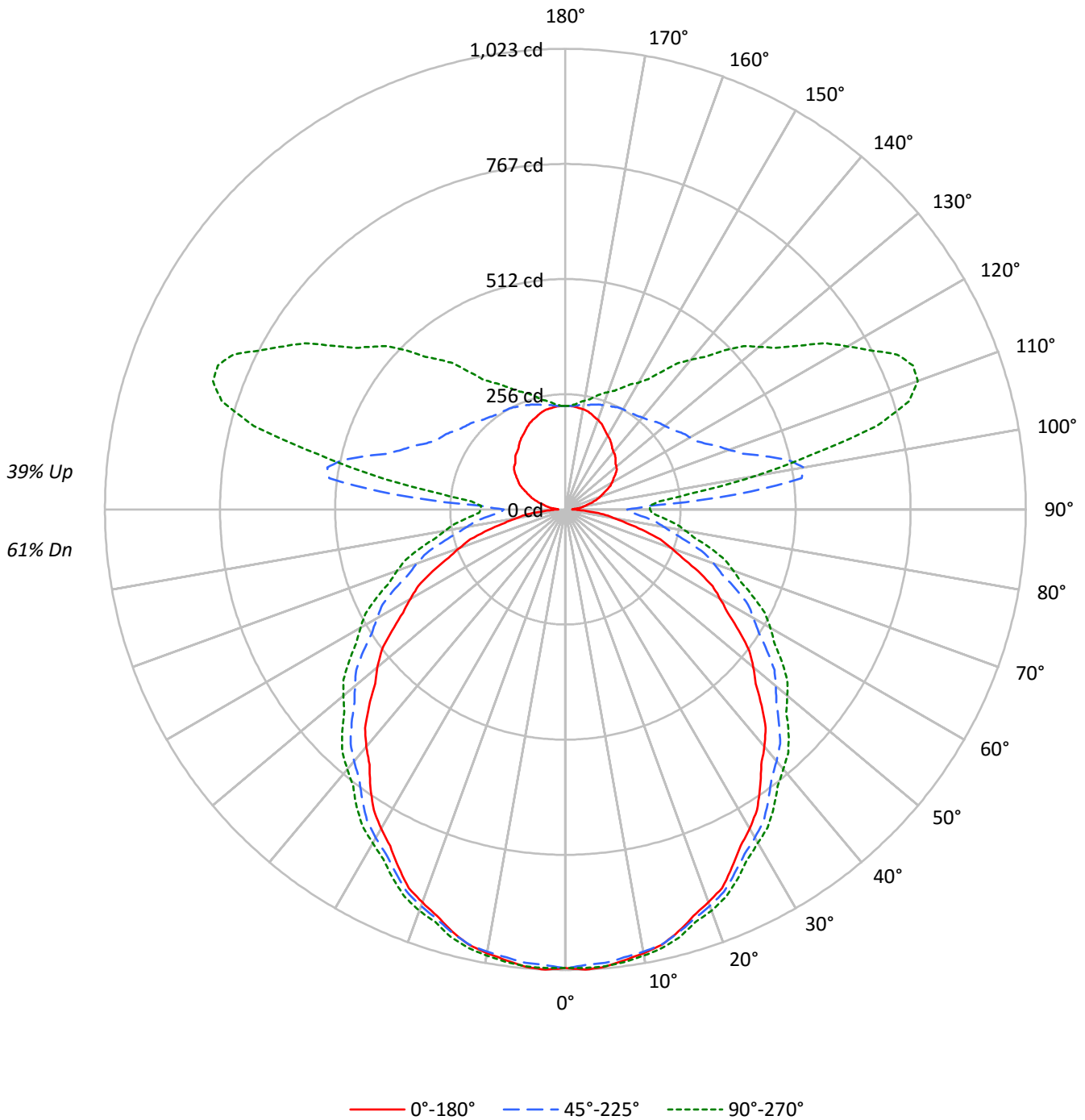
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5153.2 lumens  
Efficiency: N/A  
Efficacy: 105.6 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: Semi-Direct  
  
Input Watts (W): 48.8  
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: P332014-930  
CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D4

### 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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	99	94	90	86	92	88	84	80	77	74	71	66	64	62	56	55	53	49
2	90	81	75	69	83	76	70	65	66	62	58	57	54	51	49	46	44	40
3	81	71	63	57	76	67	60	54	58	53	48	50	46	42	43	40	37	33
4	74	63	54	48	69	59	51	45	51	45	41	45	40	36	38	34	31	28
5	68	56	47	41	63	52	45	39	46	40	35	40	35	31	34	30	27	24
6	63	50	41	35	58	47	39	34	41	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	42	35	29	37	31	27	33	28	24	28	24	21	19
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17	15
10	47	34	27	22	44	32	26	21	29	23	19	25	21	17	22	18	15	13

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

	0°	45°	90°
0°	10964	10964	10964
5°	10999	10689	10694
10°	10900	10443	10390
15°	10759	10162	10058
20°	10559	9844	9692
25°	10311	9476	9308
30°	10057	9145	8918
35°	9773	8796	8606
40°	9500	8479	8272
45°	9199	8172	8007
50°	8904	7871	7713
55°	8574	7562	7449
60°	8255	7248	7178
65°	7926	6915	6856
70°	7430	6538	6527
75°	6807	6107	6190
80°	6087	5683	5807
85°	5426	5394	5585



TEST NUMBER: P332014-930

CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.6	1.9
10°-20°	275.3	5.3
20°-30°	411.7	8.0
30°-40°	491.7	9.5
40°-50°	514.4	10.0
50°-60°	482.8	9.4
60°-70°	403.2	7.8
70°-80°	288.5	5.6
80°-90°	173.8	3.4
90°-100°	235.8	4.6
100°-110°	441.3	8.6
110°-120°	409.1	7.9
120°-130°	314.3	6.1
130°-140°	237.5	4.6
140°-150°	170.1	3.3
150°-160°	116.5	2.3
160°-170°	68.4	1.3
170°-180°	22.3	0.4
0°-30°	783.6	15.2
0°-40°	1275.2	24.7
0°-60°	2272.4	44.1
0°-90°	3137.9	60.9
90°-120°	1086.2	21.1
90°-150°	1808.1	35.1
90°-180°	2015.0	39.1
0°-180°	5153.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1019	1019	1019	1019	1019	
5°	1020	1017	1011	1019	1019	97
15°	971	974	973	984	983	273
25°	877	887	891	905	906	404
35°	755	772	787	803	808	472
45°	617	644	671	692	701	476
55°	470	507	547	576	586	421
65°	325	369	417	449	462	321
75°	176	229	284	319	334	188
85°	54	110	169	205	218	57
90°	15	74	137	175	188	11
95°	28	108	386	223	209	27
105°	63	116	457	767	716	66
115°	101	139	345	712	814	100
125°	136	162	302	542	634	121
135°	158	187	276	431	499	122
145°	178	203	260	335	373	111
155°	201	217	252	286	298	93
165°	220	226	241	256	260	62
175°	229	230	231	234	234	22
180°	230	230	230	230	230	



TEST NUMBER: P332014-930

CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1023.1	1022.5	1021.9	1021.3	1020.8	1019.6	1018.1	1016.5	1014.9	1013.3	1014.9
5°	1019.8	1019.3	1018.8	1018.3	1017.8	1016.8	1015.4	1013.8	1012.4	1010.9	1012.8
7.5°	1009.7	1009.9	1010.0	1010.1	1010.2	1009.5	1008.1	1006.7	1005.2	1003.8	1006.2
10°	1000.9	1001.4	1001.9	1002.4	1002.9	1002.5	1001.3	1000.0	998.8	997.6	1000.0
12.5°	990.3	990.9	991.6	992.3	993.0	993.0	992.1	991.2	990.4	989.6	991.9
15°	970.9	971.7	972.4	973.1	973.9	974.1	973.9	973.6	973.4	973.1	975.7
17.5°	946.6	948.0	949.5	951.0	952.4	953.2	953.1	952.9	952.8	952.8	955.0
20°	928.8	930.3	931.7	933.2	934.7	935.7	936.2	936.7	937.2	937.7	939.9
22.5°	910.1	911.6	913.1	914.6	916.1	917.1	917.9	918.5	919.2	919.9	922.7
25°	876.6	879.1	881.6	884.0	886.5	888.1	888.8	889.6	890.3	891.0	894.2
27.5°	842.9	845.7	848.5	851.3	854.1	856.3	857.9	859.5	861.0	862.7	865.4
30°	818.9	822.1	825.3	828.5	831.8	834.3	836.3	838.3	840.2	842.2	845.2
32.5°	792.3	795.9	799.5	803.1	806.7	809.8	812.4	814.9	817.5	820.0	823.2
35°	754.6	758.5	762.5	766.4	770.4	773.9	777.1	780.3	783.5	786.8	790.4
37.5°	714.6	719.1	723.5	727.9	732.4	736.5	740.5	744.4	748.4	752.4	756.5
40°	687.9	692.4	696.8	701.3	705.7	710.5	715.3	720.3	725.2	730.2	734.3
42.5°	658.7	664.1	669.5	675.0	680.4	685.7	690.8	695.9	701.1	706.2	710.8
45°	616.9	622.9	628.8	634.7	640.7	646.7	652.8	659.0	665.2	671.3	676.0
47.5°	573.2	579.9	586.7	593.4	600.1	607.0	614.0	621.1	628.1	635.2	640.4
50°	544.9	551.7	558.6	565.6	572.4	579.8	587.3	595.0	602.7	610.3	616.0
52.5°	514.6	522.0	529.3	536.5	543.9	551.7	560.2	568.6	577.0	585.5	591.3
55°	470.5	478.7	486.7	494.9	503.0	511.5	520.4	529.3	538.2	547.1	553.8
57.5°	427.5	435.9	444.4	452.9	461.4	470.5	480.2	489.9	499.6	509.3	516.0
60°	397.3	406.1	415.0	423.9	432.8	442.2	452.3	462.5	472.6	482.7	489.6
62.5°	368.8	377.9	387.0	396.1	405.1	415.1	425.7	436.4	447.1	457.9	464.7
65°	325.1	334.8	344.4	354.0	363.6	373.8	384.7	395.5	406.3	417.3	424.6
67.5°	280.7	291.0	301.2	311.4	321.6	332.2	343.2	354.3	365.3	376.4	384.5
70°	249.6	260.2	270.8	281.5	292.1	303.3	315.1	327.0	338.8	350.7	358.6
72.5°	221.3	231.9	242.5	253.1	263.7	275.1	287.3	299.5	311.8	324.0	332.1
75°	176.4	188.0	199.6	211.2	222.8	234.7	247.1	259.4	271.7	284.1	292.2
77.5°	137.4	149.0	160.8	172.4	184.1	196.2	208.6	221.0	233.5	245.9	254.5
80°	109.8	122.0	134.0	146.1	158.2	170.6	183.4	196.3	209.1	221.9	230.3
82.5°	85.9	98.2	110.5	122.7	135.0	147.7	160.7	173.7	186.7	199.7	208.1
85°	54.4	66.7	79.0	91.4	103.7	116.4	129.5	142.5	155.6	168.7	177.1
87.5°	29.7	42.2	54.6	67.2	79.7	92.3	105.1	118.0	130.9	143.7	152.0
90°	15.3	28.4	41.4	54.9	67.8	81.1	95.1	109.1	123.0	137.1	145.0
92.5°	19.3	33.0	47.8	62.3	77.1	95.6	120.2	152.6	184.6	189.8	180.4
95°	28.0	39.1	53.7	71.3	93.0	122.0	173.6	254.9	343.3	385.6	341.2
97.5°	37.8	47.0	59.7	75.3	95.8	125.6	174.9	264.5	403.2	529.2	566.4
100°	44.4	52.7	63.9	78.3	97.3	125.1	169.0	249.2	382.8	537.0	635.7
102.5°	51.4	59.3	69.2	82.5	99.6	125.4	165.8	235.3	355.4	507.4	633.9
105°	62.9	70.1	78.8	90.3	105.1	127.8	163.5	222.0	320.5	457.1	597.5
107.5°	73.9	80.4	88.1	98.7	111.9	132.9	164.9	214.8	295.8	412.0	539.7
110°	82.0	87.8	94.6	104.1	116.5	136.6	167.5	212.6	284.9	386.3	503.9



TEST NUMBER: P332014-930

CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	90.2	95.2	101.2	110.0	121.5	140.7	169.7	211.8	276.1	366.8	471.2
115°	100.9	105.7	111.5	119.0	130.0	148.4	175.0	212.2	268.5	344.8	431.1
117.5°	112.4	116.4	120.6	126.7	137.4	154.0	179.9	213.5	262.1	328.1	403.6
120°	119.8	122.4	126.0	131.8	141.9	158.2	183.1	215.4	259.3	319.6	388.5
122.5°	126.9	128.9	131.8	137.5	146.6	163.1	187.3	217.4	257.9	312.5	375.3
125°	135.8	136.8	139.6	144.7	153.5	169.7	193.1	220.7	255.8	302.4	357.3
127.5°	143.6	144.7	147.9	152.9	162.4	177.8	199.4	223.8	254.8	294.1	340.7
130°	148.4	149.5	153.5	158.8	168.4	183.3	203.5	226.2	254.3	288.5	330.9
132.5°	151.2	153.0	157.5	164.1	173.8	188.0	206.9	228.1	253.1	283.7	321.4
135°	157.5	159.1	164.0	170.7	180.3	194.0	211.2	229.7	251.0	276.5	308.4
137.5°	163.5	165.2	170.1	177.2	186.8	199.0	214.4	231.1	249.1	270.2	297.0
140°	166.6	169.0	173.7	181.1	190.4	202.4	216.6	231.3	247.9	266.3	289.9
142.5°	171.1	172.8	177.7	184.2	193.3	204.2	217.4	231.1	246.0	262.0	283.0
145°	178.3	179.4	183.4	190.1	197.8	208.3	220.5	233.0	246.0	259.9	276.8
147.5°	184.4	185.2	189.4	195.4	203.0	212.1	223.2	234.5	246.0	258.2	271.5
150°	189.2	189.7	193.5	199.5	206.0	214.3	225.1	234.8	246.0	256.7	268.3
152.5°	194.1	194.2	198.0	203.3	209.0	217.0	226.2	235.6	244.9	254.9	265.4
155°	201.4	201.4	204.2	208.8	213.9	220.5	228.4	235.8	243.7	251.6	260.9
157.5°	207.1	207.5	209.7	213.9	218.2	223.2	229.5	236.3	242.1	248.7	255.8
160°	211.6	211.6	213.4	217.2	220.5	225.1	230.6	236.3	241.3	246.5	252.5
162.5°	214.9	214.9	216.5	219.4	222.3	226.2	231.1	235.9	239.9	244.3	249.2
165°	220.0	219.5	220.5	222.7	224.6	227.9	231.5	234.8	237.7	240.9	244.6
167.5°	223.8	223.2	223.6	225.4	226.7	228.8	231.5	234.1	235.4	237.5	240.3
170°	226.0	225.1	225.5	226.9	227.9	228.8	231.1	233.0	233.9	235.3	237.7
172.5°	227.5	226.9	227.1	228.0	228.6	229.2	231.1	232.6	232.8	233.4	235.1
175°	229.3	228.8	228.4	229.3	229.3	229.8	230.6	231.5	231.1	231.1	232.0
177.5°	230.1	229.8	229.3	229.8	229.8	229.8	230.1	230.8	230.1	229.8	230.1
180°	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8



TEST NUMBER: P332014-930

CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1016.5	1018.1	1019.6	1020.3	1020.1	1019.9	1019.8	1019.5
5°	1014.8	1016.8	1018.8	1019.6	1019.4	1019.1	1018.9	1018.6
7.5°	1008.7	1011.2	1013.7	1014.7	1014.5	1014.2	1013.8	1013.6
10°	1002.5	1004.9	1007.5	1008.4	1008.0	1007.5	1007.0	1006.5
12.5°	994.1	996.4	998.7	999.6	999.1	998.6	998.1	997.6
15°	978.1	980.6	983.0	984.1	983.9	983.7	983.4	983.2
17.5°	957.2	959.4	961.6	962.5	962.2	961.9	961.6	961.2
20°	942.1	944.3	946.6	947.8	948.0	948.3	948.5	948.8
22.5°	925.5	928.3	931.2	932.5	932.3	932.2	932.1	931.9
25°	897.5	900.7	903.8	905.5	905.5	905.5	905.5	905.5
27.5°	868.1	870.9	873.7	875.1	875.4	875.5	875.8	876.0
30°	848.2	851.1	854.0	855.6	855.6	855.6	855.6	855.6
32.5°	826.4	829.5	832.7	834.5	835.1	835.7	836.3	836.9
35°	794.1	797.9	801.5	803.9	804.9	805.8	806.8	807.8
37.5°	760.8	764.9	769.2	771.6	772.4	773.1	774.0	774.8
40°	738.5	742.7	746.9	749.5	750.5	751.5	752.4	753.4
42.5°	715.3	719.9	724.6	727.5	728.9	730.3	731.6	733.0
45°	680.7	685.4	690.1	693.4	695.4	697.3	699.4	701.3
47.5°	645.7	651.0	656.2	659.7	661.2	662.8	664.2	665.8
50°	621.7	627.3	633.0	636.7	638.5	640.2	641.9	643.6
52.5°	597.2	603.1	608.9	612.9	615.1	617.2	619.3	621.4
55°	560.4	567.0	573.7	578.0	580.0	582.0	583.9	585.9
57.5°	522.8	529.5	536.1	540.7	543.0	545.3	547.6	549.9
60°	496.5	503.4	510.3	515.1	517.9	520.6	523.3	525.9
62.5°	471.7	478.6	485.4	490.2	492.7	495.2	497.7	500.3
65°	432.0	439.4	446.8	451.8	454.2	456.6	459.2	461.6
67.5°	392.6	400.6	408.7	413.8	415.9	418.0	420.0	422.1
70°	366.4	374.3	382.2	387.4	389.9	392.3	394.8	397.3
72.5°	340.2	348.3	356.4	361.7	364.1	366.6	369.1	371.5
75°	300.4	308.5	316.6	322.2	325.1	328.1	331.0	334.0
77.5°	263.1	271.7	280.2	285.7	287.9	290.2	292.4	294.7
80°	238.7	247.1	255.4	260.9	263.3	265.8	268.3	270.8
82.5°	216.5	224.9	233.3	238.7	241.2	243.6	246.1	248.6
85°	185.4	193.8	202.2	207.7	210.1	212.5	215.0	217.5
87.5°	160.5	168.9	177.4	183.0	185.4	187.9	190.5	192.9
90°	153.8	162.7	171.5	177.8	179.9	182.8	185.7	187.7
92.5°	173.8	173.9	178.5	181.3	182.7	183.6	186.3	187.8
95°	292.5	246.2	229.3	217.6	211.2	209.5	208.7	209.3
97.5°	533.9	458.2	405.5	354.8	322.9	304.5	294.4	292.9
100°	659.1	628.6	581.3	520.1	475.6	444.1	428.4	431.4
102.5°	696.9	702.6	677.9	640.7	606.7	582.3	569.6	561.3
105°	701.6	755.0	770.7	763.2	744.0	728.6	715.9	715.8
107.5°	656.6	738.7	786.0	807.0	809.5	805.8	802.9	800.8
110°	616.8	708.7	773.7	810.5	825.5	831.2	832.2	833.2





TEST NUMBER: P332014-930

CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	576.4	670.1	741.9	788.0	814.0	827.7	833.4	835.8
115°	523.1	609.9	684.2	738.8	775.7	798.2	809.4	813.8
117.5°	482.1	557.7	625.0	680.4	718.6	744.0	759.3	764.4
120°	459.7	528.2	589.6	640.3	678.8	706.5	719.4	724.0
122.5°	441.2	503.4	560.6	607.8	642.2	667.4	681.3	686.6
125°	415.6	471.4	521.2	561.9	593.4	615.6	628.9	633.9
127.5°	392.3	442.4	487.5	524.6	552.9	572.0	584.2	588.9
130°	377.4	424.0	466.4	501.0	527.2	545.4	556.6	561.8
132.5°	363.3	406.3	445.8	479.1	503.9	522.3	532.6	537.0
135°	344.0	381.5	416.1	445.5	469.4	484.7	494.2	498.7
137.5°	326.1	357.1	387.0	412.5	433.0	448.3	456.6	460.0
140°	315.5	342.9	368.9	391.4	410.3	424.5	433.3	434.0
142.5°	304.8	328.5	351.1	370.8	387.1	399.9	407.8	408.5
145°	293.7	311.0	327.8	342.8	355.4	366.2	370.9	372.8
147.5°	284.7	297.4	310.1	320.3	330.0	337.5	342.0	343.2
150°	279.0	289.7	299.5	308.6	316.0	321.6	324.9	325.4
152.5°	274.9	284.1	292.8	300.2	305.7	310.6	312.3	312.5
155°	268.8	276.2	283.2	288.8	292.9	296.7	297.6	298.1
157.5°	262.3	268.5	273.9	278.3	281.9	284.7	285.4	285.4
160°	258.5	263.7	268.3	271.6	274.8	277.6	277.6	277.1
162.5°	254.1	258.4	262.8	265.6	267.7	270.2	270.2	269.7
165°	248.3	251.1	254.4	256.7	258.5	260.4	259.9	259.9
167.5°	243.3	245.4	247.3	249.0	249.8	251.1	250.6	250.6
170°	239.9	241.3	243.2	244.1	244.6	245.6	245.1	245.1
172.5°	237.0	238.0	239.5	240.0	240.1	241.1	240.3	239.9
175°	233.0	233.4	234.4	234.4	234.4	234.8	234.4	233.9
177.5°	230.5	230.8	231.2	231.2	230.8	231.2	230.5	230.5
180°	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8

(END OF REPORT)