

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: P332013-930

Luminaire Tested: **S123DIP-S1000D585U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332013-930
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: S123DIP-S1000D585U930-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

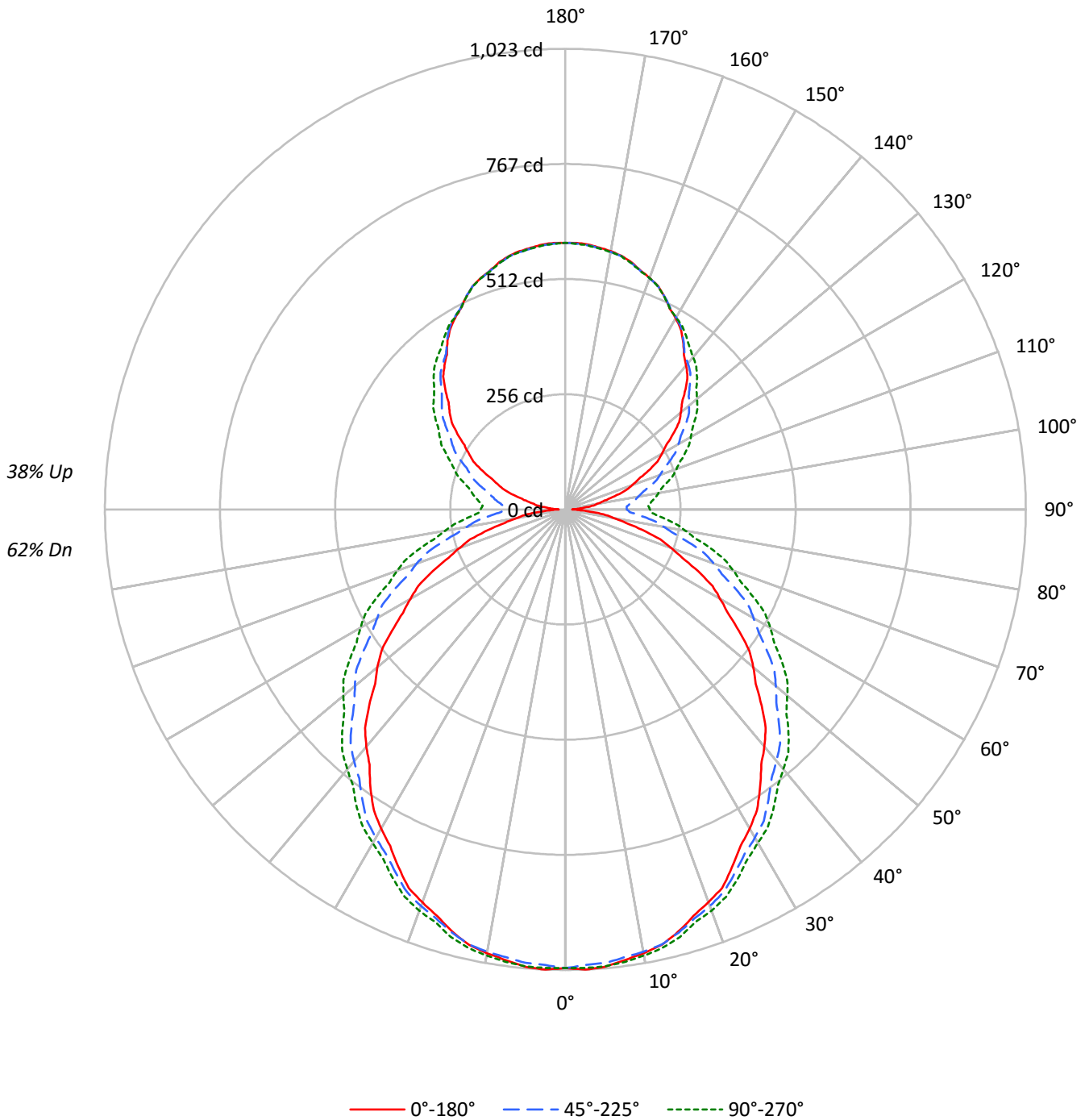
Lumens per Lamp: N/A
Luminaire Lumens: 5065.1 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

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: P332013-930
CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





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CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D1

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	90	90	90	78	78	78	67	67	67	62
1	99	94	90	86	93	88	84	81	77	74	71	67	64	62	57	56	54	49
2	90	82	75	69	84	76	70	65	67	62	58	58	54	51	50	47	45	40
3	82	71	63	57	76	67	60	54	58	53	48	51	46	43	44	40	37	34
4	75	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	29
5	68	56	47	41	64	53	45	39	46	40	35	40	35	31	35	31	28	25
6	63	50	42	35	59	47	39	34	42	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	43	35	30	38	31	27	33	28	24	29	25	21	19
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17
9	50	38	30	24	47	35	28	23	32	25	21	28	23	19	24	20	17	15
10	47	34	27	22	44	33	26	21	29	23	19	26	21	17	23	19	16	14

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: P332013-930

CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.6	1.9
10°-20°	275.3	5.4
20°-30°	411.7	8.1
30°-40°	491.7	9.7
40°-50°	514.4	10.2
50°-60°	482.8	9.5
60°-70°	403.2	8.0
70°-80°	288.5	5.7
80°-90°	173.8	3.4
90°-100°	146.5	2.9
100°-110°	194.8	3.8
110°-120°	249.3	4.9
120°-130°	288.5	5.7
130°-140°	303.8	6.0
140°-150°	288.2	5.7
150°-160°	240.2	4.7
160°-170°	159.9	3.2
170°-180°	56.0	1.1
0°-30°	783.6	15.5
0°-40°	1275.2	25.2
0°-60°	2272.4	44.9
0°-90°	3137.9	62.0
90°-120°	590.6	11.7
90°-150°	1471.1	29.0
90°-180°	1927.0	38.0
0°-180°	5065.1	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	12
95°	40	87	144	179	192	40
105°	114	142	193	223	235	121
115°	203	219	257	283	292	201
125°	293	296	325	346	353	261
135°	378	380	391	408	414	291
145°	456	456	458	466	469	285
155°	521	521	522	523	520	240
165°	568	566	566	569	566	160
175°	591	589	589	591	588	56
180°	592	592	592	592	592	



TEST NUMBER: P332013-930

CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D1

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°	29.6	42.1	54.5	67.1	79.6	92.2	105.1	117.9	130.8	143.6	152.1
90°	14.9	28.0	41.1	54.2	67.3	80.9	94.8	108.7	122.6	136.6	145.4
92.5°	24.8	36.4	48.0	59.6	71.2	83.6	96.7	109.8	123.0	136.2	144.6
95°	39.6	50.0	60.3	70.7	81.0	92.6	105.5	118.5	131.3	144.3	152.3
97.5°	59.6	68.8	78.0	87.2	96.4	107.1	119.3	131.4	143.6	155.7	163.5
100°	73.2	81.8	90.3	98.7	107.3	117.5	129.3	141.2	153.0	164.9	172.4
102.5°	89.1	96.5	104.0	111.5	119.0	128.7	140.5	152.3	164.1	175.9	183.2
105°	113.5	119.6	125.8	131.9	138.0	146.8	158.4	169.9	181.4	193.0	199.9
107.5°	140.8	146.0	151.2	156.3	161.4	169.3	179.7	190.1	200.6	211.0	217.9
110°	157.8	162.4	167.1	171.7	176.3	183.8	193.8	203.9	213.9	224.0	230.8



TEST NUMBER: P332013-930

CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	176.4	180.2	183.9	187.7	191.5	198.1	207.7	217.1	226.7	236.2	242.9
115°	203.2	206.4	209.7	213.0	216.3	222.3	230.9	239.6	248.3	256.9	262.9
117.5°	231.1	233.1	235.1	237.2	239.2	244.3	252.3	260.3	268.4	276.5	282.3
120°	247.7	249.5	251.4	253.2	255.0	259.8	267.4	275.1	282.7	290.2	295.9
122.5°	265.9	267.0	268.1	269.2	270.3	274.5	282.0	289.5	297.0	304.4	309.7
125°	292.6	292.9	293.2	293.5	293.8	297.4	304.4	311.4	318.3	325.2	330.0
127.5°	318.3	318.7	319.1	319.5	319.9	322.9	328.6	334.4	340.1	345.8	350.0
130°	335.3	336.0	336.6	337.1	337.7	340.3	344.9	349.5	354.2	358.8	363.1
132.5°	351.6	352.4	353.2	353.9	354.7	356.9	360.7	364.4	368.1	371.9	375.9
135°	377.5	377.9	378.2	378.6	379.0	380.5	383.1	385.7	388.3	390.9	394.9
137.5°	401.5	401.8	402.1	402.4	402.8	403.8	405.6	407.4	409.2	411.0	414.4
140°	417.4	417.8	418.3	418.9	419.4	420.0	420.9	421.8	422.6	423.5	427.1
142.5°	432.6	432.9	433.3	433.5	433.8	434.1	434.5	434.9	435.2	435.5	438.7
145°	456.4	456.3	456.3	456.2	456.2	456.3	456.6	457.0	457.3	457.6	459.5
147.5°	476.1	476.5	476.9	477.2	477.6	477.9	478.3	478.5	478.8	479.1	479.6
150°	490.6	490.8	491.1	491.2	491.5	491.6	491.9	492.0	492.3	492.4	492.4
152.5°	502.6	502.8	503.1	503.4	503.7	503.9	504.0	504.1	504.3	504.3	504.5
155°	521.3	521.3	521.3	521.3	521.3	521.4	521.5	521.5	521.7	521.8	522.2
157.5°	537.3	537.2	537.0	537.0	536.8	536.8	536.9	537.0	537.0	537.1	537.5
160°	547.3	547.1	546.9	546.7	546.5	546.4	546.4	546.4	546.4	546.4	546.9
162.5°	556.3	556.0	555.7	555.4	555.1	555.1	555.1	555.2	555.3	555.4	555.9
165°	567.8	567.5	567.2	566.9	566.6	566.4	566.4	566.4	566.4	566.4	567.0
167.5°	577.0	576.6	576.2	575.8	575.4	575.2	575.3	575.4	575.4	575.5	576.2
170°	582.2	581.8	581.4	581.0	580.6	580.3	580.3	580.3	580.3	580.3	581.1
172.5°	586.3	585.9	585.5	585.1	584.7	584.5	584.5	584.5	584.5	584.5	585.1
175°	590.6	590.2	589.8	589.4	589.0	588.7	588.7	588.7	588.7	588.7	589.4
177.5°	592.4	592.1	591.7	591.3	591.0	590.8	590.8	590.8	590.8	590.8	591.3
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0



TEST NUMBER: P332013-930

CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D1

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	169.0	177.5	183.0	185.5	188.0	190.5	193.0
90°	154.2	163.0	171.7	177.5	180.2	182.8	185.5	188.2
92.5°	153.2	161.7	170.2	175.5	177.7	179.9	182.0	184.1
95°	160.4	168.4	176.5	181.7	184.3	186.7	189.1	191.6
97.5°	171.4	179.2	187.0	192.2	194.5	197.0	199.4	201.9
100°	179.9	187.3	194.8	199.8	202.5	205.1	207.8	210.5
102.5°	190.5	197.7	205.0	209.9	212.3	214.7	217.1	219.6
105°	206.8	213.7	220.6	225.3	227.7	230.1	232.5	235.0
107.5°	224.9	231.8	238.7	243.2	245.2	247.3	249.3	251.4
110°	237.7	244.5	251.3	255.6	257.4	259.1	260.9	262.7



TEST NUMBER: P332013-930

CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	249.6	256.3	263.0	267.4	269.5	271.7	273.9	276.0
115°	269.0	275.0	281.0	284.9	286.8	288.7	290.6	292.4
117.5°	288.2	294.1	299.9	303.6	305.2	306.9	308.5	310.1
120°	301.4	307.0	312.6	316.1	317.6	319.1	320.7	322.2
122.5°	314.9	320.1	325.3	328.6	330.0	331.5	332.9	334.4
125°	334.8	339.5	344.3	347.3	348.6	349.9	351.2	352.6
127.5°	354.3	358.7	363.0	365.7	366.9	368.1	369.3	370.5
130°	367.3	371.6	375.9	378.4	379.1	379.9	380.7	381.4
132.5°	379.8	383.8	387.8	390.4	391.4	392.6	393.7	394.8
135°	399.0	403.0	407.0	409.5	410.6	411.6	412.6	413.7
137.5°	417.9	421.3	424.9	427.0	427.9	428.7	429.5	430.3
140°	430.6	434.2	437.8	439.9	440.3	440.9	441.4	441.9
142.5°	441.9	445.2	448.3	450.3	450.9	451.6	452.2	453.0
145°	461.4	463.2	465.0	466.3	466.8	467.4	468.0	468.6
147.5°	480.3	480.9	481.4	481.8	482.2	482.4	482.7	483.0
150°	492.4	492.4	492.4	492.4	492.3	492.2	492.0	491.9
152.5°	504.8	504.9	505.1	504.9	504.5	504.0	503.6	503.1
155°	522.6	523.0	523.4	523.3	522.5	521.8	521.1	520.4
157.5°	538.0	538.4	538.8	538.7	538.2	537.6	537.0	536.5
160°	547.5	548.0	548.5	548.5	548.1	547.7	547.3	546.9
162.5°	556.4	556.9	557.4	557.3	556.7	556.0	555.4	554.7
165°	567.7	568.3	568.9	568.8	568.1	567.4	566.7	566.0
167.5°	576.8	577.5	578.1	578.1	577.5	576.8	576.2	575.5
170°	581.8	582.5	583.3	583.3	582.5	581.8	581.1	580.3
172.5°	585.7	586.4	587.0	587.0	586.3	585.5	584.8	584.1
175°	590.0	590.6	591.3	591.2	590.4	589.7	589.0	588.2
177.5°	591.9	592.4	592.9	592.8	592.2	591.7	591.1	590.5
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0

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