

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: P332013-940

Luminaire Tested: **S123DIP-S1000D585U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332013-940
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-S1000D585U940-4F0-1E-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: 5539.8 lumens
Efficiency: N/A
Efficacy: 113.5 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

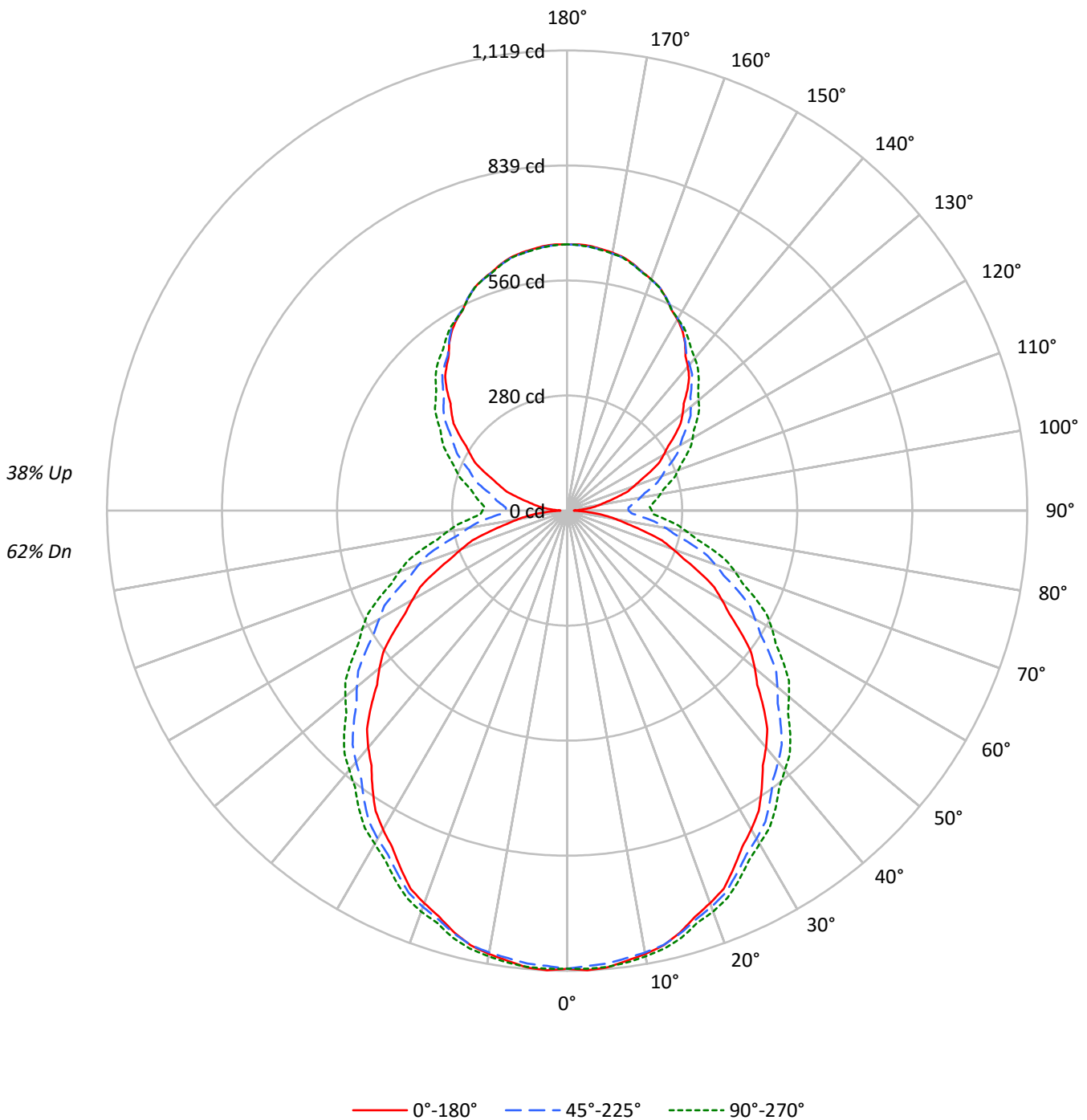
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	11992	11992	11992
5°	12030	11690	11697
10°	11922	11421	11364
15°	11768	11114	11000
20°	11548	10767	10600
25°	11278	10365	10179
30°	10999	10002	9754
35°	10689	9620	9413
40°	10391	9273	9048
45°	10062	8938	8757
50°	9737	8608	8436
55°	9378	8270	8147
60°	9028	7928	7850
65°	8670	7563	7499
70°	8127	7150	7138
75°	7448	6679	6770
80°	6658	6216	6350
85°	5935	5899	6108



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	1.9
10°-20°	301.1	5.4
20°-30°	450.3	8.1
30°-40°	537.8	9.7
40°-50°	562.6	10.2
50°-60°	528.0	9.5
60°-70°	441.0	8.0
70°-80°	315.5	5.7
80°-90°	190.1	3.4
90°-100°	160.2	2.9
100°-110°	213.0	3.8
110°-120°	272.7	4.9
120°-130°	315.6	5.7
130°-140°	332.3	6.0
140°-150°	315.2	5.7
150°-160°	262.7	4.7
160°-170°	174.9	3.2
170°-180°	61.2	1.1
0°-30°	857.0	15.5
0°-40°	1394.8	25.2
0°-60°	2485.4	44.9
0°-90°	3432.0	62.0
90°-120°	645.9	11.7
90°-150°	1609.0	29.0
90°-180°	2108.0	38.1
0°-180°	5539.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1114	1114	1114	1114	1114	
5°	1115	1113	1106	1115	1114	106
15°	1062	1065	1064	1076	1075	299
25°	959	970	975	989	990	442
35°	825	844	860	878	884	516
45°	675	704	734	757	767	520
55°	515	555	598	630	641	461
65°	356	403	456	491	505	351
75°	193	250	311	349	365	206
85°	60	120	184	224	238	62
90°	16	81	149	191	206	13
95°	43	95	158	196	210	44
105°	124	156	211	244	257	132
115°	222	240	281	310	320	220
125°	320	323	356	378	386	286
135°	413	415	428	446	452	318
145°	499	499	500	509	512	311
155°	570	570	571	572	569	262
165°	621	620	620	622	619	175
175°	646	644	644	647	643	61
180°	648	648	648	648	648	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1119.0	1118.4	1117.7	1117.0	1116.4	1115.2	1113.5	1111.8	1110.0	1108.3	1110.0
5°	1115.4	1114.8	1114.3	1113.7	1113.2	1112.1	1110.5	1108.8	1107.2	1105.6	1107.8
7.5°	1104.4	1104.6	1104.7	1104.7	1104.8	1104.1	1102.6	1101.0	1099.4	1097.9	1100.5
10°	1094.8	1095.3	1095.8	1096.4	1096.9	1096.4	1095.1	1093.8	1092.4	1091.1	1093.8
12.5°	1083.1	1083.8	1084.6	1085.3	1086.1	1086.0	1085.1	1084.1	1083.3	1082.4	1084.9
15°	1061.9	1062.7	1063.5	1064.3	1065.1	1065.4	1065.1	1064.9	1064.6	1064.3	1067.1
17.5°	1035.3	1036.9	1038.5	1040.1	1041.7	1042.5	1042.4	1042.2	1042.1	1042.1	1044.5
20°	1015.8	1017.4	1019.0	1020.7	1022.3	1023.4	1024.0	1024.5	1025.0	1025.6	1028.0
22.5°	995.4	997.0	998.7	1000.3	1001.9	1003.1	1003.9	1004.6	1005.4	1006.1	1009.1
25°	958.8	961.4	964.2	966.9	969.6	971.3	972.1	972.9	973.7	974.6	978.0
27.5°	921.9	925.0	928.0	931.1	934.2	936.6	938.3	940.0	941.7	943.5	946.6
30°	895.6	899.2	902.7	906.2	909.7	912.5	914.7	916.9	919.0	921.1	924.4
32.5°	866.6	870.5	874.4	878.3	882.3	885.6	888.5	891.3	894.1	896.9	900.4
35°	825.3	829.6	833.9	838.2	842.6	846.4	850.0	853.5	856.9	860.5	864.5
37.5°	781.6	786.5	791.3	796.1	801.0	805.6	809.9	814.2	818.5	822.9	827.4
40°	752.4	757.3	762.1	767.0	771.9	777.0	782.4	787.8	793.2	798.6	803.2
42.5°	720.4	726.4	732.3	738.2	744.1	749.9	755.5	761.2	766.8	772.4	777.4
45°	674.8	681.3	687.8	694.2	700.7	707.3	714.0	720.8	727.5	734.2	739.4
47.5°	627.0	634.3	641.7	649.0	656.3	663.9	671.5	679.3	687.0	694.7	700.4
50°	595.9	603.4	611.0	618.6	626.1	634.1	642.4	650.8	659.2	667.5	673.7
52.5°	562.8	570.9	578.9	586.8	594.9	603.4	612.7	621.9	631.1	640.3	646.8
55°	514.6	523.5	532.4	541.3	550.2	559.5	569.2	578.9	588.6	598.3	605.6
57.5°	467.5	476.8	486.1	495.3	504.6	514.6	525.2	535.8	546.4	557.1	564.4
60°	434.5	444.2	453.9	463.6	473.3	483.7	494.7	505.9	516.9	528.0	535.5
62.5°	403.4	413.3	423.3	433.2	443.1	454.0	465.7	477.3	489.0	500.8	508.3
65°	355.6	366.1	376.7	387.2	397.7	408.8	420.7	432.6	444.4	456.4	464.4
67.5°	307.0	318.3	329.4	340.5	351.7	363.4	375.4	387.5	399.6	411.7	420.5
70°	273.0	284.6	296.2	307.9	319.5	331.7	344.6	357.7	370.6	383.5	392.2
72.5°	242.0	253.6	265.2	276.8	288.4	300.9	314.2	327.6	341.0	354.4	363.2
75°	193.0	205.6	218.3	231.0	243.7	256.7	270.3	283.7	297.2	310.7	319.6
77.5°	150.3	163.0	175.8	188.6	201.3	214.5	228.2	241.7	255.4	268.9	278.3
80°	120.1	133.4	146.6	159.8	173.0	186.6	200.6	214.7	228.7	242.7	251.9
82.5°	93.9	107.4	120.8	134.2	147.7	161.5	175.8	189.9	204.2	218.5	227.7
85°	59.5	72.9	86.4	100.0	113.4	127.3	141.6	155.9	170.1	184.5	193.7
87.5°	32.4	46.0	59.7	73.4	87.0	100.9	114.9	128.9	143.0	157.0	166.3
90°	16.3	30.7	44.9	59.3	73.7	88.5	103.7	118.9	134.1	149.4	159.0
92.5°	27.1	39.8	52.5	65.2	77.8	91.4	105.8	120.1	134.6	148.9	158.2
95°	43.3	54.7	66.0	77.3	88.6	101.3	115.4	129.6	143.7	157.8	166.6
97.5°	65.2	75.3	85.3	95.4	105.5	117.2	130.5	143.7	157.0	170.3	178.9
100°	80.1	89.4	98.7	108.0	117.3	128.5	141.4	154.4	167.4	180.4	188.5
102.5°	97.5	105.6	113.8	122.0	130.1	140.7	153.6	166.6	179.5	192.4	200.4
105°	124.1	130.8	137.6	144.3	151.0	160.6	173.3	185.8	198.4	211.1	218.6
107.5°	154.0	159.7	165.3	170.9	176.6	185.1	196.5	207.9	219.4	230.8	238.4
110°	172.5	177.6	182.7	187.8	192.9	201.0	212.0	223.0	234.0	245.0	252.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	193.0	197.1	201.2	205.3	209.5	216.7	227.1	237.5	247.9	258.3	265.6
115°	222.2	225.8	229.3	233.0	236.6	243.1	252.5	262.1	271.5	281.0	287.6
117.5°	252.7	254.9	257.2	259.4	261.6	267.2	276.0	284.7	293.6	302.4	308.8
120°	270.9	272.9	274.9	277.0	278.9	284.2	292.5	300.9	309.2	317.4	323.6
122.5°	290.8	292.0	293.2	294.4	295.6	300.2	308.4	316.6	324.9	333.0	338.7
125°	320.0	320.3	320.7	321.0	321.4	325.3	333.0	340.5	348.1	355.7	361.0
127.5°	348.1	348.6	349.0	349.5	349.9	353.2	359.4	365.7	371.9	378.2	382.8
130°	366.8	367.5	368.1	368.7	369.3	372.2	377.2	382.3	387.4	392.4	397.1
132.5°	384.5	385.4	386.3	387.1	388.0	390.4	394.5	398.5	402.6	406.7	411.1
135°	412.9	413.3	413.7	414.1	414.6	416.2	419.0	421.9	424.7	427.6	431.9
137.5°	439.1	439.4	439.8	440.1	440.5	441.7	443.6	445.6	447.5	449.5	453.3
140°	456.5	457.0	457.5	458.2	458.7	459.4	460.4	461.3	462.2	463.2	467.1
142.5°	473.1	473.5	473.9	474.1	474.5	474.8	475.2	475.6	476.0	476.4	479.8
145°	499.2	499.1	499.1	499.0	499.0	499.1	499.4	499.8	500.2	500.5	502.6
147.5°	520.8	521.1	521.6	521.9	522.4	522.7	523.1	523.3	523.7	524.0	524.6
150°	536.6	536.8	537.1	537.3	537.5	537.7	538.0	538.1	538.4	538.6	538.6
152.5°	549.7	549.9	550.3	550.5	550.9	551.1	551.3	551.3	551.5	551.6	551.8
155°	570.2	570.2	570.2	570.2	570.2	570.2	570.3	570.4	570.6	570.7	571.1
157.5°	587.6	587.5	587.4	587.3	587.1	587.1	587.2	587.3	587.4	587.5	587.9
160°	598.6	598.4	598.2	598.0	597.7	597.6	597.6	597.6	597.6	597.6	598.2
162.5°	608.4	608.1	607.8	607.4	607.2	607.1	607.2	607.3	607.3	607.4	608.0
165°	621.0	620.7	620.4	620.0	619.6	619.5	619.5	619.5	619.5	619.5	620.2
167.5°	631.1	630.6	630.2	629.7	629.3	629.1	629.2	629.3	629.4	629.5	630.2
170°	636.8	636.3	635.9	635.4	635.0	634.7	634.7	634.7	634.7	634.7	635.5
172.5°	641.2	640.8	640.3	639.9	639.4	639.3	639.3	639.3	639.3	639.3	640.0
175°	646.0	645.5	645.1	644.6	644.2	643.9	643.9	643.9	643.9	643.9	644.6
177.5°	647.9	647.6	647.2	646.8	646.4	646.2	646.2	646.2	646.2	646.2	646.8
180°	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1111.8	1113.5	1115.2	1116.0	1115.7	1115.5	1115.4	1115.1
5°	1109.9	1112.1	1114.3	1115.2	1114.9	1114.6	1114.4	1114.1
7.5°	1103.2	1106.0	1108.7	1109.8	1109.6	1109.2	1108.8	1108.6
10°	1096.4	1099.1	1101.9	1103.0	1102.4	1101.9	1101.4	1100.8
12.5°	1087.3	1089.8	1092.3	1093.2	1092.7	1092.2	1091.6	1091.1
15°	1069.8	1072.5	1075.1	1076.4	1076.1	1075.8	1075.6	1075.3
17.5°	1046.9	1049.4	1051.8	1052.8	1052.4	1052.0	1051.7	1051.2
20°	1030.4	1032.8	1035.3	1036.6	1036.9	1037.1	1037.4	1037.7
22.5°	1012.3	1015.3	1018.4	1019.8	1019.7	1019.6	1019.4	1019.2
25°	981.6	985.1	988.6	990.3	990.3	990.3	990.3	990.3
27.5°	949.5	952.5	955.6	957.2	957.4	957.6	957.9	958.1
30°	927.6	930.9	934.1	935.8	935.8	935.8	935.8	935.8
32.5°	903.8	907.2	910.7	912.8	913.4	914.0	914.7	915.3
35°	868.5	872.6	876.6	879.2	880.3	881.4	882.4	883.5
37.5°	832.1	836.6	841.2	843.9	844.8	845.6	846.5	847.4
40°	807.7	812.3	816.9	819.7	820.8	821.9	823.0	824.0
42.5°	782.4	787.4	792.5	795.7	797.2	798.7	800.2	801.7
45°	744.5	749.7	754.7	758.4	760.5	762.7	764.9	767.0
47.5°	706.2	712.0	717.7	721.5	723.2	724.9	726.5	728.2
50°	679.9	686.1	692.3	696.3	698.3	700.2	702.0	703.9
52.5°	653.2	659.6	666.0	670.4	672.7	675.0	677.3	679.7
55°	612.9	620.2	627.5	632.1	634.4	636.5	638.6	640.8
57.5°	571.8	579.1	586.4	591.4	593.9	596.4	599.0	601.5
60°	543.1	550.6	558.1	563.4	566.4	569.4	572.3	575.2
62.5°	515.9	523.4	530.9	536.1	538.9	541.6	544.4	547.2
65°	472.5	480.6	488.7	494.1	496.8	499.4	502.2	504.9
67.5°	429.4	438.2	447.0	452.6	454.9	457.2	459.4	461.6
70°	400.7	409.4	418.0	423.7	426.4	429.1	431.8	434.5
72.5°	372.1	380.9	389.8	395.6	398.2	400.9	403.7	406.4
75°	328.5	337.4	346.3	352.4	355.6	358.8	362.0	365.3
77.5°	287.8	297.1	306.5	312.5	314.9	317.4	319.9	322.4
80°	261.1	270.3	279.4	285.3	288.0	290.7	293.5	296.1
82.5°	236.8	245.9	255.1	261.1	263.8	266.4	269.1	271.9
85°	202.8	212.0	221.1	227.1	229.8	232.5	235.1	237.9
87.5°	175.6	184.9	194.1	200.1	202.9	205.6	208.3	211.1
90°	168.6	178.3	187.8	194.1	197.1	199.9	202.9	205.8
92.5°	167.6	176.8	186.2	192.0	194.3	196.7	199.0	201.3
95°	175.4	184.2	193.1	198.8	201.5	204.2	206.9	209.6
97.5°	187.4	196.0	204.6	210.2	212.8	215.4	218.1	220.8
100°	196.7	204.8	213.0	218.6	221.5	224.4	227.3	230.2
102.5°	208.3	216.2	224.2	229.5	232.2	234.8	237.5	240.1
105°	226.1	233.7	241.3	246.4	249.1	251.6	254.3	257.0
107.5°	245.9	253.5	261.1	266.0	268.2	270.5	272.7	275.0
110°	259.9	267.4	274.8	279.6	281.5	283.4	285.3	287.3



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CATALOG NUMBER: S123DIP-S1000D585U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	273.0	280.4	287.7	292.5	294.8	297.1	299.5	301.8
115°	294.2	300.8	307.4	311.7	313.7	315.8	317.8	319.9
117.5°	315.2	321.6	328.0	332.1	333.9	335.6	337.4	339.2
120°	329.7	335.7	341.9	345.7	347.4	349.0	350.7	352.4
122.5°	344.4	350.1	355.8	359.4	361.0	362.6	364.1	365.7
125°	366.1	371.3	376.6	379.9	381.3	382.7	384.1	385.7
127.5°	387.5	392.3	397.0	399.9	401.3	402.6	403.9	405.2
130°	401.7	406.4	411.1	413.8	414.6	415.5	416.3	417.1
132.5°	415.4	419.7	424.1	427.0	428.1	429.4	430.6	431.9
135°	436.4	440.8	445.1	447.9	449.1	450.2	451.3	452.5
137.5°	457.1	460.8	464.7	467.0	468.0	468.9	469.8	470.6
140°	471.0	474.9	478.8	481.1	481.6	482.2	482.8	483.3
142.5°	483.3	486.9	490.4	492.5	493.2	493.9	494.6	495.4
145°	504.6	506.6	508.6	510.0	510.6	511.2	511.8	512.5
147.5°	525.3	525.9	526.6	527.0	527.4	527.6	527.9	528.2
150°	538.6	538.6	538.6	538.6	538.4	538.3	538.1	538.0
152.5°	552.1	552.2	552.4	552.2	551.8	551.3	550.8	550.3
155°	571.6	572.0	572.5	572.3	571.5	570.7	570.0	569.2
157.5°	588.4	588.9	589.3	589.2	588.6	588.0	587.4	586.7
160°	598.8	599.3	599.9	599.9	599.5	599.1	598.6	598.2
162.5°	608.5	609.1	609.7	609.6	608.9	608.1	607.4	606.7
165°	620.9	621.5	622.2	622.1	621.3	620.5	619.8	619.0
167.5°	630.9	631.6	632.3	632.3	631.6	630.9	630.2	629.5
170°	636.3	637.1	637.9	637.9	637.1	636.3	635.5	634.7
172.5°	640.6	641.3	642.0	642.0	641.2	640.4	639.6	638.8
175°	645.2	646.0	646.7	646.6	645.8	645.0	644.2	643.4
177.5°	647.4	647.9	648.5	648.4	647.7	647.1	646.5	645.9
180°	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5

(END OF REPORT)