

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: P332014-940

Luminaire Tested: **S123DIP-S1000D585U940-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332014-940  
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-S1000D585U940-4F0-1E-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**

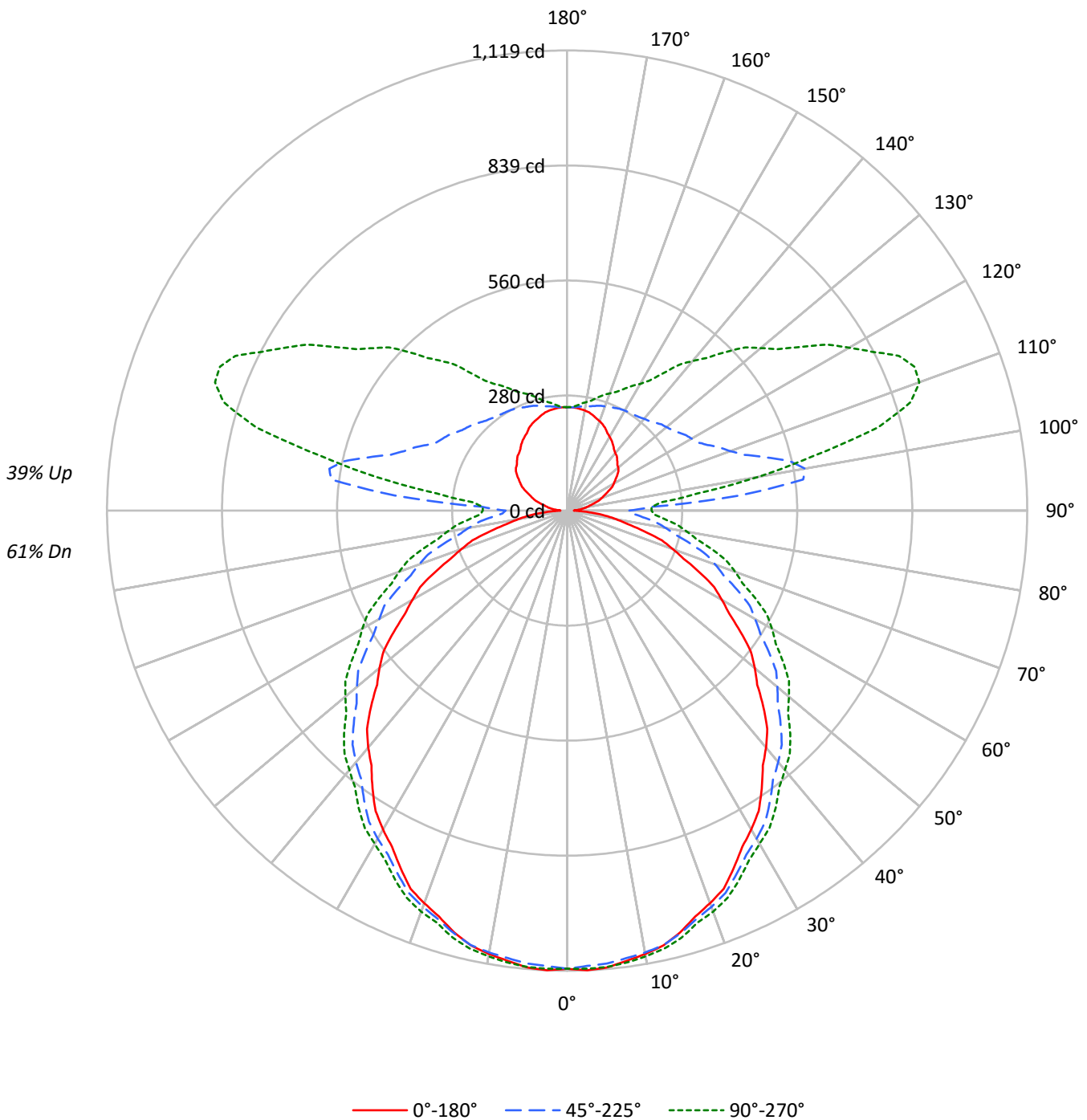
Lumens per Lamp: N/A  
Luminaire Lumens: 5636.2 lumens  
Efficiency: N/A  
Efficacy: 115.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct  
  
Input Watts (W): 48.8  
Input Voltage (V): 120  
Input 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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66
1	99	94	90	86	92	88	84	80	77	74	71	66	64	62	56	55	53
2	90	81	75	69	83	76	70	65	66	62	58	57	54	51	49	46	44
3	81	71	63	57	76	67	60	54	58	53	48	50	46	42	43	40	37
4	74	63	54	48	69	59	51	45	51	45	41	45	40	36	38	34	31
5	68	56	47	41	63	52	45	39	46	40	35	40	35	31	34	30	27
6	63	50	41	35	58	47	39	34	41	35	30	36	31	27	31	27	24
7	58	45	37	31	54	42	35	29	37	31	27	33	28	24	28	24	21
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17
10	47	34	27	22	44	32	26	21	29	23	19	25	21	17	22	18	15

**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	5.3
20°-30°	450.3	8.0
30°-40°	537.8	9.5
40°-50°	562.6	10.0
50°-60°	528.0	9.4
60°-70°	441.0	7.8
70°-80°	315.5	5.6
80°-90°	190.1	3.4
90°-100°	257.9	4.6
100°-110°	482.7	8.6
110°-120°	447.4	7.9
120°-130°	343.8	6.1
130°-140°	259.8	4.6
140°-150°	186.0	3.3
150°-160°	127.5	2.3
160°-170°	74.9	1.3
170°-180°	24.4	0.4
0°-30°	857.0	15.2
0°-40°	1394.8	24.7
0°-60°	2485.4	44.1
0°-90°	3432.0	60.9
90°-120°	1188.0	21.1
90°-150°	1977.5	35.1
90°-180°	2204.0	39.1
0°-180°	5636.2	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°	17	81	150	191	205	12
95°	31	118	422	244	229	29
105°	69	127	500	839	783	73
115°	110	152	377	778	890	109
125°	149	177	331	592	693	132
135°	172	205	302	471	546	133
145°	195	222	284	367	408	122
155°	220	238	275	313	326	101
165°	241	247	264	279	284	68
175°	251	251	253	256	256	24
180°	251	251	251	251	251	



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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°	32.5	46.1	59.7	73.5	87.1	100.9	114.9	129.0	143.1	157.1	166.2
90°	16.8	31.0	45.3	60.0	74.2	88.7	104.0	119.3	134.6	149.9	158.5
92.5°	21.1	36.1	52.3	68.1	84.4	104.6	131.4	166.9	201.9	207.6	197.3
95°	30.7	42.7	58.8	77.9	101.7	133.4	189.8	278.8	375.5	421.8	373.2
97.5°	41.4	51.4	65.3	82.3	104.8	137.3	191.3	289.3	441.0	578.8	619.5
100°	48.6	57.7	69.9	85.6	106.5	136.8	184.9	272.5	418.7	587.3	695.3
102.5°	56.2	64.8	75.7	90.2	109.0	137.1	181.3	257.3	388.7	555.0	693.3
105°	68.8	76.7	86.2	98.8	114.9	139.7	178.8	242.8	350.5	500.0	653.4
107.5°	80.9	87.9	96.4	107.9	122.4	145.3	180.4	235.0	323.5	450.6	590.3
110°	89.7	96.0	103.4	113.9	127.4	149.5	183.2	232.6	311.6	422.5	551.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	98.6	104.2	110.7	120.3	132.9	153.9	185.6	231.7	302.0	401.2	515.3
115°	110.3	115.6	121.9	130.2	142.1	162.3	191.4	232.1	293.6	377.1	471.5
117.5°	123.0	127.3	131.9	138.6	150.3	168.4	196.7	233.5	286.7	358.8	441.4
120°	131.0	133.8	137.8	144.2	155.2	173.1	200.3	235.6	283.7	349.6	424.9
122.5°	138.8	141.0	144.2	150.3	160.3	178.4	204.8	237.7	282.0	341.8	410.5
125°	148.6	149.6	152.7	158.3	167.9	185.6	211.2	241.4	279.7	330.7	390.8
127.5°	157.0	158.3	161.8	167.2	177.6	194.5	218.1	244.8	278.7	321.6	372.6
130°	162.3	163.5	167.9	173.7	184.1	200.5	222.6	247.4	278.1	315.6	361.9
132.5°	165.4	167.3	172.3	179.5	190.1	205.6	226.3	249.5	276.8	310.3	351.5
135°	172.3	174.1	179.4	186.7	197.2	212.2	231.0	251.2	274.6	302.5	337.3
137.5°	178.8	180.7	186.0	193.9	204.3	217.7	234.5	252.7	272.4	295.5	324.9
140°	182.3	184.9	189.9	198.0	208.2	221.3	236.9	253.0	271.1	291.2	317.1
142.5°	187.2	189.0	194.4	201.4	211.4	223.3	237.8	252.8	269.0	286.5	309.5
145°	195.0	196.3	200.5	207.9	216.3	227.8	241.1	254.9	269.0	284.3	302.7
147.5°	201.7	202.6	207.1	213.7	222.0	232.0	244.2	256.5	269.0	282.4	296.9
150°	207.0	207.5	211.6	218.2	225.3	234.4	246.2	256.8	269.0	280.7	293.5
152.5°	212.3	212.4	216.5	222.3	228.5	237.3	247.4	257.7	267.9	278.7	290.3
155°	220.3	220.3	223.3	228.4	234.0	241.1	249.8	257.9	266.5	275.2	285.3
157.5°	226.5	226.9	229.3	233.9	238.6	244.2	251.0	258.4	264.7	272.0	279.8
160°	231.4	231.4	233.4	237.6	241.1	246.2	252.3	258.4	263.9	269.6	276.2
162.5°	235.1	235.1	236.7	240.0	243.1	247.4	252.7	258.0	262.3	267.2	272.5
165°	240.6	240.0	241.1	243.6	245.7	249.2	253.2	256.8	259.9	263.5	267.5
167.5°	244.8	244.2	244.6	246.6	248.0	250.2	253.2	256.0	257.4	259.8	262.8
170°	247.2	246.2	246.6	248.2	249.2	250.2	252.8	254.9	255.8	257.3	259.9
172.5°	248.8	248.2	248.3	249.4	250.0	250.7	252.8	254.4	254.6	255.3	257.1
175°	250.7	250.2	249.8	250.7	250.7	251.3	252.3	253.2	252.8	252.8	253.8
177.5°	251.6	251.3	250.8	251.3	251.3	251.3	251.6	252.4	251.6	251.3	251.6
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3



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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°	175.5	184.8	194.0	200.2	202.8	205.5	208.4	211.0
90°	168.2	177.9	187.5	194.5	196.7	199.9	203.1	205.3
92.5°	190.1	190.2	195.2	198.3	199.8	200.8	203.8	205.4
95°	319.9	269.3	250.7	238.0	231.0	229.1	228.3	228.9
97.5°	583.9	501.1	443.5	388.1	353.2	333.1	322.0	320.3
100°	720.9	687.5	635.8	568.8	520.2	485.7	468.6	471.8
102.5°	762.2	768.5	741.5	700.8	663.5	636.9	622.9	613.9
105°	767.3	825.7	842.9	834.7	813.8	796.8	783.0	782.9
107.5°	718.1	807.9	859.7	882.6	885.4	881.3	878.2	875.8
110°	674.6	775.2	846.2	886.4	902.9	909.1	910.2	911.3





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CATALOG NUMBER: S123DIP-S1000D585U940-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	630.4	732.9	811.5	861.8	890.3	905.3	911.5	914.1
115°	572.1	667.1	748.3	808.1	848.4	873.0	885.3	890.0
117.5°	527.3	610.0	683.6	744.1	786.0	813.7	830.5	836.1
120°	502.8	577.7	644.9	700.3	742.4	772.8	786.8	791.8
122.5°	482.5	550.6	613.1	664.8	702.4	730.0	745.2	751.0
125°	454.5	515.6	570.1	614.6	649.0	673.2	687.9	693.3
127.5°	429.1	483.8	533.2	573.8	604.7	625.6	639.0	644.1
130°	412.8	463.7	510.1	548.0	576.6	596.5	608.8	614.5
132.5°	397.3	444.3	487.6	524.0	551.2	571.2	582.6	587.3
135°	376.2	417.2	455.1	487.2	513.4	530.1	540.6	545.5
137.5°	356.7	390.6	423.3	451.2	473.6	490.4	499.4	503.1
140°	345.1	375.1	403.5	428.1	448.7	464.3	473.9	474.7
142.5°	333.4	359.3	384.1	405.6	423.4	437.4	446.0	446.8
145°	321.2	340.1	358.6	375.0	388.7	400.5	405.6	407.7
147.5°	311.4	325.3	339.1	350.4	361.0	369.2	374.1	375.4
150°	305.1	316.8	327.5	337.5	345.6	351.8	355.3	355.9
152.5°	300.7	310.8	320.2	328.3	334.4	339.7	341.6	341.8
155°	294.0	302.1	309.8	315.8	320.4	324.5	325.5	326.0
157.5°	286.9	293.6	299.6	304.3	308.4	311.4	312.2	312.1
160°	282.8	288.4	293.5	297.0	300.6	303.6	303.6	303.1
162.5°	277.9	282.7	287.4	290.5	292.8	295.5	295.5	295.0
165°	271.6	274.6	278.2	280.7	282.8	284.8	284.3	284.3
167.5°	266.1	268.4	270.5	272.3	273.2	274.6	274.1	274.1
170°	262.4	263.9	266.0	267.0	267.5	268.6	268.0	268.0
172.5°	259.2	260.3	261.9	262.5	262.6	263.7	262.8	262.3
175°	254.9	255.3	256.4	256.4	256.4	256.8	256.4	255.8
177.5°	252.1	252.4	252.9	252.9	252.4	252.9	252.1	252.1
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3

(END OF REPORT)