

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: P332012

Luminaire Tested: **S123DIP-S1000D585U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332012  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1000D585U835-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 585 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6541.9 lumens  
Efficiency: N/A  
Efficacy: 134.1 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: General Diffuse

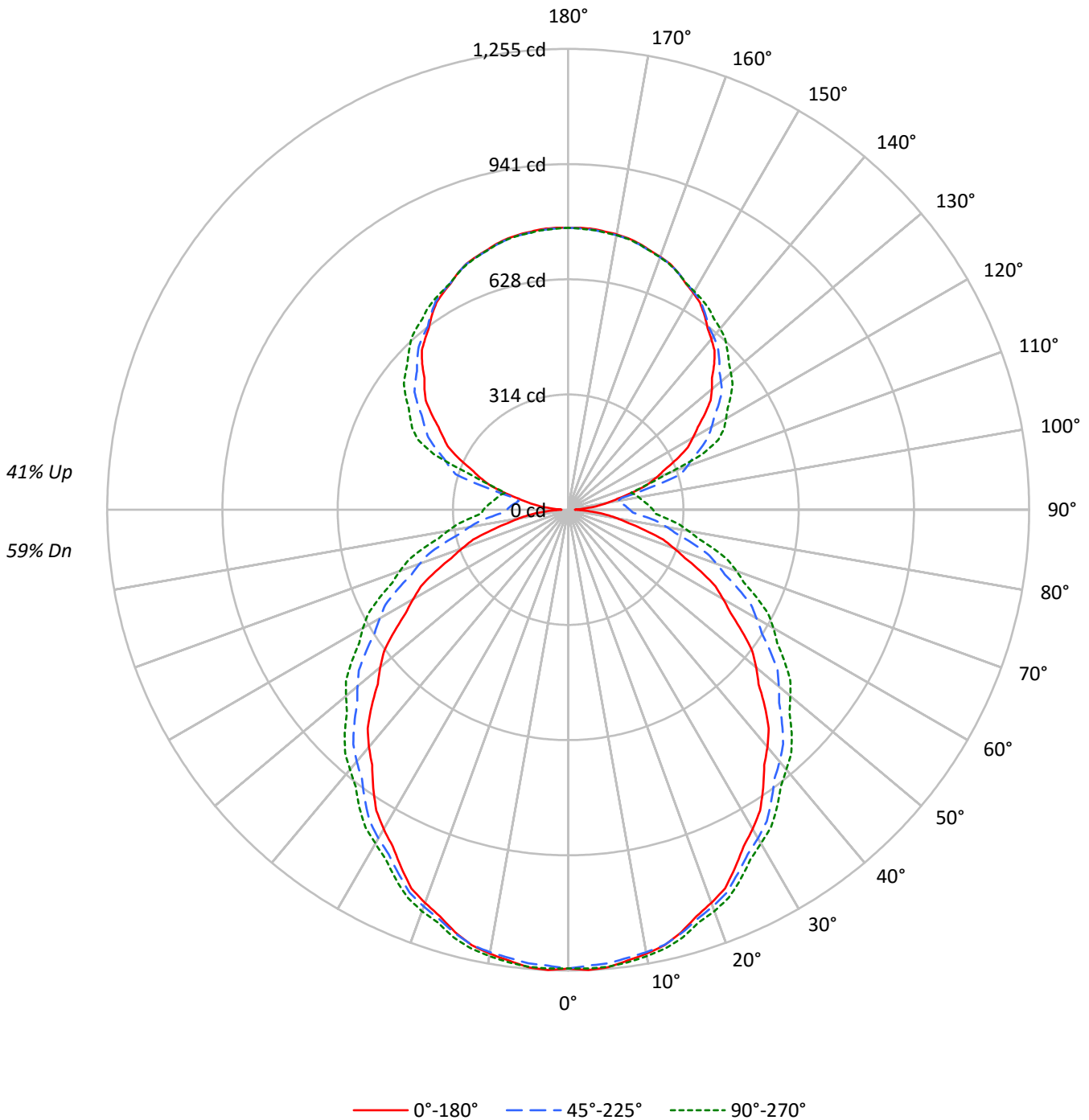
Input Watts (W): 48.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332012

CATALOG NUMBER: S123DIP-S1000D585U835-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P332012

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	50	30	10	50	30	10	0														
RCR																																						
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59																				
1	99	94	89	85	92	87	83	80	76	73	70	65	63	61	55	53	52	47																				
2	89	81	74	69	83	76	70	65	66	61	57	56	53	50	48	45	43	38																				
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	42	39	36	32																				
4	74	63	54	48	69	58	51	45	51	45	40	44	39	35	37	33	31	27																				
5	68	56	47	41	63	52	44	39	45	39	34	39	34	30	33	29	26	23																				
6	63	50	41	35	58	47	39	33	41	35	30	35	30	26	30	26	23	20																				
7	58	45	37	31	54	42	35	29	37	31	26	32	27	23	27	24	20	18																				
8	54	41	33	27	50	38	31	26	34	28	23	29	24	21	25	21	18	16																				
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	16	14																				
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	22	18	15	13																				

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

	0°	45°	90°
0°	13448	13448	13448
5°	13490	13110	13117
10°	13370	12808	12744
15°	13197	12465	12336
20°	12951	12074	11888
25°	12647	11623	11416
30°	12335	11217	10938
35°	11987	10789	10556
40°	11653	10399	10147
45°	11284	10024	9821
50°	10920	9654	9461
55°	10517	9275	9136
60°	10125	8890	8804
65°	9723	8481	8409
70°	9115	8019	8005
75°	8351	7490	7593
80°	7467	6971	7122
85°	6653	6616	6850



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.4	1.8
10°-20°	337.6	5.2
20°-30°	505.0	7.7
30°-40°	603.1	9.2
40°-50°	631.0	9.6
50°-60°	592.1	9.1
60°-70°	494.5	7.6
70°-80°	353.8	5.4
80°-90°	213.2	3.3
90°-100°	160.3	2.5
100°-110°	230.3	3.5
110°-120°	384.5	5.9
120°-130°	444.0	6.8
130°-140°	451.4	6.9
140°-150°	410.1	6.3
150°-160°	328.0	5.0
160°-170°	211.6	3.2
170°-180°	72.9	1.1
0°-30°	961.1	14.7
0°-40°	1564.1	23.9
0°-60°	2787.2	42.6
0°-90°	3848.8	58.8
90°-120°	775.1	11.8
90°-150°	2080.6	31.8
90°-180°	2693.0	41.2
0°-180°	6541.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1249	1249	1249	1249	1249	
5°	1251	1248	1240	1250	1249	119
15°	1191	1195	1194	1206	1206	335
25°	1075	1088	1093	1110	1111	495
35°	926	947	965	985	991	579
45°	757	790	823	848	860	583
55°	577	622	671	706	719	517
65°	399	452	512	551	566	394
75°	216	281	348	392	410	231
85°	67	135	207	251	267	70
90°	18	91	168	214	231	14
95°	50	82	152	197	212	55
105°	181	218	227	168	178	191
115°	326	347	400	436	451	322
125°	454	460	500	528	540	405
135°	562	565	582	607	613	433
145°	647	650	651	662	668	405
155°	711	710	711	713	710	328
165°	750	748	748	752	748	212
175°	768	765	765	769	765	73
180°	768	768	768	768	768	



TEST NUMBER: P332012

CATALOG NUMBER: S123DIP-S1000D585U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4
2.5°	1254.9	1254.2	1253.4	1252.7	1252.0	1250.6	1248.7	1246.8	1244.8	1242.9	1244.8
5°	1250.8	1250.2	1249.6	1249.0	1248.4	1247.2	1245.4	1243.5	1241.7	1239.9	1242.3
7.5°	1238.5	1238.7	1238.8	1238.9	1239.0	1238.2	1236.5	1234.7	1232.9	1231.2	1234.2
10°	1227.7	1228.3	1228.9	1229.5	1230.1	1229.6	1228.1	1226.6	1225.1	1223.6	1226.6
12.5°	1214.6	1215.4	1216.3	1217.1	1218.0	1217.9	1216.9	1215.8	1214.8	1213.8	1216.6
15°	1190.9	1191.8	1192.7	1193.6	1194.5	1194.8	1194.5	1194.2	1193.9	1193.6	1196.7
17.5°	1161.0	1162.8	1164.6	1166.4	1168.2	1169.1	1169.0	1168.8	1168.7	1168.6	1171.3
20°	1139.2	1141.0	1142.8	1144.6	1146.4	1147.7	1148.3	1148.9	1149.5	1150.1	1152.8
22.5°	1116.3	1118.1	1120.0	1121.8	1123.6	1124.9	1125.8	1126.6	1127.5	1128.3	1131.7
25°	1075.2	1078.2	1081.3	1084.3	1087.3	1089.3	1090.2	1091.1	1092.0	1092.9	1096.8
27.5°	1033.8	1037.3	1040.7	1044.2	1047.6	1050.3	1052.3	1054.2	1056.1	1058.1	1061.5
30°	1004.4	1008.4	1012.3	1016.2	1020.2	1023.3	1025.8	1028.2	1030.6	1033.0	1036.7
32.5°	971.8	976.2	980.6	985.0	989.4	993.2	996.4	999.5	1002.7	1005.8	1009.7
35°	925.5	930.3	935.2	940.0	944.9	949.2	953.2	957.1	961.0	965.0	969.5
37.5°	876.5	882.0	887.4	892.8	898.3	903.4	908.3	913.1	917.9	922.8	927.9
40°	843.8	849.3	854.7	860.2	865.6	871.4	877.4	883.5	889.5	895.6	900.7
42.5°	807.9	814.6	821.2	827.9	834.5	841.0	847.3	853.6	859.9	866.2	871.8
45°	756.7	764.0	771.3	778.5	785.8	793.2	800.7	808.3	815.9	823.4	829.2
47.5°	703.1	711.3	719.6	727.8	736.0	744.5	753.1	761.8	770.4	779.1	785.5
50°	668.3	676.7	685.2	693.7	702.1	711.1	720.4	729.8	739.2	748.6	755.5
52.5°	631.2	640.2	649.2	658.1	667.1	676.7	687.1	697.4	707.7	718.1	725.3
55°	577.1	587.1	597.0	607.0	617.0	627.4	638.3	649.2	660.1	671.0	679.2
57.5°	524.3	534.7	545.1	555.5	565.9	577.1	589.0	600.9	612.8	624.7	632.9
60°	487.3	498.1	509.0	519.9	530.8	542.4	554.8	567.3	579.7	592.1	600.5
62.5°	452.4	463.5	474.7	485.8	496.9	509.1	522.2	535.3	548.4	561.6	570.0
65°	398.8	410.6	422.4	434.2	446.0	458.5	471.8	485.1	498.4	511.8	520.8
67.5°	344.3	356.9	369.4	381.9	394.4	407.5	421.0	434.6	448.1	461.7	471.6
70°	306.2	319.2	332.2	345.3	358.3	372.0	386.5	401.1	415.6	430.1	439.8
72.5°	271.4	284.4	297.4	310.4	323.4	337.4	352.4	367.4	382.4	397.4	407.3
75°	216.4	230.6	244.8	259.1	273.3	287.9	303.1	318.2	333.3	348.4	358.4
77.5°	168.5	182.8	197.2	211.5	225.8	240.6	255.9	271.1	286.4	301.6	312.1
80°	134.7	149.6	164.4	179.2	194.0	209.3	225.0	240.8	256.5	272.2	282.5
82.5°	105.3	120.4	135.5	150.5	165.6	181.1	197.1	213.0	229.0	245.0	255.3
85°	66.7	81.8	96.9	112.1	127.2	142.8	158.8	174.8	190.8	206.9	217.2
87.5°	36.3	51.6	66.9	82.3	97.6	113.1	128.9	144.6	160.4	176.1	186.5
90°	18.3	34.4	50.4	66.5	82.6	99.2	116.3	133.3	150.4	167.5	178.3
92.5°	27.2	40.2	53.2	66.3	79.3	94.0	110.4	126.8	143.3	159.7	170.5
95°	49.8	56.4	63.0	69.6	76.2	87.6	103.8	120.0	136.2	152.4	162.7
97.5°	83.3	91.6	99.9	108.2	116.5	123.2	128.2	133.3	138.3	143.3	153.3
100°	108.6	120.9	133.1	145.3	157.5	160.7	154.8	149.0	143.1	137.2	147.0
102.5°	137.7	148.2	158.7	169.3	179.8	181.1	173.2	165.3	157.3	149.4	154.8
105°	180.9	189.5	198.2	206.8	215.5	220.6	222.2	223.8	225.4	227.0	213.0
107.5°	225.1	232.4	239.6	246.9	254.2	264.9	279.1	293.2	307.4	321.5	313.1
110°	254.6	261.0	267.5	273.9	280.4	290.4	303.9	317.4	330.8	344.3	348.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	283.8	289.2	294.5	299.9	305.3	314.5	327.5	340.5	353.5	366.5	374.2
115°	325.6	330.0	334.4	338.8	343.2	351.4	363.4	375.5	387.5	399.5	408.0
117.5°	367.2	370.4	373.6	376.8	379.9	386.9	397.7	408.5	419.3	430.1	438.4
120°	392.1	394.8	397.5	400.1	402.8	409.3	419.6	430.0	440.3	450.7	458.7
122.5°	418.6	420.3	422.1	423.8	425.5	431.4	441.3	451.3	461.3	471.3	478.7
125°	453.5	454.5	455.6	456.6	457.6	462.7	472.0	481.3	490.6	499.8	506.4
127.5°	488.7	489.4	490.1	490.8	491.5	495.8	503.7	511.5	519.4	527.3	533.7
130°	510.6	511.3	512.0	512.7	513.4	517.0	523.6	530.2	536.7	543.3	549.5
132.5°	530.5	531.4	532.4	533.3	534.3	537.4	542.6	547.9	553.1	558.4	564.4
135°	562.2	562.7	563.2	563.6	564.1	566.2	570.1	573.9	577.7	581.6	587.4
137.5°	589.3	590.1	590.8	591.5	592.2	593.7	595.8	598.0	600.1	602.3	607.7
140°	606.5	607.3	608.0	608.8	609.6	610.6	611.9	613.1	614.4	615.7	620.8
142.5°	623.4	623.9	624.4	624.9	625.5	626.0	626.6	627.1	627.7	628.3	632.7
145°	647.0	647.6	648.2	648.8	649.3	649.8	650.0	650.3	650.5	650.8	653.4
147.5°	667.9	668.5	669.1	669.6	670.2	670.6	670.9	671.1	671.4	671.7	672.6
150°	681.6	682.0	682.3	682.7	683.1	683.4	683.7	683.9	684.2	684.4	684.7
152.5°	693.9	694.1	694.2	694.4	694.6	694.8	694.9	695.1	695.2	695.4	695.8
155°	711.2	711.0	710.7	710.5	710.2	710.2	710.3	710.4	710.5	710.7	711.3
157.5°	724.7	724.7	724.6	724.6	724.6	724.5	724.4	724.3	724.1	724.0	724.8
160°	732.9	732.8	732.7	732.5	732.4	732.3	732.1	732.0	731.9	731.8	732.5
162.5°	740.7	740.3	740.0	739.7	739.3	739.1	739.0	738.9	738.7	738.6	739.5
165°	750.0	749.6	749.3	748.9	748.5	748.2	748.1	748.0	747.9	747.7	748.8
167.5°	757.3	756.8	756.3	755.8	755.3	755.0	755.0	755.0	755.0	755.0	756.1
170°	761.4	760.9	760.4	759.9	759.4	759.1	759.1	759.1	759.1	759.1	760.2
172.5°	764.2	763.6	762.9	762.3	761.7	761.5	761.6	761.7	761.8	761.9	762.9
175°	767.7	767.1	766.4	765.8	765.2	764.9	765.0	765.2	765.3	765.4	766.3
177.5°	768.6	768.1	767.6	767.1	766.6	766.4	766.5	766.6	766.7	766.8	767.6
180°	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4
2.5°	1246.8	1248.7	1250.6	1251.5	1251.2	1251.0	1250.8	1250.5
5°	1244.7	1247.2	1249.6	1250.6	1250.3	1250.0	1249.7	1249.4
7.5°	1237.2	1240.3	1243.3	1244.6	1244.3	1243.9	1243.5	1243.2
10°	1229.6	1232.6	1235.7	1236.9	1236.3	1235.7	1235.1	1234.5
12.5°	1219.3	1222.1	1224.9	1226.0	1225.4	1224.8	1224.2	1223.6
15°	1199.7	1202.7	1205.7	1207.1	1206.8	1206.5	1206.2	1205.9
17.5°	1174.0	1176.8	1179.5	1180.6	1180.2	1179.8	1179.4	1178.9
20°	1155.5	1158.2	1161.0	1162.5	1162.8	1163.1	1163.4	1163.7
22.5°	1135.2	1138.6	1142.1	1143.7	1143.5	1143.4	1143.2	1143.0
25°	1100.8	1104.7	1108.6	1110.6	1110.6	1110.6	1110.6	1110.6
27.5°	1064.8	1068.2	1071.6	1073.4	1073.7	1073.9	1074.2	1074.4
30°	1040.3	1043.9	1047.5	1049.4	1049.4	1049.4	1049.4	1049.4
32.5°	1013.6	1017.4	1021.3	1023.6	1024.3	1025.0	1025.8	1026.5
35°	974.0	978.6	983.1	986.0	987.2	988.4	989.6	990.8
37.5°	933.1	938.2	943.4	946.4	947.4	948.3	949.3	950.3
40°	905.8	911.0	916.1	919.3	920.5	921.7	922.9	924.1
42.5°	877.4	883.0	888.7	892.3	894.0	895.7	897.4	899.1
45°	834.9	840.7	846.4	850.5	852.9	855.3	857.8	860.2
47.5°	792.0	798.5	804.9	809.1	811.0	812.9	814.7	816.6
50°	762.5	769.4	776.4	780.9	783.1	785.2	787.3	789.4
52.5°	732.5	739.7	746.9	751.8	754.4	757.0	759.6	762.2
55°	687.3	695.5	703.7	708.9	711.4	713.8	716.2	718.6
57.5°	641.2	649.4	657.6	663.2	666.0	668.8	671.7	674.5
60°	609.0	617.5	625.9	631.8	635.2	638.5	641.8	645.1
62.5°	578.5	587.0	595.4	601.2	604.3	607.4	610.5	613.6
65°	529.9	539.0	548.0	554.1	557.1	560.1	563.2	566.2
67.5°	481.5	491.4	501.3	507.6	510.1	512.7	515.2	517.7
70°	449.4	459.1	468.8	475.2	478.2	481.2	484.2	487.3
72.5°	417.3	427.2	437.1	443.6	446.6	449.6	452.7	455.7
75°	368.4	378.4	388.3	395.2	398.8	402.4	406.0	409.7
77.5°	322.7	333.2	343.7	350.4	353.1	355.9	358.7	361.5
80°	292.8	303.1	313.3	320.0	323.0	326.0	329.1	332.1
82.5°	265.6	275.8	286.1	292.8	295.8	298.8	301.8	304.9
85°	227.4	237.7	248.0	254.7	257.7	260.7	263.7	266.8
87.5°	196.9	207.3	217.7	224.4	227.5	230.6	233.6	236.7
90°	189.1	199.9	210.6	217.7	221.0	224.2	227.5	230.8
92.5°	181.4	192.2	203.1	210.0	212.9	215.9	218.8	221.7
95°	173.0	183.2	193.5	200.1	203.1	206.2	209.2	212.2
97.5°	163.4	173.4	183.4	190.0	193.2	196.3	199.5	202.6
100°	156.8	166.6	176.4	182.8	186.0	189.1	192.3	195.4
102.5°	160.2	165.6	171.0	175.3	178.5	181.8	185.0	188.3
105°	199.1	185.1	171.1	165.6	168.6	171.6	174.6	177.5
107.5°	304.8	296.5	288.1	276.8	262.6	248.3	234.1	219.8
110°	351.7	355.4	359.1	353.0	337.3	321.6	305.9	290.2





TEST NUMBER: P332012

CATALOG NUMBER: S123DIP-S1000D585U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	381.9	389.6	397.3	400.6	399.4	398.3	397.1	395.9
115°	416.6	425.1	433.6	439.4	442.3	445.2	448.1	451.1
117.5°	446.6	454.8	463.0	468.3	470.8	473.3	475.7	478.2
120°	466.6	474.6	482.6	487.6	489.8	491.9	494.0	496.1
122.5°	486.1	493.5	501.0	505.8	508.0	510.2	512.4	514.7
125°	513.0	519.7	526.3	530.7	533.1	535.5	537.9	540.2
127.5°	540.0	546.4	552.8	556.9	558.7	560.5	562.3	564.1
130°	555.8	562.0	568.3	572.2	573.7	575.3	576.9	578.4
132.5°	570.4	576.4	582.4	586.3	588.0	589.7	591.4	593.1
135°	593.2	599.0	604.9	608.3	609.5	610.6	611.7	612.9
137.5°	613.1	618.4	623.8	627.2	628.4	629.7	630.9	632.2
140°	625.8	630.9	635.9	639.1	640.3	641.6	642.8	644.1
142.5°	637.2	641.6	646.1	648.9	650.1	651.2	652.4	653.5
145°	656.1	658.8	661.5	663.4	664.6	665.8	667.0	668.2
147.5°	673.6	674.6	675.6	676.3	676.8	677.3	677.8	678.3
150°	684.9	685.2	685.4	685.7	685.9	686.1	686.4	686.6
152.5°	696.3	696.7	697.2	697.2	696.7	696.3	695.8	695.4
155°	711.9	712.6	713.2	713.1	712.4	711.6	710.9	710.1
157.5°	725.5	726.3	727.1	726.9	725.9	725.0	724.0	723.0
160°	733.3	734.0	734.8	734.7	733.9	733.0	732.1	731.2
162.5°	740.3	741.2	742.1	742.1	741.3	740.5	739.7	739.0
165°	749.8	750.8	751.8	751.9	751.0	750.1	749.2	748.3
167.5°	757.1	758.1	759.1	759.1	758.1	757.1	756.1	755.0
170°	761.2	762.2	763.2	763.2	762.2	761.2	760.2	759.1
172.5°	763.9	764.9	765.9	765.9	764.8	763.7	762.5	761.4
175°	767.2	768.1	769.0	768.9	767.9	766.9	765.9	764.8
177.5°	768.4	769.2	770.0	769.9	768.9	767.9	766.9	765.9
180°	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7

(END OF REPORT)