

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: P332003

Luminaire Tested: **S123DIP-S1000D365U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332003
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-S1000D365U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5650.4 lumens
Efficiency: N/A
Efficacy: 129.9 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

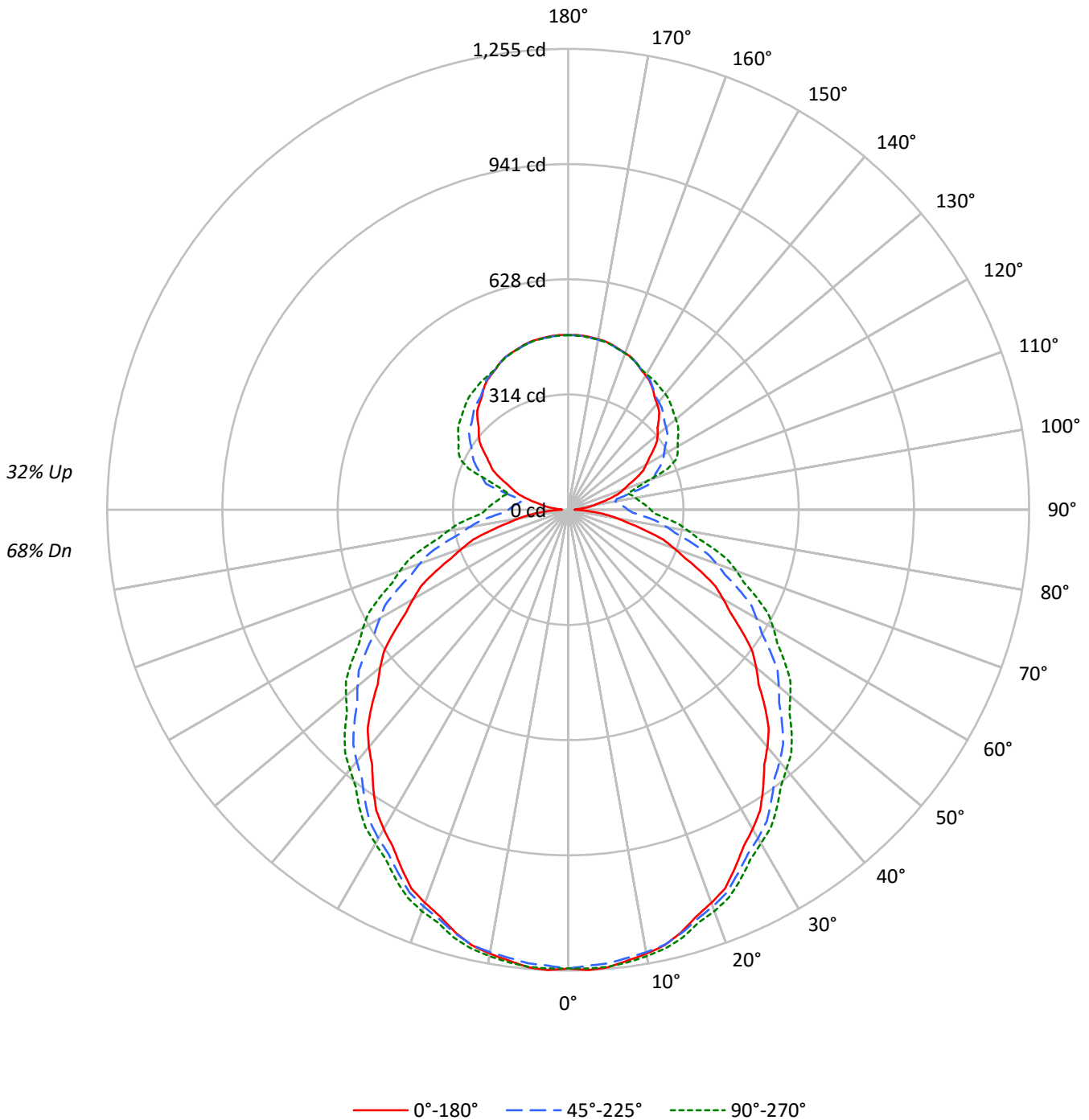
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332003

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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	50	30	10	50	30	10	0		
RCR																										
0	111	111	111	111	105	105	105	105	93	93	93	83	83	83	73	73	73	68								
1	100	95	91	87	94	90	86	82	80	77	74	71	68	66	62	60	59	54								
2	91	82	76	70	85	78	72	66	69	64	60	61	57	54	54	51	48	44								
3	83	72	64	57	77	68	61	55	61	55	50	54	49	45	47	44	40	37								
4	75	64	55	48	71	60	52	46	54	47	42	48	42	38	42	38	35	31								
5	69	57	48	41	65	54	46	40	48	41	36	43	37	33	38	33	30	27								
6	64	51	42	36	60	48	40	34	43	37	32	38	33	29	34	30	26	24								
7	59	46	37	31	55	44	36	30	39	33	28	35	30	25	31	27	23	21								
8	55	42	33	28	51	40	32	27	36	29	25	32	27	23	29	24	21	18								
9	51	38	30	25	48	36	29	24	33	26	22	29	24	20	26	22	19	17								
10	48	35	27	22	45	33	26	21	30	24	20	27	22	18	24	20	17	15								

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	2.1
10°-20°	337.6	6.0
20°-30°	505.0	8.9
30°-40°	603.1	10.7
40°-50°	631.0	11.2
50°-60°	592.1	10.5
60°-70°	494.5	8.8
70°-80°	353.8	6.3
80°-90°	212.3	3.8
90°-100°	149.7	2.6
100°-110°	179.7	3.2
110°-120°	262.9	4.7
120°-130°	289.2	5.1
130°-140°	286.0	5.1
140°-150°	255.4	4.5
150°-160°	203.2	3.6
160°-170°	131.1	2.3
170°-180°	45.2	0.8
0°-30°	961.1	17.0
0°-40°	1564.1	27.7
0°-60°	2787.2	49.3
0°-90°	3847.9	68.1
90°-120°	592.3	10.5
90°-150°	1423.0	25.2
90°-180°	1803.0	31.9
0°-180°	5650.4	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	88	162	208	224	13
95°	36	77	146	189	204	38
105°	116	152	180	157	168	123
115°	204	225	275	310	324	202
125°	282	288	326	354	366	253
135°	349	351	366	391	398	269
145°	401	402	403	414	420	251
155°	441	440	440	442	440	203
165°	465	464	463	466	464	131
175°	476	474	474	476	474	45
180°	476	476	476	476	476	



TEST NUMBER: P332003

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-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	51.5	66.7	81.9	97.2	112.6	128.2	143.8	159.5	175.1	185.4
90°	18.0	33.7	49.3	64.9	80.5	96.5	112.9	129.4	145.8	162.3	172.9
92.5°	23.2	36.3	49.5	62.6	75.8	90.3	106.3	122.2	138.2	154.1	164.7
95°	36.5	45.1	53.7	62.3	70.8	83.0	98.6	114.3	130.0	145.7	155.6
97.5°	56.7	65.9	75.1	84.3	93.5	102.3	110.8	119.3	127.8	136.3	146.0
100°	72.0	83.2	94.5	105.7	117.0	123.4	125.1	126.7	128.4	130.1	139.5
102.5°	89.5	99.4	109.2	119.1	128.9	134.0	134.3	134.5	134.8	135.1	141.7
105°	116.2	124.3	132.4	140.6	148.7	155.7	161.7	167.6	173.5	179.5	174.0
107.5°	143.0	149.8	156.7	163.6	170.4	180.6	194.0	207.5	220.9	234.4	232.3
110°	160.8	166.9	173.0	179.0	185.1	194.6	207.6	220.6	233.5	246.5	251.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	178.9	184.0	189.0	194.0	199.1	207.8	220.3	232.8	245.3	257.8	265.4
115°	204.3	208.4	212.5	216.6	220.7	228.6	240.2	251.8	263.4	275.0	283.0
117.5°	230.0	232.8	235.6	238.5	241.3	248.0	258.6	269.2	279.7	290.3	298.1
120°	245.0	247.2	249.5	251.7	253.9	260.1	270.3	280.6	290.8	301.0	308.6
122.5°	261.4	262.8	264.2	265.5	266.9	272.5	282.3	292.1	301.9	311.7	318.8
125°	282.5	283.2	283.8	284.4	285.1	289.9	299.0	308.1	317.2	326.2	332.8
127.5°	304.3	304.6	305.0	305.3	305.6	309.6	317.2	324.9	332.5	340.1	346.4
130°	317.9	318.2	318.5	318.9	319.2	322.5	328.9	335.2	341.6	348.0	354.0
132.5°	329.8	330.4	330.9	331.5	332.1	334.9	340.0	345.1	350.2	355.3	361.1
135°	349.4	349.5	349.7	349.9	350.1	352.0	355.6	359.2	362.9	366.5	372.2
137.5°	366.1	366.4	366.8	367.1	367.5	368.7	370.7	372.8	374.8	376.9	382.0
140°	376.3	376.8	377.2	377.7	378.2	379.0	380.1	381.3	382.4	383.5	388.4
142.5°	386.7	387.0	387.2	387.4	387.7	388.0	388.4	388.8	389.2	389.7	394.0
145°	401.4	401.6	401.9	402.1	402.4	402.6	402.7	402.9	403.0	403.2	405.8
147.5°	413.8	414.2	414.5	414.9	415.2	415.5	415.7	415.8	416.0	416.1	417.0
150°	422.3	422.5	422.7	423.0	423.2	423.4	423.6	423.7	423.9	424.0	424.2
152.5°	429.9	430.0	430.1	430.2	430.3	430.5	430.5	430.6	430.7	430.8	431.1
155°	440.7	440.5	440.3	440.2	440.0	440.0	440.1	440.1	440.2	440.3	440.7
157.5°	449.0	449.0	449.0	448.9	448.9	448.9	448.8	448.7	448.6	448.6	449.0
160°	454.1	454.0	453.9	453.8	453.8	453.7	453.6	453.5	453.5	453.4	453.8
162.5°	458.9	458.7	458.5	458.3	458.1	457.9	457.8	457.8	457.7	457.6	458.1
165°	464.7	464.4	464.2	464.0	463.7	463.6	463.5	463.4	463.3	463.3	463.9
167.5°	469.2	468.9	468.6	468.3	467.9	467.8	467.8	467.8	467.8	467.8	468.4
170°	471.7	471.4	471.1	470.8	470.5	470.3	470.3	470.3	470.3	470.3	471.0
172.5°	473.4	473.1	472.7	472.3	471.9	471.8	471.8	471.9	472.0	472.0	472.7
175°	475.6	475.2	474.8	474.5	474.1	473.9	474.0	474.1	474.1	474.2	474.8
177.5°	476.2	475.9	475.6	475.3	474.9	474.8	474.9	474.9	475.0	475.1	475.6
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6



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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°	195.8	206.1	216.5	223.2	226.2	229.3	232.3	235.4
90°	183.5	194.1	204.7	211.6	214.7	217.9	221.1	224.3
92.5°	175.2	185.8	196.3	203.0	205.9	208.8	211.6	214.5
95°	165.5	175.5	185.4	191.9	194.9	197.9	200.9	204.0
97.5°	155.6	165.2	174.9	181.3	184.4	187.5	190.6	193.7
100°	148.9	158.3	167.7	173.9	177.0	180.1	183.2	186.3
102.5°	148.3	154.9	161.5	166.3	169.5	172.7	175.8	179.0
105°	168.6	163.2	157.7	156.5	159.3	162.2	165.1	168.0
107.5°	230.2	228.1	226.0	221.1	213.3	205.5	197.7	189.8
110°	257.0	262.3	267.6	265.8	257.0	248.2	239.4	230.6



TEST NUMBER: P332003

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	273.1	280.8	288.4	292.4	292.7	293.0	293.3	293.6
115°	291.1	299.1	307.1	312.5	315.3	318.0	320.7	323.5
117.5°	306.0	313.8	321.6	326.7	329.2	331.6	334.0	336.4
120°	316.2	323.7	331.3	336.2	338.3	340.4	342.5	344.6
122.5°	326.0	333.1	340.3	344.9	347.1	349.3	351.5	353.7
125°	339.3	345.8	352.3	356.7	358.9	361.2	363.5	365.8
127.5°	352.6	358.9	365.1	369.2	371.1	373.0	374.9	376.8
130°	360.1	366.2	372.2	376.1	377.7	379.4	381.1	382.7
132.5°	366.9	372.7	378.5	382.4	384.2	386.0	387.9	389.7
135°	377.9	383.6	389.2	392.7	394.0	395.3	396.5	397.8
137.5°	387.2	392.3	397.5	400.8	402.1	403.5	404.8	406.2
140°	393.3	398.1	403.0	406.1	407.4	408.8	410.1	411.5
142.5°	398.3	402.6	406.9	409.7	411.0	412.3	413.5	414.8
145°	408.3	410.9	413.5	415.4	416.6	417.8	419.0	420.2
147.5°	417.9	418.8	419.7	420.5	421.2	421.9	422.6	423.4
150°	424.4	424.5	424.7	424.9	425.3	425.7	426.0	426.4
152.5°	431.4	431.7	432.0	432.0	431.7	431.5	431.3	431.0
155°	441.1	441.5	441.9	441.8	441.4	440.9	440.4	439.9
157.5°	449.5	450.0	450.5	450.4	449.8	449.2	448.5	447.9
160°	454.3	454.8	455.3	455.2	454.7	454.1	453.6	453.0
162.5°	458.7	459.2	459.7	459.8	459.3	458.8	458.3	457.8
165°	464.5	465.2	465.8	465.8	465.3	464.7	464.2	463.6
167.5°	469.0	469.7	470.3	470.3	469.7	469.0	468.4	467.8
170°	471.6	472.2	472.8	472.8	472.2	471.6	471.0	470.3
172.5°	473.3	473.9	474.5	474.5	473.8	473.1	472.4	471.7
175°	475.3	475.9	476.4	476.4	475.8	475.1	474.5	473.9
177.5°	476.1	476.6	477.1	477.0	476.4	475.8	475.1	474.5
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6

(END OF REPORT)