

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

Luminaire Tested: **S123DIP-S1000D585U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332013
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-S1000D585U835-4F0-1E-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: 6212.6 lumens
Efficiency: N/A
Efficacy: 127.3 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

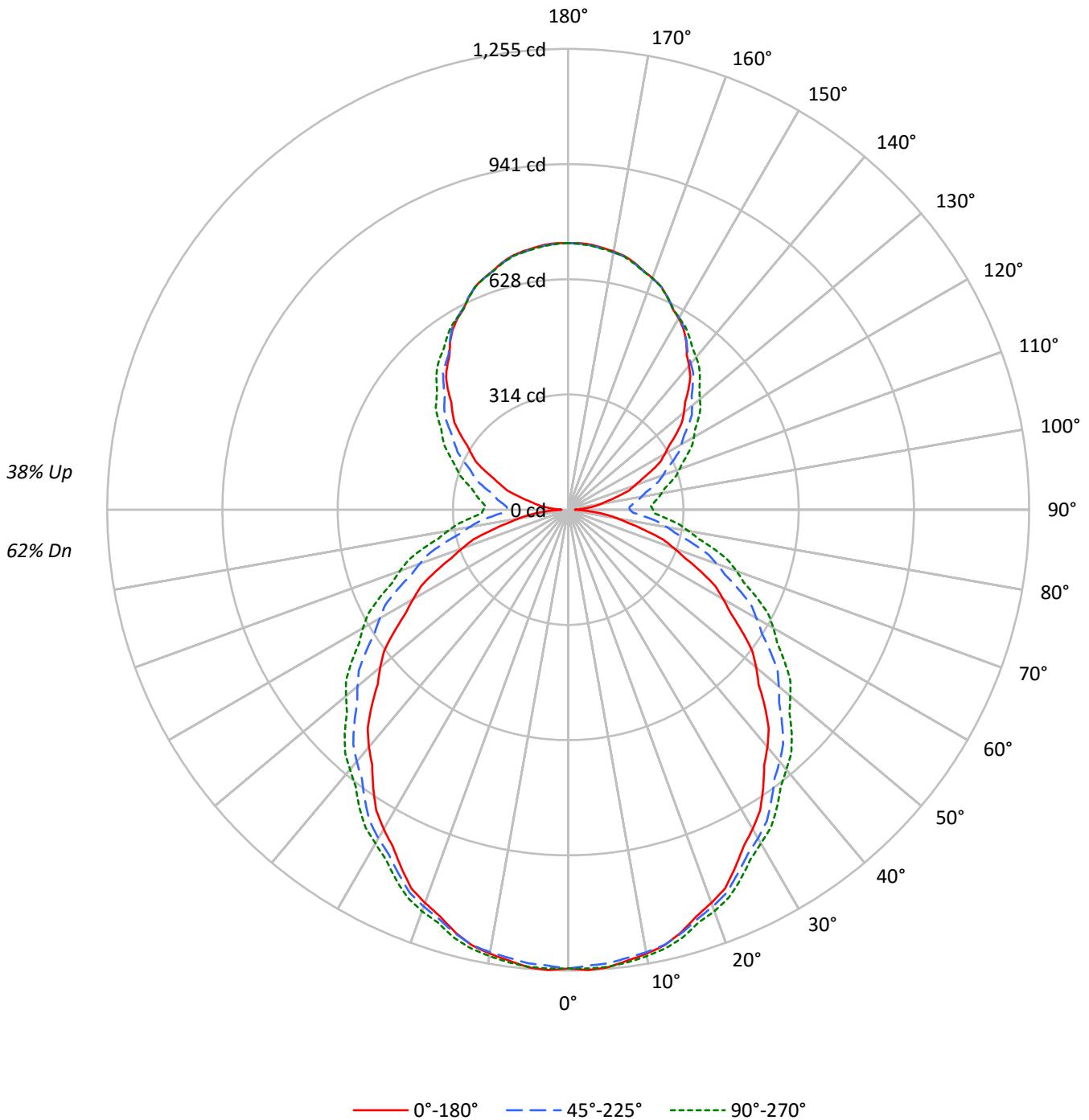
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

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	1.9
10°-20°	337.6	5.4
20°-30°	505.0	8.1
30°-40°	603.1	9.7
40°-50°	631.0	10.2
50°-60°	592.1	9.5
60°-70°	494.5	8.0
70°-80°	353.8	5.7
80°-90°	213.2	3.4
90°-100°	179.7	2.9
100°-110°	238.9	3.8
110°-120°	305.8	4.9
120°-130°	353.9	5.7
130°-140°	372.7	6.0
140°-150°	353.5	5.7
150°-160°	294.6	4.7
160°-170°	196.1	3.2
170°-180°	68.7	1.1
0°-30°	961.1	15.5
0°-40°	1564.1	25.2
0°-60°	2787.2	44.9
0°-90°	3848.8	62.0
90°-120°	724.3	11.7
90°-150°	1804.4	29.0
90°-180°	2364.0	38.1
0°-180°	6212.6	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°	49	106	177	220	235	49
105°	139	175	237	273	288	148
115°	249	269	315	347	359	247
125°	359	363	399	424	432	320
135°	463	466	480	501	507	357
145°	560	560	561	571	575	349
155°	639	639	640	642	638	294
165°	696	695	695	698	694	196
175°	724	722	722	725	722	69
180°	726	726	726	726	726	



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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°	30.4	44.6	58.9	73.1	87.3	102.5	118.6	134.7	150.9	167.0	177.4
95°	48.6	61.3	74.0	86.7	99.4	113.6	129.4	145.3	161.1	177.0	186.8
97.5°	73.1	84.4	95.7	107.0	118.3	131.4	146.3	161.2	176.1	191.0	200.6
100°	89.8	100.3	110.7	121.1	131.6	144.1	158.6	173.2	187.7	202.3	211.4
102.5°	109.3	118.4	127.6	136.8	145.9	157.8	172.3	186.8	201.3	215.8	224.7
105°	139.2	146.7	154.3	161.8	169.3	180.1	194.3	208.4	222.5	236.7	245.2
107.5°	172.7	179.1	185.4	191.7	198.0	207.6	220.4	233.2	246.0	258.8	267.3
110°	193.5	199.2	204.9	210.6	216.3	225.4	237.7	250.1	262.4	274.8	283.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	216.4	221.0	225.6	230.2	234.9	243.0	254.7	266.3	278.0	289.7	297.9
115°	249.2	253.2	257.2	261.3	265.3	272.6	283.2	293.9	304.5	315.1	322.5
117.5°	283.4	285.9	288.4	290.9	293.4	299.6	309.5	319.3	329.2	339.1	346.3
120°	303.8	306.0	308.3	310.6	312.8	318.7	328.0	337.4	346.7	356.0	362.9
122.5°	326.1	327.5	328.8	330.2	331.5	336.7	345.9	355.1	364.3	373.4	379.8
125°	358.9	359.2	359.6	360.0	360.4	364.8	373.4	381.9	390.4	398.9	404.8
127.5°	390.4	390.9	391.4	391.9	392.4	396.1	403.1	410.1	417.1	424.1	429.3
130°	411.3	412.1	412.8	413.5	414.2	417.4	423.0	428.7	434.4	440.1	445.3
132.5°	431.2	432.2	433.2	434.1	435.1	437.8	442.4	446.9	451.5	456.1	461.0
135°	463.0	463.5	463.9	464.4	464.9	466.7	469.9	473.1	476.3	479.5	484.4
137.5°	492.4	492.8	493.2	493.6	494.0	495.3	497.5	499.7	501.9	504.1	508.3
140°	511.9	512.5	513.1	513.8	514.4	515.2	516.3	517.3	518.3	519.4	523.8
142.5°	530.6	531.0	531.4	531.7	532.1	532.5	532.9	533.4	533.8	534.2	538.1
145°	559.8	559.7	559.7	559.6	559.6	559.7	560.1	560.5	560.9	561.3	563.6
147.5°	584.0	584.4	584.9	585.3	585.8	586.2	586.6	586.9	587.3	587.6	588.3
150°	601.8	602.0	602.3	602.5	602.8	603.0	603.3	603.5	603.8	604.0	604.0
152.5°	616.4	616.7	617.1	617.4	617.8	618.0	618.2	618.3	618.5	618.6	618.8
155°	639.4	639.4	639.4	639.4	639.4	639.5	639.6	639.7	639.9	640.0	640.5
157.5°	659.0	658.9	658.7	658.6	658.4	658.4	658.5	658.6	658.7	658.8	659.3
160°	671.3	671.1	670.8	670.6	670.3	670.2	670.2	670.2	670.2	670.2	670.8
162.5°	682.3	681.9	681.6	681.2	680.9	680.8	680.9	681.0	681.1	681.2	681.8
165°	696.4	696.1	695.7	695.3	694.9	694.7	694.7	694.7	694.7	694.7	695.5
167.5°	707.7	707.2	706.7	706.2	705.7	705.5	705.6	705.7	705.8	705.9	706.7
170°	714.1	713.6	713.1	712.6	712.1	711.8	711.8	711.8	711.8	711.8	712.7
172.5°	719.1	718.6	718.1	717.6	717.1	716.9	716.9	716.9	716.9	716.9	717.7
175°	724.4	723.9	723.4	722.9	722.4	722.1	722.1	722.1	722.1	722.1	722.9
177.5°	726.6	726.2	725.8	725.3	724.9	724.7	724.7	724.7	724.7	724.7	725.3
180°	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1



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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°	187.9	198.3	208.8	215.3	217.9	220.6	223.2	225.8
95°	196.7	206.6	216.5	222.9	226.0	229.0	232.0	235.0
97.5°	210.2	219.8	229.4	235.7	238.6	241.6	244.6	247.6
100°	220.6	229.7	238.9	245.1	248.4	251.6	254.9	258.2
102.5°	233.6	242.5	251.4	257.4	260.4	263.3	266.3	269.3
105°	253.6	262.1	270.6	276.3	279.3	282.2	285.2	288.2
107.5°	275.8	284.3	292.8	298.3	300.8	303.3	305.8	308.4
110°	291.5	299.9	308.2	313.5	315.7	317.8	320.0	322.2



TEST NUMBER: P332013

CATALOG NUMBER: S123DIP-S1000D585U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	306.1	314.4	322.6	328.0	330.6	333.2	335.9	338.5
115°	329.9	337.3	344.7	349.5	351.8	354.1	356.4	358.7
117.5°	353.5	360.7	367.8	372.4	374.4	376.4	378.4	380.4
120°	369.7	376.5	383.4	387.7	389.6	391.4	393.3	395.2
122.5°	386.2	392.6	399.0	403.0	404.8	406.6	408.3	410.1
125°	410.6	416.4	422.3	426.0	427.6	429.2	430.8	432.5
127.5°	434.6	439.9	445.2	448.5	450.0	451.5	453.0	454.4
130°	450.5	455.8	461.0	464.1	465.0	466.0	466.9	467.8
132.5°	465.8	470.7	475.6	478.8	480.1	481.5	482.9	484.3
135°	489.4	494.3	499.2	502.3	503.6	504.9	506.1	507.4
137.5°	512.6	516.8	521.1	523.7	524.8	525.8	526.8	527.8
140°	528.2	532.6	537.0	539.5	540.1	540.8	541.4	542.0
142.5°	542.0	546.0	549.9	552.3	553.1	553.9	554.7	555.6
145°	565.9	568.1	570.4	571.9	572.6	573.3	574.0	574.7
147.5°	589.1	589.8	590.5	591.0	591.4	591.7	592.0	592.4
150°	604.0	604.0	604.0	604.0	603.8	603.7	603.5	603.3
152.5°	619.1	619.3	619.5	619.3	618.8	618.2	617.7	617.1
155°	641.0	641.5	642.0	641.8	640.9	640.0	639.2	638.3
157.5°	659.9	660.4	660.9	660.8	660.1	659.4	658.7	658.0
160°	671.5	672.1	672.7	672.8	672.3	671.8	671.3	670.8
162.5°	682.4	683.1	683.7	683.6	682.8	682.0	681.2	680.4
165°	696.3	697.0	697.8	697.7	696.8	695.9	695.1	694.2
167.5°	707.5	708.3	709.1	709.1	708.3	707.5	706.7	705.9
170°	713.6	714.5	715.4	715.4	714.5	713.6	712.7	711.8
172.5°	718.4	719.2	720.0	720.0	719.1	718.2	717.3	716.4
175°	723.6	724.4	725.2	725.1	724.2	723.3	722.4	721.5
177.5°	726.0	726.6	727.2	727.1	726.4	725.7	725.0	724.3
180°	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1

(END OF REPORT)