

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: P332006-927

Luminaire Tested: **S123DIP-S1000D365U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332006-927
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-S1000D365U927-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4412.9 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

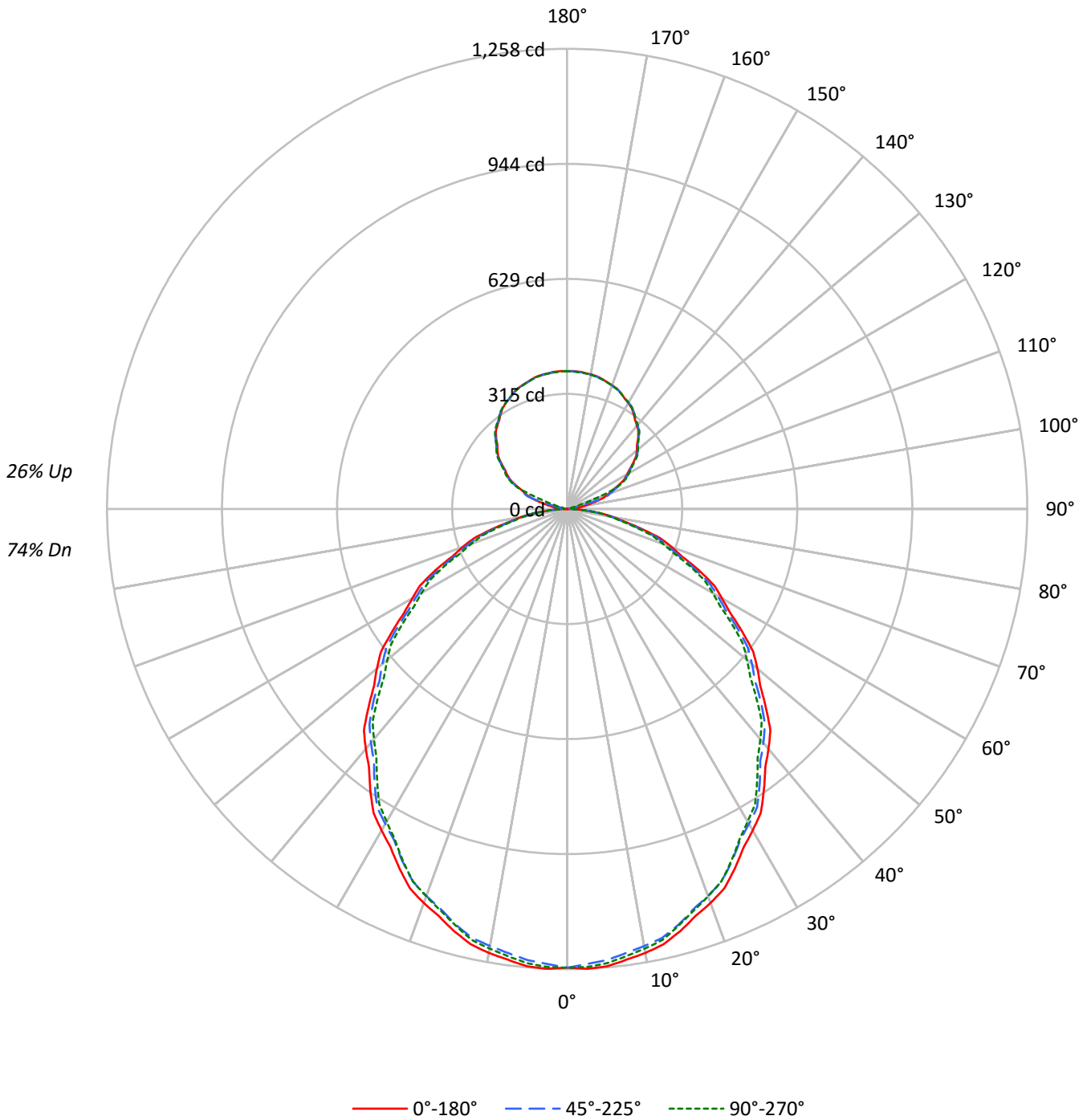
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	113	113	113	113	107	107	107	107	97	97	97		87	87	87		78	78	78	74
1	103	99	94	91	98	94	90	87	85	82	79		77	74	72		69	67	66	62
2	94	86	80	74	89	82	76	71	74	70	66		67	64	60		61	58	55	52
3	86	76	68	62	81	72	65	60	66	60	55		59	55	51		54	50	47	44
4	78	67	59	52	74	64	56	51	58	52	47		53	48	44		48	44	41	38
5	72	60	51	45	68	57	49	44	52	46	41		48	42	38		43	39	35	33
6	67	54	45	39	63	52	44	38	47	41	36		43	38	33		39	35	31	29
7	62	49	40	35	58	47	39	34	43	36	32		39	34	30		36	31	28	25
8	57	44	36	31	54	43	35	30	39	33	28		36	31	27		33	28	25	23
9	53	41	33	28	51	39	32	27	36	30	25		33	28	24		30	26	23	21
10	50	37	30	25	48	36	29	24	33	27	23		31	25	22		28	24	20	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13497	13497	13497
5°	13560	13374	13467
10°	13470	13258	13340
15°	13312	13108	13133
20°	13128	12893	12906
25°	12883	12638	12613
30°	12609	12356	12261
35°	12326	12056	11901
40°	12029	11726	11545
45°	11702	11423	11144
50°	11375	11050	10742
55°	10946	10663	10340
60°	10514	10213	9888
65°	10132	9722	9419
70°	9567	9161	8752
75°	8742	8430	8072
80°	7885	7550	7482
85°	6928	6657	6385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.1	2.7
10°-20°	333.5	7.6
20°-30°	492.7	11.2
30°-40°	575.5	13.0
40°-50°	578.6	13.1
50°-60°	508.2	11.5
60°-70°	378.6	8.6
70°-80°	215.7	4.9
80°-90°	63.0	1.4
90°-100°	13.7	0.3
100°-110°	65.3	1.5
110°-120°	156.8	3.6
120°-130°	199.7	4.5
130°-140°	213.4	4.8
140°-150°	199.5	4.5
150°-160°	160.9	3.6
160°-170°	103.9	2.4
170°-180°	35.8	0.8
0°-30°	944.3	21.4
0°-40°	1519.8	34.4
0°-60°	2606.6	59.1
0°-90°	3263.9	74.0
90°-120°	235.8	5.3
90°-150°	848.4	19.2
90°-180°	1149.0	26.0
0°-180°	4412.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1254	1254	1254	1254	1254	
5°	1255	1249	1238	1248	1246	119
15°	1195	1190	1176	1184	1178	337
25°	1085	1078	1064	1065	1062	499
35°	938	931	918	911	906	587
45°	769	764	750	738	732	593
55°	583	582	568	557	551	522
65°	398	392	382	373	370	392
75°	210	206	203	197	194	225
85°	56	54	54	52	52	62
90°	0	3	7	8	8	4
95°	17	6	9	11	11	21
105°	83	85	61	15	12	88
115°	156	158	161	163	165	154
125°	221	223	224	224	225	197
135°	275	276	277	278	277	211
145°	317	319	319	320	320	198
155°	349	349	349	350	348	161
165°	368	367	367	369	367	104
175°	377	376	376	377	375	36
180°	377	377	377	377	377	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9
2.5°	1258.2	1257.5	1256.7	1255.9	1255.2	1253.7	1251.6	1249.5	1247.4	1245.3	1247.2
5°	1255.0	1253.8	1252.6	1251.4	1250.2	1248.3	1245.7	1243.0	1240.4	1237.8	1240.2
7.5°	1242.7	1241.5	1240.3	1239.1	1237.9	1236.0	1233.3	1230.5	1227.8	1225.0	1227.2
10°	1232.4	1231.2	1229.9	1228.8	1227.6	1225.4	1222.3	1219.2	1216.1	1213.0	1215.1
12.5°	1218.5	1217.6	1216.6	1215.5	1214.6	1212.6	1209.7	1206.7	1203.8	1200.9	1202.5
15°	1194.6	1193.7	1192.7	1191.8	1190.8	1188.7	1185.7	1182.6	1179.4	1176.3	1178.2
17.5°	1166.8	1165.5	1164.3	1163.1	1161.8	1159.7	1156.5	1153.4	1150.3	1147.2	1148.5
20°	1146.1	1144.7	1143.3	1141.8	1140.3	1138.0	1135.0	1131.9	1128.8	1125.6	1126.6
22.5°	1122.8	1121.4	1120.0	1118.5	1117.1	1114.8	1111.7	1108.6	1105.5	1102.3	1103.1
25°	1084.7	1083.2	1081.8	1080.4	1078.9	1076.7	1073.5	1070.4	1067.3	1064.1	1064.4
27.5°	1043.9	1042.5	1041.1	1039.7	1038.3	1035.9	1032.6	1029.3	1025.9	1022.5	1022.7
30°	1014.5	1013.4	1012.2	1011.0	1009.8	1007.5	1004.2	1000.8	997.4	994.1	994.1
32.5°	985.2	983.7	982.1	980.5	978.9	976.8	974.2	971.7	969.1	966.5	965.1
35°	938.0	936.6	935.2	933.7	932.2	930.0	926.9	923.8	920.7	917.5	916.1
37.5°	889.7	887.9	886.1	884.2	882.4	880.0	876.8	873.6	870.4	867.3	865.5
40°	856.1	854.6	853.2	851.8	850.3	848.0	844.5	841.2	837.9	834.5	832.6
42.5°	822.4	820.8	819.2	817.5	815.9	813.4	810.1	806.8	803.4	800.0	798.1
45°	768.7	767.8	766.8	765.9	764.9	762.9	759.8	756.6	753.5	750.4	747.6
47.5°	715.5	714.1	712.7	711.3	710.0	707.7	704.9	702.0	699.0	696.1	693.2
50°	679.3	678.0	676.8	675.7	674.5	672.3	669.2	666.1	663.0	659.9	657.2
52.5°	641.3	640.5	639.7	638.9	638.0	636.0	632.7	629.4	626.1	622.7	620.5
55°	583.3	583.0	582.8	582.6	582.3	580.7	577.6	574.4	571.3	568.2	565.5
57.5°	528.1	527.3	526.5	525.7	524.8	523.2	520.7	518.2	515.7	513.3	510.9
60°	488.4	488.1	487.9	487.7	487.4	485.9	483.0	480.1	477.3	474.4	472.2
62.5°	453.0	452.4	451.8	451.1	450.6	448.9	445.9	443.1	440.2	437.3	435.1
65°	397.8	396.6	395.5	394.3	393.1	391.3	388.9	386.5	384.0	381.7	379.8
67.5°	339.5	338.3	337.3	336.3	335.2	333.7	331.9	330.1	328.3	326.5	324.8
70°	304.0	302.6	301.2	299.8	298.3	296.8	295.4	294.0	292.6	291.1	289.5
72.5°	267.0	265.9	264.8	263.8	262.8	261.4	259.8	258.2	256.5	254.8	253.4
75°	210.2	209.3	208.3	207.4	206.4	205.6	204.9	204.1	203.4	202.7	201.5
77.5°	160.0	159.5	158.9	158.4	157.9	157.2	156.4	155.5	154.6	153.8	153.0
80°	127.2	126.5	125.8	125.1	124.4	123.7	123.3	122.8	122.3	121.8	121.6
82.5°	95.3	95.1	95.1	94.9	94.7	94.6	94.5	94.4	94.3	94.3	93.8
85°	56.1	55.6	55.1	54.7	54.2	53.9	53.9	53.9	53.9	53.9	53.4
87.5°	22.5	22.0	21.5	21.2	20.7	20.4	20.4	20.4	20.4	20.4	20.2
90°	0.3	0.9	1.5	2.1	2.8	3.5	4.3	5.1	5.9	6.7	7.0
92.5°	5.2	5.1	4.8	4.7	4.5	4.8	5.3	5.9	6.6	7.1	7.5
95°	17.1	14.5	12.0	9.4	6.9	5.9	6.7	7.3	8.0	8.7	9.1
97.5°	34.3	33.2	32.0	30.9	29.7	26.9	22.4	18.0	13.5	9.0	9.5
100°	47.3	48.6	49.8	51.0	52.3	48.1	38.3	28.7	18.9	9.3	9.7
102.5°	62.1	63.0	63.8	64.8	65.7	60.8	50.2	39.6	29.0	18.5	16.9
105°	83.4	84.1	84.8	85.5	86.2	83.7	78.1	72.5	66.9	61.3	50.3
107.5°	105.9	106.5	107.0	107.6	108.1	108.8	109.7	110.6	111.5	112.3	104.3
110°	121.0	121.4	121.9	122.4	122.9	123.5	124.2	124.8	125.6	126.3	124.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	135.2	135.7	136.2	136.6	137.0	137.6	138.3	139.0	139.7	140.4	140.4
115°	156.5	156.9	157.2	157.6	158.0	158.4	159.0	159.5	160.1	160.7	161.3
117.5°	177.1	177.5	177.9	178.4	178.9	179.3	179.5	179.8	180.1	180.4	180.9
120°	189.8	190.4	190.9	191.5	192.0	192.4	192.6	192.8	193.0	193.1	193.7
122.5°	202.8	203.3	203.7	204.1	204.6	204.9	205.2	205.4	205.7	205.9	206.3
125°	220.6	221.1	221.6	222.0	222.6	222.9	223.2	223.5	223.7	223.9	224.1
127.5°	237.8	238.4	238.8	239.3	239.8	240.2	240.5	240.8	241.1	241.4	241.6
130°	248.6	249.1	249.5	250.1	250.6	251.0	251.2	251.4	251.7	251.9	252.2
132.5°	258.9	259.4	259.9	260.4	260.9	261.2	261.4	261.7	261.8	262.1	262.3
135°	274.6	275.0	275.4	275.8	276.1	276.4	276.6	276.9	277.2	277.4	277.6
137.5°	288.0	288.5	289.0	289.5	289.9	290.3	290.4	290.5	290.7	290.8	291.1
140°	297.0	297.4	297.8	298.1	298.5	298.8	299.0	299.1	299.4	299.5	299.8
142.5°	305.3	305.7	306.0	306.4	306.8	307.0	307.3	307.4	307.6	307.8	308.0
145°	316.9	317.3	317.7	318.2	318.6	318.9	319.0	319.2	319.2	319.4	319.6
147.5°	327.8	328.1	328.4	328.7	328.9	329.2	329.3	329.4	329.5	329.6	329.8
150°	334.5	334.7	334.9	335.1	335.3	335.4	335.6	335.6	335.8	335.9	336.0
152.5°	340.6	340.6	340.7	340.8	340.9	341.0	341.0	341.1	341.2	341.3	341.5
155°	349.1	349.0	348.8	348.7	348.6	348.6	348.6	348.6	348.7	348.8	349.1
157.5°	355.7	355.7	355.7	355.6	355.6	355.6	355.5	355.5	355.4	355.4	355.7
160°	359.7	359.7	359.6	359.5	359.5	359.4	359.3	359.3	359.3	359.2	359.5
162.5°	363.5	363.4	363.2	363.1	362.9	362.7	362.7	362.7	362.6	362.5	362.9
165°	368.1	367.9	367.7	367.6	367.3	367.3	367.2	367.1	367.0	367.0	367.5
167.5°	371.7	371.5	371.2	371.0	370.7	370.6	370.6	370.6	370.6	370.6	371.1
170°	373.7	373.4	373.2	373.0	372.7	372.6	372.6	372.6	372.6	372.6	373.1
172.5°	375.0	374.8	374.5	374.1	373.8	373.8	373.8	373.8	373.9	373.9	374.5
175°	376.8	376.4	376.1	375.9	375.6	375.4	375.5	375.6	375.6	375.7	376.1
177.5°	377.2	377.0	376.8	376.5	376.2	376.1	376.2	376.2	376.3	376.4	376.8
180°	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9
2.5°	1249.1	1251.1	1253.0	1253.9	1253.6	1253.5	1253.2	1253.1
5°	1242.5	1244.9	1247.4	1248.3	1247.8	1247.4	1246.9	1246.4
7.5°	1229.4	1231.5	1233.7	1234.6	1234.3	1234.1	1233.7	1233.4
10°	1217.3	1219.4	1221.6	1222.4	1221.9	1221.5	1221.0	1220.5
12.5°	1204.0	1205.6	1207.2	1207.8	1207.6	1207.3	1207.0	1206.7
15°	1180.1	1182.0	1184.0	1184.2	1182.8	1181.3	1179.9	1178.5
17.5°	1149.9	1151.2	1152.5	1152.9	1152.5	1151.9	1151.4	1150.9
20°	1127.5	1128.5	1129.5	1129.6	1128.9	1128.1	1127.4	1126.7
22.5°	1103.9	1104.6	1105.4	1105.3	1104.5	1103.5	1102.6	1101.7
25°	1064.6	1064.9	1065.2	1064.9	1064.1	1063.4	1062.7	1062.0
27.5°	1022.9	1023.1	1023.3	1022.9	1022.1	1021.1	1020.3	1019.3
30°	994.1	994.1	994.1	993.2	991.6	989.9	988.2	986.5
32.5°	963.8	962.5	961.2	960.0	959.1	958.1	957.3	956.3
35°	914.7	913.2	911.8	910.5	909.3	908.1	906.9	905.7
37.5°	863.9	862.1	860.4	859.1	858.4	857.6	856.8	856.1
40°	830.7	828.8	826.9	825.4	824.4	823.5	822.5	821.6
42.5°	796.1	794.2	792.3	790.9	790.0	789.0	788.1	787.1
45°	744.7	741.8	738.9	736.9	735.7	734.5	733.3	732.1
47.5°	690.4	687.6	684.8	682.9	681.8	680.7	679.7	678.6
50°	654.6	652.0	649.3	647.3	645.9	644.4	642.9	641.5
52.5°	618.2	616.0	613.8	611.9	610.5	609.0	607.6	606.2
55°	562.9	560.3	557.7	555.7	554.5	553.3	552.2	551.0
57.5°	508.5	506.2	503.8	501.9	500.6	499.2	497.8	496.4
60°	470.1	467.9	465.8	464.1	462.9	461.7	460.5	459.3
62.5°	433.0	430.9	428.6	427.2	426.4	425.6	424.8	424.0
65°	377.9	375.9	374.0	372.7	372.0	371.3	370.5	369.8
67.5°	323.1	321.5	319.8	318.5	317.4	316.4	315.4	314.4
70°	287.7	286.1	284.4	283.0	281.8	280.6	279.4	278.1
72.5°	251.9	250.4	248.9	247.9	247.2	246.6	246.1	245.4
75°	200.3	199.1	197.9	196.9	196.2	195.5	194.8	194.1
77.5°	152.1	151.3	150.5	150.1	150.1	150.1	150.1	150.1
80°	121.4	121.1	120.9	120.7	120.7	120.7	120.7	120.7
82.5°	93.4	92.9	92.5	92.2	92.0	91.8	91.7	91.4
85°	52.9	52.4	52.0	51.7	51.7	51.7	51.7	51.7
87.5°	20.0	19.9	19.7	19.7	19.7	19.7	19.8	19.8
90°	7.2	7.4	7.7	7.9	8.0	8.2	8.2	8.4
92.5°	8.0	8.4	8.8	9.0	9.0	9.1	9.2	9.3
95°	9.6	10.0	10.5	10.6	10.6	10.6	10.6	10.6
97.5°	10.0	10.5	11.0	11.2	11.3	11.4	11.5	11.6
100°	10.2	10.7	11.2	11.5	11.6	11.6	11.7	11.7
102.5°	15.4	13.8	12.3	11.6	11.6	11.7	11.9	12.0
105°	39.3	28.3	17.3	11.8	12.0	12.0	12.2	12.3
107.5°	96.3	88.2	80.1	71.9	63.6	55.3	47.0	38.7
110°	122.2	120.1	118.0	112.6	103.7	94.7	85.9	77.0



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CATALOG NUMBER: S123DIP-S1000D365U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	140.5	140.5	140.5	139.6	137.7	135.9	134.0	132.1
115°	161.9	162.6	163.2	163.6	163.8	164.1	164.4	164.6
117.5°	181.4	181.9	182.4	182.7	182.7	182.8	182.8	182.8
120°	194.2	194.6	195.1	195.4	195.4	195.4	195.4	195.4
122.5°	206.6	207.0	207.3	207.5	207.6	207.6	207.6	207.7
125°	224.2	224.3	224.4	224.6	224.7	224.8	225.0	225.1
127.5°	241.8	242.0	242.2	242.2	242.1	242.0	241.9	241.8
130°	252.5	252.7	252.9	253.0	252.9	252.8	252.6	252.5
132.5°	262.5	262.8	263.0	263.1	262.8	262.7	262.5	262.4
135°	277.8	278.0	278.1	278.1	278.0	277.8	277.6	277.4
137.5°	291.4	291.7	292.0	292.1	291.9	291.8	291.7	291.6
140°	300.0	300.2	300.6	300.6	300.5	300.3	300.2	300.1
142.5°	308.2	308.4	308.6	308.6	308.5	308.2	308.1	307.9
145°	319.6	319.8	319.9	320.0	320.0	320.0	320.0	320.0
147.5°	329.9	330.0	330.2	330.1	329.8	329.5	329.2	328.9
150°	336.2	336.3	336.4	336.4	336.2	336.0	335.8	335.6
152.5°	341.7	342.0	342.2	342.1	341.9	341.6	341.3	341.0
155°	349.4	349.7	350.1	350.0	349.7	349.3	348.9	348.5
157.5°	356.1	356.5	356.9	356.8	356.3	355.8	355.3	354.8
160°	359.9	360.3	360.7	360.6	360.2	359.7	359.3	358.9
162.5°	363.4	363.8	364.2	364.2	363.8	363.5	363.1	362.7
165°	368.0	368.5	369.0	369.0	368.6	368.1	367.7	367.3
167.5°	371.5	372.1	372.6	372.6	372.1	371.5	371.1	370.6
170°	373.6	374.1	374.5	374.5	374.1	373.6	373.1	372.6
172.5°	374.9	375.4	375.9	375.9	375.3	374.8	374.2	373.7
175°	376.5	377.0	377.4	377.4	376.9	376.4	375.9	375.4
177.5°	377.2	377.6	378.0	377.9	377.4	376.9	376.4	375.9
180°	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8

(END OF REPORT)