

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: P332003-935

Luminaire Tested: **S123DIP-S1000D365U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332003-935
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-S1000D365U935-4F0-1E-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: 4865.0 lumens
Efficiency: N/A
Efficacy: 111.8 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

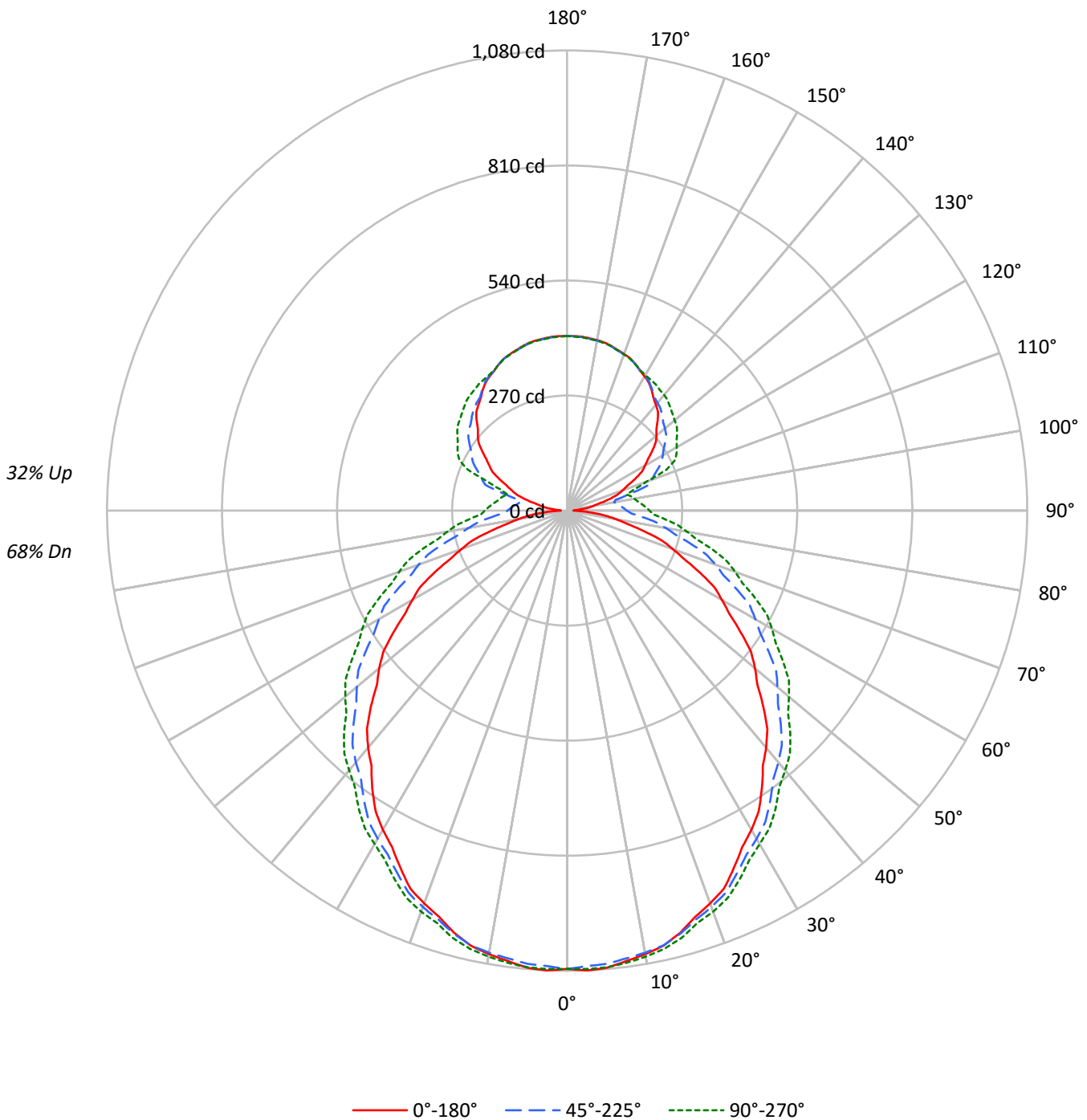
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	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°	11579	11579	11579
5°	11615	11288	11294
10°	11511	11028	10973
15°	11363	10732	10622
20°	11151	10395	10235
25°	10888	10007	9829
30°	10621	9658	9417
35°	10321	9289	9089
40°	10033	8953	8737
45°	9715	8630	8455
50°	9402	8312	8146
55°	9056	7985	7866
60°	8718	7655	7580
65°	8372	7303	7241
70°	7847	6904	6893
75°	7189	6449	6538
80°	6431	6003	6131
85°	5726	5695	5898



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	2.1
10°-20°	290.7	6.0
20°-30°	434.8	8.9
30°-40°	519.2	10.7
40°-50°	543.3	11.2
50°-60°	509.8	10.5
60°-70°	425.8	8.8
70°-80°	304.6	6.3
80°-90°	182.8	3.8
90°-100°	128.9	2.6
100°-110°	154.7	3.2
110°-120°	226.4	4.7
120°-130°	249.0	5.1
130°-140°	246.3	5.1
140°-150°	219.9	4.5
150°-160°	175.0	3.6
160°-170°	112.9	2.3
170°-180°	38.9	0.8
0°-30°	827.5	17.0
0°-40°	1346.7	27.7
0°-60°	2399.8	49.3
0°-90°	3313.1	68.1
90°-120°	510.0	10.5
90°-150°	1225.2	25.2
90°-180°	1552.0	31.9
0°-180°	4865.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1077	1074	1068	1076	1076	102
15°	1025	1029	1028	1039	1038	289
25°	926	937	941	955	956	426
35°	797	815	831	848	853	498
45°	652	680	709	731	741	502
55°	497	536	578	608	619	445
65°	343	389	441	474	488	339
75°	186	242	300	337	353	199
85°	57	116	178	216	230	60
90°	16	76	140	179	193	11
95°	31	66	125	162	176	33
105°	100	131	154	135	145	106
115°	176	193	237	267	278	174
125°	243	248	281	305	315	218
135°	301	302	316	337	342	232
145°	346	347	347	357	362	216
155°	379	379	379	380	379	175
165°	400	399	399	401	399	113
175°	410	408	408	410	408	39
180°	410	410	410	410	410	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1080.5	1079.9	1079.2	1078.6	1078.0	1076.8	1075.1	1073.5	1071.8	1070.1	1071.8
5°	1076.9	1076.4	1075.9	1075.4	1074.9	1073.8	1072.3	1070.7	1069.1	1067.6	1069.6
7.5°	1066.3	1066.5	1066.6	1066.7	1066.8	1066.1	1064.6	1063.1	1061.5	1060.1	1062.6
10°	1057.0	1057.6	1058.1	1058.6	1059.1	1058.7	1057.4	1056.1	1054.8	1053.5	1056.1
12.5°	1045.8	1046.5	1047.2	1047.9	1048.7	1048.6	1047.8	1046.8	1045.9	1045.1	1047.5
15°	1025.4	1026.1	1026.9	1027.7	1028.5	1028.7	1028.5	1028.2	1027.9	1027.7	1030.4
17.5°	999.6	1001.2	1002.7	1004.3	1005.8	1006.6	1006.5	1006.3	1006.3	1006.2	1008.5
20°	980.9	982.4	984.0	985.5	987.1	988.2	988.7	989.2	989.7	990.2	992.6
22.5°	961.1	962.7	964.3	965.9	967.4	968.5	969.3	970.0	970.8	971.5	974.4
25°	925.7	928.3	931.0	933.6	936.2	937.9	938.7	939.4	940.2	941.0	944.3
27.5°	890.1	893.1	896.0	899.1	902.0	904.3	906.0	907.7	909.3	911.0	914.0
30°	864.8	868.2	871.6	874.9	878.4	881.1	883.2	885.3	887.3	889.4	892.6
32.5°	836.7	840.5	844.3	848.1	851.9	855.1	857.9	860.6	863.3	866.0	869.4
35°	796.9	801.0	805.2	809.3	813.6	817.3	820.7	824.1	827.4	830.9	834.7
37.5°	754.7	759.4	764.1	768.7	773.4	777.8	782.0	786.2	790.3	794.5	798.9
40°	726.5	731.2	735.9	740.6	745.3	750.3	755.4	760.7	765.9	771.1	775.5
42.5°	695.6	701.4	707.1	712.8	718.5	724.1	729.5	734.9	740.4	745.8	750.6
45°	651.5	657.8	664.1	670.3	676.6	682.9	689.4	695.9	702.5	708.9	713.9
47.5°	605.4	612.4	619.6	626.6	633.7	641.0	648.4	655.9	663.3	670.8	676.3
50°	575.4	582.6	590.0	597.3	604.5	612.3	620.3	628.4	636.5	644.5	650.5
52.5°	543.5	551.2	559.0	566.6	574.4	582.6	591.6	600.5	609.3	618.3	624.5
55°	496.9	505.5	514.0	522.6	531.2	540.2	549.6	559.0	568.3	577.7	584.8
57.5°	451.4	460.4	469.3	478.3	487.2	496.9	507.1	517.4	527.6	537.9	544.9
60°	419.6	428.9	438.2	447.6	457.0	467.0	477.7	488.4	499.1	509.8	517.0
62.5°	389.5	399.1	408.7	418.3	427.8	438.3	449.6	460.9	472.2	483.5	490.8
65°	343.4	353.5	363.7	373.8	384.0	394.8	406.2	417.7	429.1	440.7	448.4
67.5°	296.4	307.3	318.1	328.8	339.6	350.9	362.5	374.2	385.8	397.5	406.0
70°	263.6	274.8	286.0	297.3	308.5	320.3	332.8	345.3	357.8	370.3	378.7
72.5°	233.7	244.9	256.1	267.3	278.4	290.5	303.4	316.3	329.2	342.2	350.7
75°	186.3	198.5	210.8	223.1	235.3	247.9	261.0	274.0	287.0	300.0	308.6
77.5°	145.1	157.4	169.8	182.1	194.4	207.2	220.3	233.4	246.6	259.7	268.7
80°	116.0	128.8	141.5	154.3	167.0	180.2	193.7	207.3	220.8	234.4	243.2
82.5°	90.7	103.7	116.7	129.6	142.6	155.9	169.7	183.4	197.2	210.9	219.8
85°	57.4	70.4	83.4	96.5	109.5	123.0	136.7	150.5	164.3	178.1	187.0
87.5°	31.3	44.3	57.4	70.5	83.7	96.9	110.4	123.8	137.3	150.8	159.6
90°	15.5	29.0	42.4	55.9	69.3	83.1	97.2	111.4	125.5	139.7	148.9
92.5°	20.0	31.3	42.6	53.9	65.3	77.7	91.5	105.2	119.0	132.7	141.8
95°	31.4	38.8	46.2	53.6	61.0	71.5	84.9	98.4	111.9	125.4	134.0
97.5°	48.8	56.7	64.7	72.6	80.5	88.1	95.4	102.7	110.0	117.4	125.7
100°	62.0	71.6	81.4	91.0	100.7	106.2	107.7	109.1	110.6	112.0	120.1
102.5°	77.1	85.6	94.0	102.5	111.0	115.4	115.6	115.8	116.1	116.3	122.0
105°	100.0	107.0	114.0	121.1	128.0	134.1	139.2	144.3	149.4	154.5	149.8
107.5°	123.1	129.0	134.9	140.9	146.7	155.5	167.0	178.7	190.2	201.8	200.0
110°	138.4	143.7	149.0	154.1	159.4	167.6	178.7	189.9	201.0	212.2	216.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	154.0	158.4	162.7	167.0	171.4	178.9	189.7	200.4	211.2	222.0	228.5
115°	175.9	179.4	183.0	186.5	190.0	196.8	206.8	216.8	226.8	236.8	243.7
117.5°	198.0	200.4	202.9	205.3	207.8	213.5	222.7	231.8	240.8	249.9	256.7
120°	210.9	212.8	214.8	216.7	218.6	223.9	232.7	241.6	250.4	259.2	265.7
122.5°	225.1	226.3	227.5	228.6	229.8	234.6	243.1	251.5	259.9	268.4	274.5
125°	243.2	243.8	244.4	244.9	245.5	249.6	257.4	265.3	273.1	280.9	286.5
127.5°	262.0	262.3	262.6	262.9	263.1	266.6	273.1	279.7	286.3	292.8	298.3
130°	273.7	274.0	274.2	274.6	274.8	277.7	283.2	288.6	294.1	299.6	304.8
132.5°	284.0	284.5	284.9	285.4	285.9	288.3	292.7	297.1	301.5	305.9	310.9
135°	300.8	300.9	301.1	301.3	301.4	303.1	306.2	309.3	312.5	315.6	320.5
137.5°	315.2	315.5	315.8	316.1	316.4	317.5	319.2	321.0	322.7	324.5	328.9
140°	324.0	324.4	324.8	325.2	325.6	326.3	327.3	328.3	329.2	330.2	334.4
142.5°	332.9	333.2	333.4	333.6	333.8	334.1	334.4	334.8	335.1	335.5	339.2
145°	345.6	345.8	346.0	346.2	346.5	346.6	346.7	346.9	347.0	347.2	349.4
147.5°	356.3	356.6	356.9	357.2	357.5	357.7	357.9	358.0	358.2	358.3	359.0
150°	363.6	363.8	363.9	364.2	364.4	364.5	364.7	364.8	365.0	365.1	365.2
152.5°	370.1	370.2	370.3	370.4	370.5	370.7	370.7	370.7	370.8	370.9	371.2
155°	379.4	379.3	379.1	379.0	378.8	378.8	378.9	378.9	379.0	379.1	379.4
157.5°	386.6	386.6	386.6	386.5	386.5	386.5	386.4	386.3	386.2	386.2	386.6
160°	391.0	390.9	390.8	390.7	390.7	390.6	390.5	390.5	390.5	390.4	390.7
162.5°	395.1	394.9	394.8	394.6	394.4	394.3	394.2	394.2	394.1	394.0	394.4
165°	400.1	399.8	399.7	399.5	399.2	399.2	399.1	399.0	398.9	398.9	399.4
167.5°	404.0	403.7	403.5	403.2	402.9	402.8	402.8	402.8	402.8	402.8	403.3
170°	406.1	405.9	405.6	405.4	405.1	404.9	404.9	404.9	404.9	404.9	405.5
172.5°	407.6	407.3	407.0	406.7	406.3	406.2	406.2	406.3	406.4	406.4	407.0
175°	409.5	409.1	408.8	408.5	408.2	408.0	408.1	408.2	408.2	408.3	408.8
177.5°	410.0	409.7	409.5	409.2	408.9	408.8	408.9	408.9	409.0	409.1	409.5
180°	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1073.5	1075.1	1076.8	1077.5	1077.3	1077.1	1076.9	1076.7
5°	1071.7	1073.8	1075.9	1076.8	1076.5	1076.2	1076.0	1075.7
7.5°	1065.2	1067.9	1070.5	1071.6	1071.3	1071.0	1070.7	1070.4
10°	1058.7	1061.3	1063.9	1065.0	1064.5	1063.9	1063.4	1062.9
12.5°	1049.8	1052.2	1054.6	1055.6	1055.1	1054.6	1054.0	1053.5
15°	1032.9	1035.5	1038.1	1039.3	1039.1	1038.8	1038.5	1038.3
17.5°	1010.8	1013.2	1015.5	1016.5	1016.2	1015.8	1015.5	1015.0
20°	994.9	997.2	999.6	1000.9	1001.2	1001.4	1001.7	1001.9
22.5°	977.4	980.3	983.3	984.7	984.6	984.5	984.3	984.1
25°	947.8	951.1	954.5	956.2	956.2	956.2	956.2	956.2
27.5°	916.8	919.7	922.6	924.2	924.5	924.6	924.9	925.1
30°	895.7	898.8	901.9	903.5	903.5	903.5	903.5	903.5
32.5°	872.7	876.0	879.3	881.3	881.9	882.5	883.2	883.8
35°	838.6	842.6	846.4	848.9	850.0	851.0	852.0	853.1
37.5°	803.4	807.8	812.3	814.9	815.7	816.5	817.3	818.2
40°	779.9	784.4	788.8	791.5	792.6	793.6	794.6	795.7
42.5°	755.4	760.3	765.2	768.3	769.7	771.2	772.7	774.1
45°	718.8	723.8	728.8	732.3	734.3	736.4	738.6	740.6
47.5°	681.9	687.5	693.0	696.6	698.3	699.9	701.5	703.1
50°	656.5	662.5	668.5	672.4	674.2	676.1	677.9	679.7
52.5°	630.7	636.9	643.1	647.3	649.5	651.8	654.0	656.3
55°	591.8	598.8	605.9	610.4	612.5	614.6	616.6	618.7
57.5°	552.1	559.1	566.2	571.0	573.4	575.8	578.3	580.7
60°	524.3	531.7	538.9	544.0	546.9	549.7	552.6	555.4
62.5°	498.1	505.4	512.6	517.6	520.3	523.0	525.6	528.3
65°	456.2	464.1	471.8	477.1	479.7	482.2	484.9	487.5
67.5°	414.6	423.1	431.6	437.0	439.2	441.4	443.6	445.7
70°	386.9	395.3	403.6	409.1	411.7	414.3	416.9	419.6
72.5°	359.3	367.8	376.3	381.9	384.5	387.1	389.8	392.4
75°	317.2	325.8	334.3	340.3	343.4	346.5	349.6	352.8
77.5°	277.8	286.9	295.9	301.7	304.0	306.4	308.8	311.3
80°	252.1	261.0	269.8	275.5	278.1	280.7	283.4	285.9
82.5°	228.7	237.5	246.3	252.1	254.7	257.3	259.8	262.5
85°	195.8	204.7	213.5	219.3	221.9	224.5	227.0	229.7
87.5°	168.6	177.5	186.4	192.2	194.8	197.4	200.0	202.7
90°	158.0	167.1	176.2	182.2	184.9	187.6	190.4	193.1
92.5°	150.8	160.0	169.0	174.8	177.3	179.8	182.2	184.7
95°	142.5	151.1	159.6	165.2	167.8	170.4	173.0	175.6
97.5°	134.0	142.2	150.6	156.1	158.8	161.4	164.1	166.8
100°	128.2	136.3	144.4	149.7	152.4	155.1	157.7	160.4
102.5°	127.7	133.4	139.1	143.2	145.9	148.7	151.4	154.1
105°	145.2	140.5	135.8	134.7	137.2	139.7	142.2	144.6
107.5°	198.2	196.4	194.6	190.4	183.7	176.9	170.2	163.4
110°	221.3	225.8	230.4	228.9	221.3	213.7	206.1	198.5



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CATALOG NUMBER: S123DIP-S1000D365U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	235.1	241.8	248.3	251.8	252.0	252.3	252.5	252.8
115°	250.6	257.5	264.4	269.1	271.5	273.8	276.1	278.5
117.5°	263.5	270.2	276.9	281.3	283.4	285.5	287.6	289.6
120°	272.2	278.7	285.2	289.5	291.3	293.1	294.9	296.7
122.5°	280.7	286.8	293.0	297.0	298.9	300.7	302.6	304.5
125°	292.1	297.7	303.3	307.1	309.0	311.0	313.0	315.0
127.5°	303.6	309.0	314.4	317.9	319.5	321.2	322.8	324.4
130°	310.0	315.3	320.5	323.8	325.2	326.7	328.1	329.5
132.5°	315.9	320.9	325.9	329.2	330.8	332.3	334.0	335.5
135°	325.4	330.3	335.1	338.1	339.2	340.4	341.4	342.5
137.5°	333.4	337.8	342.2	345.1	346.2	347.4	348.5	349.7
140°	338.6	342.8	347.0	349.7	350.8	352.0	353.1	354.3
142.5°	342.9	346.6	350.3	352.8	353.9	355.0	356.0	357.1
145°	351.5	353.8	356.0	357.7	358.7	359.7	360.8	361.8
147.5°	359.8	360.6	361.4	362.1	362.7	363.3	363.9	364.5
150°	365.4	365.5	365.7	365.8	366.2	366.5	366.8	367.1
152.5°	371.4	371.7	372.0	372.0	371.7	371.5	371.3	371.1
155°	379.8	380.1	380.5	380.4	380.0	379.6	379.2	378.8
157.5°	387.0	387.4	387.9	387.8	387.3	386.8	386.2	385.6
160°	391.2	391.6	392.0	391.9	391.5	391.0	390.5	390.0
162.5°	394.9	395.4	395.8	395.9	395.5	395.0	394.6	394.2
165°	399.9	400.5	401.1	401.1	400.6	400.1	399.7	399.2
167.5°	403.8	404.4	404.9	404.9	404.4	403.8	403.3	402.8
170°	406.0	406.6	407.1	407.1	406.6	406.0	405.5	404.9
172.5°	407.5	408.0	408.5	408.5	407.9	407.3	406.7	406.1
175°	409.2	409.7	410.2	410.2	409.7	409.1	408.5	408.0
177.5°	409.9	410.4	410.8	410.7	410.2	409.7	409.1	408.5
180°	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5

(END OF REPORT)