

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: P331895

Luminaire Tested: **S123DIP-S340D1025U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331895
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-S340D1025U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5538.2 lumens
Efficiency: N/A
Efficacy: 148.5 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-Indirect

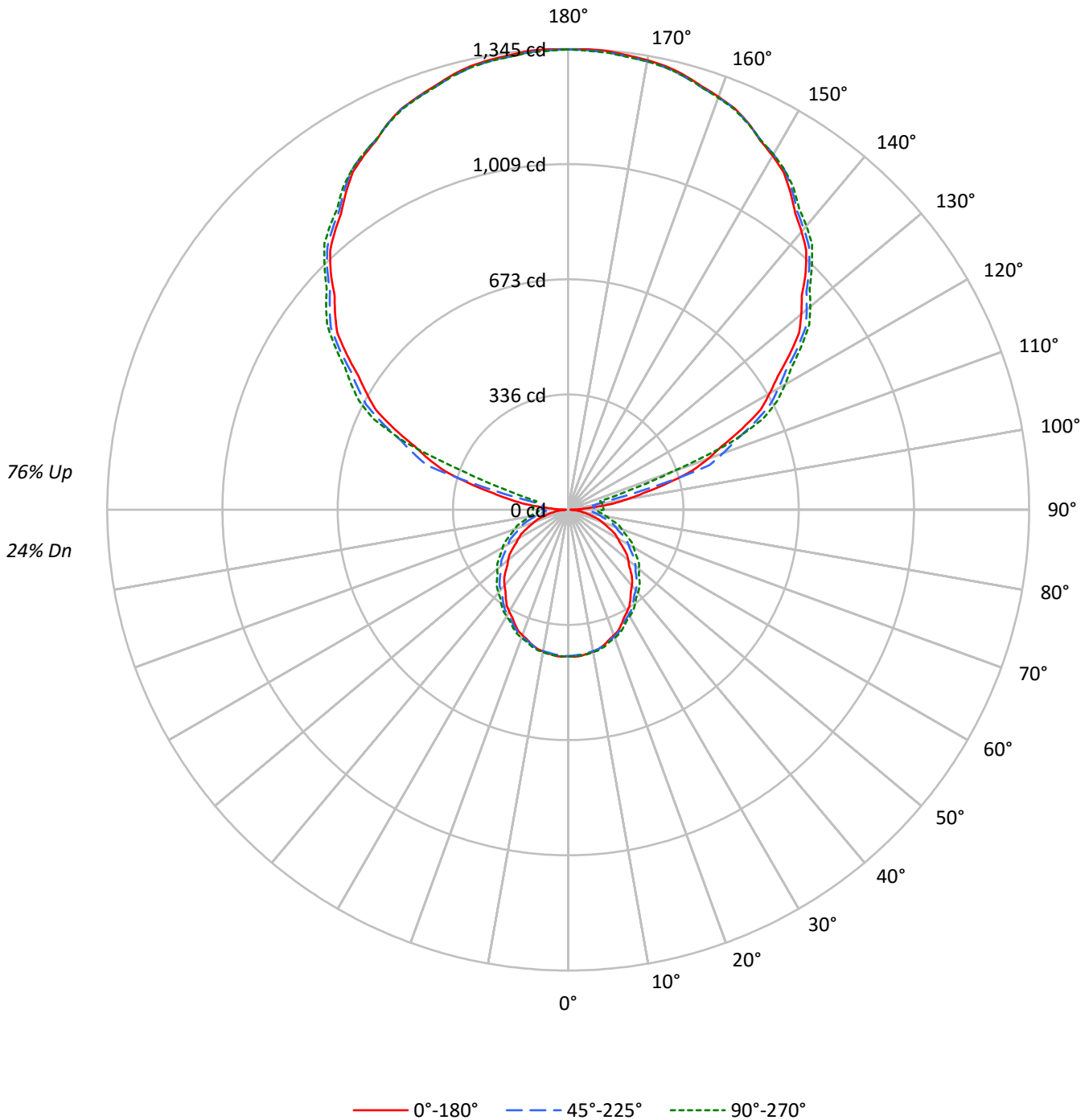
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	0	
RCR																						
0	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24				24
1	91	87	83	80	81	77	74	71	59	57	55	43	41	40	27	27	26	19				19
2	83	76	70	64	73	67	62	58	52	48	45	37	35	33	24	23	21	16				16
3	76	66	59	53	67	59	53	48	45	41	38	33	30	28	21	19	18	13				13
4	69	58	51	45	61	52	45	40	40	35	32	29	26	24	19	17	15	11				11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9				9
6	58	46	38	33	51	41	35	30	32	27	23	23	20	17	15	13	12	8				8
7	53	42	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	7				7
8	49	37	30	25	44	34	27	23	26	21	18	19	16	14	13	11	9	6				6
9	46	34	27	22	41	31	24	20	24	19	16	18	14	12	12	10	8	6				6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	7	5				5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4604	4604	4604
5°	4618	4488	4490
10°	4577	4385	4363
15°	4518	4267	4223
20°	4434	4133	4070
25°	4330	3980	3908
30°	4224	3841	3744
35°	4103	3694	3614
40°	3990	3560	3474
45°	3864	3432	3362
50°	3739	3305	3239
55°	3601	3175	3128
60°	3466	3044	3015
65°	3328	2903	2878
70°	3120	2744	2740
75°	2859	2565	2600
80°	2556	2387	2438
85°	2274	2264	2344



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.5	0.7
10°-20°	115.6	2.1
20°-30°	172.9	3.1
30°-40°	206.5	3.7
40°-50°	216.0	3.9
50°-60°	202.7	3.7
60°-70°	169.3	3.1
70°-80°	121.1	2.2
80°-90°	76.0	1.4
90°-100°	94.2	1.7
100°-110°	266.1	4.8
110°-120°	581.4	10.5
120°-130°	724.8	13.1
130°-140°	766.5	13.8
140°-150°	712.7	12.9
150°-160°	573.9	10.4
160°-170°	370.4	6.7
170°-180°	127.6	2.3
0°-30°	329.0	5.9
0°-40°	535.5	9.7
0°-60°	954.2	17.2
0°-90°	1320.6	23.8
90°-120°	941.7	17.0
90°-150°	3145.7	56.8
90°-180°	4218.0	76.2
0°-180°	5538.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	428	428	428	428	428	
5°	428	427	424	428	428	41
15°	408	409	409	413	413	115
25°	368	373	374	380	380	170
35°	317	324	330	337	339	198
45°	259	270	282	290	294	200
55°	198	213	230	242	246	177
65°	136	155	175	189	194	135
75°	74	96	119	134	140	79
85°	23	46	71	86	91	24
90°	7	40	77	96	103	7
95°	66	46	77	98	103	79
105°	301	318	254	99	96	319
115°	560	573	598	618	626	553
125°	788	796	813	825	830	704
135°	980	986	995	1006	1006	754
145°	1130	1137	1139	1144	1146	707
155°	1245	1243	1244	1248	1243	573
165°	1313	1310	1309	1316	1310	371
175°	1344	1339	1340	1346	1338	128
180°	1344	1344	1344	1344	1344	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	429.6	429.4	429.1	428.9	428.6	428.2	427.5	426.8	426.2	425.5	426.2
5°	428.2	428.0	427.8	427.6	427.4	427.0	426.3	425.7	425.1	424.5	425.3
7.5°	424.0	424.1	424.1	424.1	424.2	423.9	423.3	422.7	422.1	421.5	422.5
10°	420.3	420.5	420.7	420.9	421.1	421.0	420.4	419.9	419.4	418.9	419.9
12.5°	415.8	416.1	416.4	416.7	417.0	416.9	416.6	416.2	415.9	415.5	416.5
15°	407.7	408.0	408.3	408.6	408.9	409.1	408.9	408.8	408.7	408.6	409.7
17.5°	397.5	398.1	398.7	399.3	399.9	400.2	400.2	400.1	400.1	400.1	401.0
20°	390.0	390.6	391.2	391.9	392.5	392.9	393.1	393.3	393.5	393.7	394.7
22.5°	382.2	382.8	383.4	384.0	384.7	385.1	385.4	385.7	386.0	386.3	387.5
25°	368.1	369.1	370.2	371.2	372.2	372.9	373.2	373.5	373.8	374.2	375.5
27.5°	353.9	355.1	356.3	357.5	358.7	359.6	360.2	360.9	361.6	362.2	363.4
30°	343.9	345.2	346.6	347.9	349.3	350.3	351.2	352.0	352.8	353.7	354.9
32.5°	332.7	334.2	335.7	337.2	338.7	340.0	341.1	342.2	343.3	344.3	345.7
35°	316.8	318.5	320.2	321.8	323.5	325.0	326.3	327.7	329.0	330.4	331.9
37.5°	300.1	301.9	303.8	305.7	307.5	309.3	310.9	312.6	314.3	315.9	317.7
40°	288.9	290.8	292.6	294.5	296.3	298.3	300.4	302.5	304.5	306.6	308.4
42.5°	276.6	278.9	281.1	283.4	285.7	287.9	290.1	292.2	294.4	296.5	298.5
45°	259.1	261.6	264.0	266.5	269.0	271.5	274.1	276.7	279.3	281.9	283.9
47.5°	240.7	243.5	246.3	249.2	252.0	254.9	257.8	260.8	263.7	266.7	268.9
50°	228.8	231.7	234.6	237.5	240.4	243.4	246.6	249.9	253.1	256.3	258.7
52.5°	216.1	219.2	222.2	225.3	228.4	231.7	235.2	238.8	242.3	245.8	248.3
55°	197.6	201.0	204.4	207.8	211.2	214.8	218.5	222.3	226.0	229.7	232.5
57.5°	179.5	183.0	186.6	190.2	193.7	197.6	201.6	205.7	209.8	213.9	216.7
60°	166.8	170.5	174.3	178.0	181.7	185.7	190.0	194.2	198.4	202.7	205.6
62.5°	154.9	158.7	162.5	166.3	170.1	174.3	178.8	183.3	187.8	192.3	195.1
65°	136.5	140.6	144.6	148.6	152.7	157.0	161.5	166.1	170.6	175.2	178.3
67.5°	117.9	122.2	126.5	130.7	135.0	139.5	144.1	148.8	153.4	158.1	161.4
70°	104.8	109.3	113.7	118.2	122.6	127.4	132.3	137.3	142.3	147.2	150.6
72.5°	92.9	97.4	101.8	106.3	110.7	115.5	120.6	125.8	130.9	136.1	139.5
75°	74.1	79.0	83.8	88.7	93.6	98.6	103.8	108.9	114.1	119.3	122.7
77.5°	57.7	62.6	67.5	72.4	77.3	82.4	87.6	92.8	98.0	103.3	106.9
80°	46.1	51.2	56.3	61.4	66.4	71.7	77.0	82.4	87.8	93.2	96.7
82.5°	36.1	41.2	46.4	51.5	56.7	62.0	67.5	72.9	78.4	83.9	87.4
85°	22.8	28.0	33.2	38.4	43.5	48.9	54.4	59.8	65.3	70.8	74.3
87.5°	12.6	18.2	23.8	29.4	35.0	40.7	46.6	52.4	58.3	64.2	67.9
90°	7.1	14.3	21.6	28.9	36.2	44.0	52.1	60.3	68.4	76.6	81.0
92.5°	24.3	28.2	32.2	36.1	40.1	45.7	53.1	60.5	67.9	75.2	80.1
95°	66.0	61.0	55.9	50.8	45.8	47.0	54.5	62.0	69.6	77.1	81.8
97.5°	126.9	126.5	126.1	125.6	125.2	119.4	108.3	97.2	86.0	74.9	79.8
100°	172.9	180.6	188.4	196.1	203.9	192.8	163.0	133.2	103.3	73.5	78.3
102.5°	225.2	231.4	237.6	243.7	249.9	236.4	203.3	170.2	137.1	104.0	101.4
105°	301.2	306.1	311.0	316.0	320.9	315.6	300.1	284.6	269.1	253.5	217.2
107.5°	380.9	384.9	389.0	393.1	397.1	402.8	410.2	417.6	425.0	432.3	406.3
110°	434.0	437.6	441.3	444.9	448.5	453.7	460.2	466.8	473.4	480.0	475.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	485.1	488.2	491.4	494.5	497.6	502.4	508.8	515.2	521.6	528.1	530.8
115°	560.3	562.9	565.4	568.0	570.6	574.7	580.5	586.2	591.9	597.6	602.3
117.5°	633.5	635.9	638.3	640.7	643.1	646.6	651.1	655.6	660.1	664.6	668.9
120°	678.6	681.1	683.6	686.1	688.7	692.0	696.0	700.1	704.2	708.3	712.4
122.5°	724.9	726.8	728.7	730.7	732.6	735.6	739.7	743.8	747.8	751.9	755.5
125°	787.9	789.7	791.5	793.3	795.0	797.9	801.8	805.6	809.5	813.4	816.0
127.5°	849.4	851.1	852.8	854.4	856.1	858.7	862.3	865.8	869.4	872.9	875.7
130°	887.8	889.4	891.1	892.8	894.4	896.8	899.7	902.7	905.6	908.6	911.4
132.5°	924.1	925.9	927.6	929.4	931.1	933.2	935.6	937.9	940.3	942.7	945.4
135°	980.1	981.3	982.6	983.8	985.0	986.6	988.7	990.7	992.7	994.8	997.3
137.5°	1027.9	1029.5	1031.1	1032.7	1034.3	1035.7	1036.8	1038.0	1039.1	1040.2	1042.9
140°	1059.5	1060.8	1062.2	1063.5	1064.8	1066.0	1067.0	1067.9	1068.9	1069.9	1072.3
142.5°	1089.0	1090.3	1091.5	1092.8	1094.0	1095.0	1095.8	1096.5	1097.2	1097.9	1100.0
145°	1130.4	1131.8	1133.3	1134.7	1136.2	1137.1	1137.6	1138.0	1138.4	1138.9	1140.2
147.5°	1168.8	1169.9	1170.9	1171.9	1172.9	1173.6	1174.1	1174.5	1175.0	1175.4	1176.1
150°	1192.8	1193.5	1194.1	1194.8	1195.4	1196.0	1196.4	1196.9	1197.3	1197.8	1198.2
152.5°	1214.3	1214.7	1215.0	1215.3	1215.6	1215.9	1216.1	1216.4	1216.7	1216.9	1217.7
155°	1244.7	1244.2	1243.8	1243.4	1242.9	1242.8	1243.0	1243.2	1243.5	1243.7	1244.8
157.5°	1268.2	1268.2	1268.2	1268.1	1268.1	1267.9	1267.7	1267.5	1267.3	1267.0	1268.4
160°	1282.6	1282.4	1282.2	1282.0	1281.7	1281.5	1281.3	1281.1	1280.8	1280.6	1282.0
162.5°	1296.2	1295.6	1295.0	1294.5	1293.9	1293.5	1293.3	1293.0	1292.8	1292.6	1294.1
165°	1312.6	1311.9	1311.2	1310.6	1309.9	1309.5	1309.2	1309.0	1308.8	1308.6	1310.3
167.5°	1325.3	1324.5	1323.6	1322.7	1321.8	1321.3	1321.3	1321.3	1321.3	1321.3	1323.1
170°	1332.5	1331.6	1330.8	1329.9	1329.0	1328.5	1328.5	1328.5	1328.5	1328.5	1330.3
172.5°	1337.3	1336.3	1335.2	1334.1	1333.1	1332.6	1332.8	1333.0	1333.1	1333.3	1335.1
175°	1343.5	1342.4	1341.3	1340.2	1339.1	1338.6	1338.8	1339.1	1339.3	1339.5	1341.1
177.5°	1345.1	1344.2	1343.3	1342.4	1341.6	1341.2	1341.4	1341.6	1341.7	1341.9	1343.3
180°	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	426.8	427.5	428.2	428.4	428.4	428.3	428.2	428.1
5°	426.1	427.0	427.8	428.2	428.1	427.9	427.8	427.7
7.5°	423.6	424.6	425.6	426.1	426.0	425.8	425.7	425.6
10°	421.0	422.0	423.0	423.4	423.2	423.0	422.8	422.6
12.5°	417.4	418.4	419.3	419.7	419.5	419.3	419.1	418.9
15°	410.7	411.7	412.8	413.2	413.1	413.0	412.9	412.8
17.5°	401.9	402.9	403.8	404.2	404.0	403.9	403.8	403.6
20°	395.6	396.5	397.5	398.0	398.1	398.2	398.3	398.4
22.5°	388.6	389.8	391.0	391.6	391.5	391.4	391.4	391.3
25°	376.8	378.2	379.5	380.2	380.2	380.2	380.2	380.2
27.5°	364.5	365.7	366.9	367.5	367.6	367.7	367.7	367.8
30°	356.1	357.4	358.6	359.2	359.2	359.2	359.2	359.2
32.5°	347.0	348.3	349.6	350.4	350.7	350.9	351.2	351.4
35°	333.5	335.0	336.6	337.6	338.0	338.4	338.8	339.2
37.5°	319.4	321.2	323.0	324.0	324.3	324.7	325.0	325.3
40°	310.1	311.9	313.6	314.7	315.1	315.6	316.0	316.4
42.5°	300.4	302.3	304.2	305.5	306.1	306.6	307.2	307.8
45°	285.8	287.8	289.8	291.2	292.0	292.8	293.7	294.5
47.5°	271.1	273.4	275.6	277.0	277.6	278.3	278.9	279.6
50°	261.0	263.4	265.8	267.4	268.1	268.8	269.5	270.3
52.5°	250.8	253.2	255.7	257.4	258.3	259.2	260.0	260.9
55°	235.3	238.1	240.9	242.7	243.5	244.4	245.2	246.0
57.5°	219.5	222.3	225.1	227.0	228.0	229.0	230.0	230.9
60°	208.5	211.4	214.3	216.3	217.4	218.6	219.7	220.9
62.5°	198.0	200.9	203.8	205.8	206.9	207.9	209.0	210.1
65°	181.4	184.5	187.6	189.7	190.7	191.8	192.8	193.8
67.5°	164.8	168.2	171.6	173.8	174.6	175.5	176.4	177.2
70°	153.9	157.2	160.5	162.7	163.7	164.7	165.8	166.8
72.5°	142.8	146.2	149.6	151.9	152.9	153.9	155.0	156.0
75°	126.1	129.5	133.0	135.3	136.5	137.8	139.0	140.3
77.5°	110.5	114.1	117.7	119.9	120.9	121.9	122.8	123.8
80°	100.2	103.8	107.3	109.5	110.6	111.6	112.7	113.7
82.5°	90.9	94.4	98.0	100.2	101.3	102.3	103.3	104.4
85°	77.9	81.4	84.9	87.2	88.2	89.3	90.3	91.3
87.5°	71.5	75.2	78.9	81.4	82.5	83.6	84.7	85.9
90°	85.4	89.8	94.2	97.2	98.7	100.1	101.6	103.1
92.5°	84.9	89.8	94.7	97.7	98.9	100.1	101.3	102.6
95°	86.6	91.4	96.1	99.0	100.1	101.1	102.1	103.2
97.5°	84.6	89.5	94.4	97.4	98.7	99.9	101.2	102.4
100°	83.0	87.8	92.6	95.6	96.9	98.1	99.4	100.6
102.5°	98.8	96.2	93.7	93.1	94.5	96.0	97.4	98.8
105°	180.8	144.5	108.1	90.6	92.0	93.4	94.7	96.1
107.5°	380.3	354.3	328.3	300.9	272.3	243.6	214.9	186.2
110°	470.7	466.1	461.5	443.7	412.8	381.9	351.0	320.2



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CATALOG NUMBER: S123DIP-S340D1025U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	533.5	536.3	539.0	537.5	531.7	525.9	520.1	514.4
115°	607.0	611.7	616.4	619.7	621.4	623.1	624.8	626.5
117.5°	673.1	677.4	681.6	684.2	685.2	686.2	687.2	688.1
120°	716.6	720.8	724.9	727.4	728.1	728.8	729.5	730.3
122.5°	759.0	762.6	766.1	768.3	769.2	770.1	771.0	771.9
125°	818.7	821.3	823.9	825.8	827.0	828.1	829.3	830.5
127.5°	878.4	881.2	884.0	885.5	885.7	886.0	886.2	886.5
130°	914.3	917.1	920.0	921.5	921.7	921.9	922.1	922.2
132.5°	948.2	951.0	953.7	955.2	955.2	955.3	955.4	955.5
135°	999.8	1002.3	1004.9	1006.1	1005.9	1005.8	1005.6	1005.5
137.5°	1045.6	1048.3	1051.0	1052.4	1052.5	1052.6	1052.6	1052.7
140°	1074.8	1077.2	1079.6	1080.9	1081.0	1081.0	1081.1	1081.2
142.5°	1102.1	1104.2	1106.3	1107.3	1107.2	1107.1	1107.0	1106.9
145°	1141.4	1142.7	1144.0	1144.8	1145.2	1145.6	1146.1	1146.5
147.5°	1176.8	1177.5	1178.2	1178.2	1177.6	1176.9	1176.3	1175.6
150°	1198.7	1199.1	1199.6	1199.5	1199.1	1198.6	1198.2	1197.7
152.5°	1218.5	1219.3	1220.1	1220.0	1219.1	1218.1	1217.1	1216.1
155°	1245.9	1247.0	1248.1	1248.0	1246.7	1245.4	1244.0	1242.7
157.5°	1269.7	1271.0	1272.4	1272.2	1270.4	1268.7	1267.0	1265.3
160°	1283.3	1284.6	1285.9	1285.8	1284.3	1282.7	1281.2	1279.6
162.5°	1295.6	1297.1	1298.6	1298.7	1297.3	1295.9	1294.6	1293.2
165°	1312.1	1313.9	1315.7	1315.8	1314.2	1312.7	1311.1	1309.6
167.5°	1324.9	1326.7	1328.4	1328.4	1326.7	1324.9	1323.1	1321.3
170°	1332.1	1333.9	1335.6	1335.6	1333.9	1332.1	1330.3	1328.5
172.5°	1336.9	1338.6	1340.4	1340.3	1338.4	1336.4	1334.5	1332.5
175°	1342.6	1344.2	1345.7	1345.6	1343.8	1342.1	1340.3	1338.5
177.5°	1344.7	1346.2	1347.6	1347.4	1345.6	1343.9	1342.1	1340.3
180°	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5

(END OF REPORT)