

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: P331904-935

Luminaire Tested: **S123DIP-S340D1195U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331904-935
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-S340D1195U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5347.3 lumens
Efficiency: N/A
Efficacy: 126.7 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

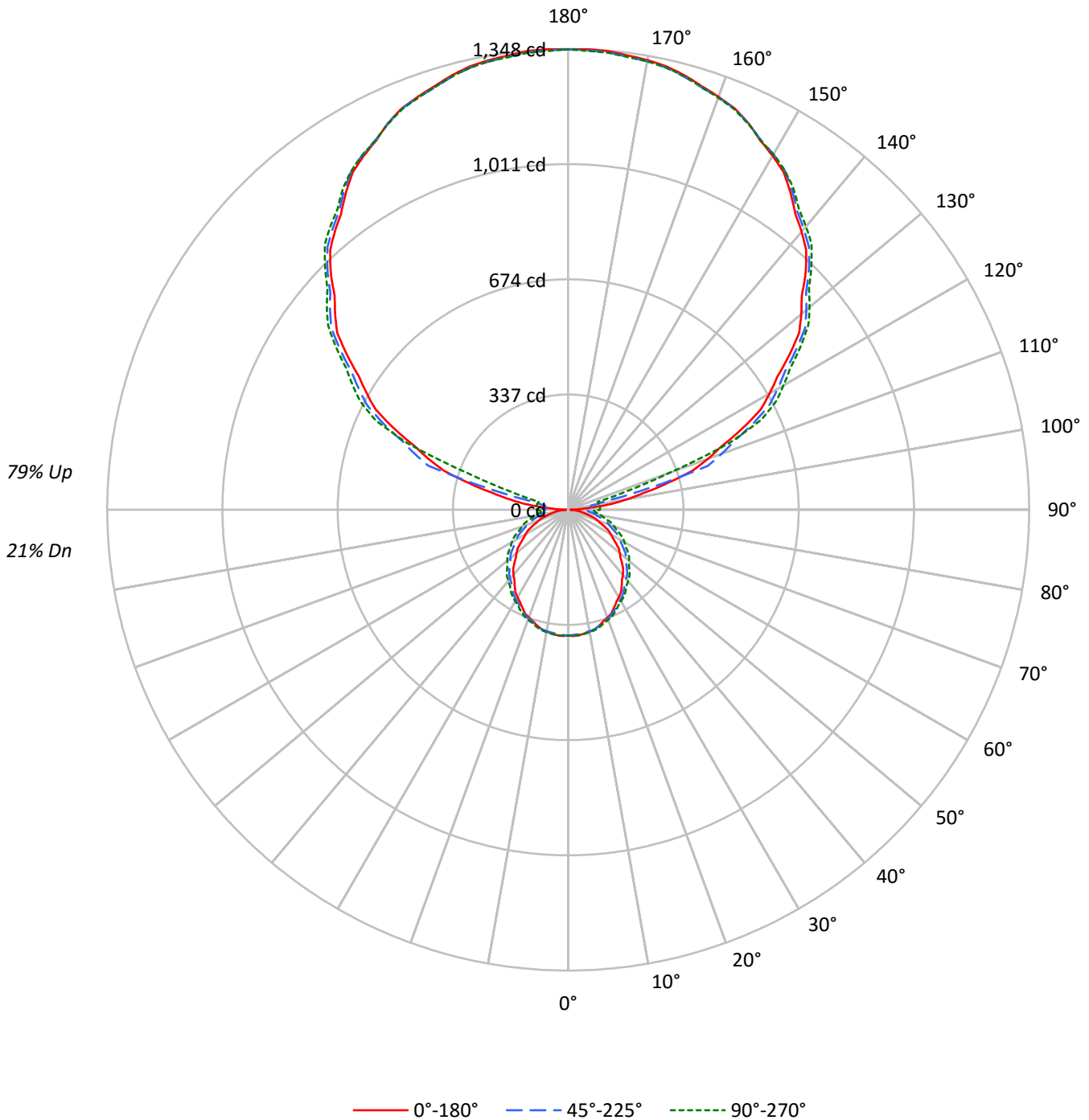
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	21
1	91	87	83	79	80	77	73	71	58	56	54	41	40	39	25	25	24	17
2	83	75	69	64	73	67	62	57	51	47	44	36	34	32	22	21	20	14
3	75	66	59	53	66	58	52	48	44	40	37	31	29	27	19	18	17	12
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	10
5	63	51	44	38	55	46	39	34	35	30	27	25	22	19	15	14	12	8
6	58	46	38	33	51	41	34	29	31	27	23	22	19	17	14	12	11	7
7	53	41	34	28	47	37	30	25	28	24	20	20	17	15	13	11	9	6
8	49	37	30	25	43	33	27	22	26	21	18	18	15	13	12	10	8	6
9	46	34	27	22	40	30	24	20	23	19	16	17	14	12	11	9	8	5
10	42	31	24	19	37	28	22	17	21	17	14	15	12	10	10	8	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3963	3963	3963
5°	3977	3865	3866
10°	3941	3776	3757
15°	3890	3674	3636
20°	3818	3559	3504
25°	3728	3427	3365
30°	3637	3307	3224
35°	3533	3181	3112
40°	3435	3065	2991
45°	3327	2955	2895
50°	3219	2846	2789
55°	3100	2734	2693
60°	2984	2620	2596
65°	2865	2499	2479
70°	2685	2362	2359
75°	2462	2208	2239
80°	2201	2054	2100
85°	1955	1950	2018



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	0.7
10°-20°	99.5	1.9
20°-30°	148.9	2.8
30°-40°	177.8	3.3
40°-50°	186.0	3.5
50°-60°	174.5	3.3
60°-70°	145.8	2.7
70°-80°	104.3	2.0
80°-90°	66.0	1.2
90°-100°	88.0	1.6
100°-110°	262.0	4.9
110°-120°	579.6	10.8
120°-130°	724.5	13.5
130°-140°	767.4	14.4
140°-150°	714.0	13.4
150°-160°	575.1	10.8
160°-170°	371.2	6.9
170°-180°	127.9	2.4
0°-30°	283.3	5.3
0°-40°	461.0	8.6
0°-60°	821.6	15.4
0°-90°	1137.6	21.3
90°-120°	929.5	17.4
90°-150°	3135.5	58.6
90°-180°	4210.0	78.7
0°-180°	5347.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	368	368	368	368	368	
5°	369	368	366	368	368	35
15°	351	352	352	356	355	99
25°	317	321	322	327	327	146
35°	273	279	284	290	292	171
45°	223	233	243	250	254	172
55°	170	183	198	208	212	152
65°	118	133	151	162	167	116
75°	64	83	103	116	121	68
85°	20	40	61	74	79	21
90°	6	36	69	86	93	6
95°	65	43	71	89	94	79
105°	301	317	249	93	89	319
115°	561	573	596	614	622	554
125°	790	798	813	823	828	705
135°	982	988	996	1006	1005	756
145°	1133	1139	1141	1146	1148	709
155°	1247	1246	1246	1251	1245	574
165°	1315	1313	1311	1319	1312	371
175°	1346	1342	1342	1349	1341	128
180°	1346	1346	1346	1346	1346	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	369.9	369.7	369.5	369.3	369.0	368.7	368.1	367.5	367.0	366.4	367.0
5°	368.7	368.5	368.3	368.2	368.0	367.6	367.0	366.5	366.0	365.5	366.2
7.5°	365.1	365.2	365.2	365.2	365.2	365.0	364.5	363.9	363.4	362.9	363.8
10°	361.9	362.1	362.2	362.4	362.6	362.5	362.0	361.5	361.1	360.7	361.5
12.5°	358.0	358.3	358.5	358.8	359.0	359.0	358.7	358.3	358.1	357.7	358.6
15°	351.0	351.3	351.5	351.8	352.1	352.2	352.1	352.0	351.9	351.8	352.8
17.5°	342.2	342.8	343.3	343.8	344.3	344.6	344.6	344.5	344.5	344.5	345.3
20°	335.8	336.3	336.8	337.4	337.9	338.3	338.5	338.6	338.8	339.0	339.8
22.5°	329.1	329.6	330.1	330.6	331.2	331.6	331.8	332.1	332.3	332.6	333.6
25°	316.9	317.8	318.7	319.6	320.5	321.1	321.3	321.6	321.8	322.2	323.3
27.5°	304.7	305.7	306.8	307.8	308.8	309.6	310.1	310.7	311.3	311.9	312.9
30°	296.1	297.2	298.4	299.5	300.7	301.6	302.4	303.1	303.8	304.5	305.6
32.5°	286.5	287.7	289.0	290.3	291.6	292.7	293.7	294.6	295.6	296.4	297.6
35°	272.8	274.2	275.7	277.1	278.5	279.8	280.9	282.1	283.3	284.5	285.8
37.5°	258.4	259.9	261.6	263.2	264.8	266.3	267.7	269.1	270.6	272.0	273.5
40°	248.7	250.4	251.9	253.6	255.1	256.8	258.6	260.5	262.2	264.0	265.5
42.5°	238.2	240.1	242.0	244.0	246.0	247.9	249.8	251.6	253.5	255.3	257.0
45°	223.1	225.2	227.3	229.5	231.6	233.8	236.0	238.2	240.5	242.7	244.4
47.5°	207.2	209.7	212.1	214.6	217.0	219.5	222.0	224.5	227.0	229.6	231.5
50°	197.0	199.5	202.0	204.5	207.0	209.6	212.3	215.2	217.9	220.7	222.7
52.5°	186.1	188.7	191.3	194.0	196.7	199.5	202.5	205.6	208.6	211.6	213.8
55°	170.1	173.1	176.0	178.9	181.8	184.9	188.1	191.4	194.6	197.8	200.2
57.5°	154.5	157.6	160.7	163.8	166.8	170.1	173.6	177.1	180.6	184.2	186.6
60°	143.6	146.8	150.1	153.3	156.4	159.9	163.6	167.2	170.8	174.5	177.0
62.5°	133.4	136.6	139.9	143.2	146.5	150.1	153.9	157.8	161.7	165.6	168.0
65°	117.5	121.1	124.5	127.9	131.5	135.2	139.1	143.0	146.9	150.8	153.5
67.5°	101.5	105.2	108.9	112.5	116.2	120.1	124.1	128.1	132.1	136.1	139.0
70°	90.2	94.1	97.9	101.8	105.6	109.7	113.9	118.2	122.5	126.7	129.7
72.5°	80.0	83.9	87.6	91.5	95.3	99.4	103.8	108.3	112.7	117.2	120.1
75°	63.8	68.0	72.2	76.4	80.6	84.9	89.4	93.8	98.2	102.7	105.6
77.5°	49.7	53.9	58.1	62.3	66.6	70.9	75.4	79.9	84.4	88.9	92.0
80°	39.7	44.1	48.5	52.9	57.2	61.7	66.3	70.9	75.6	80.2	83.3
82.5°	31.1	35.5	40.0	44.3	48.8	53.4	58.1	62.8	67.5	72.2	75.3
85°	19.6	24.1	28.6	33.1	37.5	42.1	46.8	51.5	56.2	61.0	64.0
87.5°	10.8	15.8	20.7	25.5	30.4	35.4	40.6	45.6	50.8	55.9	59.2
90°	6.2	12.8	19.4	26.0	32.5	39.6	47.0	54.5	61.9	69.3	73.3
92.5°	23.5	26.8	30.1	33.5	36.8	41.8	48.4	55.1	61.7	68.4	72.8
95°	65.4	59.8	54.2	48.6	42.9	43.5	50.3	57.1	63.9	70.7	75.1
97.5°	126.6	125.6	124.7	123.7	122.8	116.4	104.5	92.7	80.8	69.1	73.4
100°	172.6	179.9	187.3	194.6	201.8	190.2	159.6	129.1	98.5	67.9	72.2
102.5°	225.2	230.9	236.7	242.5	248.2	234.2	200.4	166.5	132.7	98.8	95.8
105°	301.3	305.9	310.5	315.0	319.6	313.8	297.6	281.5	265.4	249.2	212.3
107.5°	381.3	385.0	388.8	392.6	396.3	401.7	408.5	415.3	422.0	428.8	402.3
110°	434.5	437.9	441.3	444.7	448.1	452.8	458.8	464.8	470.8	476.8	471.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	485.8	488.7	491.6	494.6	497.4	501.9	507.7	513.6	519.4	525.3	527.7
115°	561.2	563.6	566.0	568.4	570.8	574.6	579.8	585.0	590.2	595.5	599.8
117.5°	634.6	636.8	639.1	641.4	643.8	647.0	650.9	655.0	659.0	663.1	666.9
120°	679.8	682.3	684.8	687.2	689.6	692.7	696.2	699.8	703.4	707.1	710.9
122.5°	726.3	728.1	730.0	731.8	733.7	736.5	740.1	743.8	747.4	751.1	754.3
125°	789.5	791.3	793.0	794.8	796.6	799.2	802.7	806.2	809.6	813.1	815.4
127.5°	851.1	852.7	854.5	856.2	857.8	860.3	863.5	866.7	869.9	873.1	875.6
130°	889.5	891.1	892.9	894.6	896.2	898.5	901.1	903.8	906.5	909.1	911.7
132.5°	926.0	927.7	929.5	931.3	933.0	935.0	937.1	939.3	941.4	943.5	946.1
135°	982.1	983.3	984.6	985.8	987.1	988.7	990.5	992.4	994.3	996.1	998.4
137.5°	1030.0	1031.7	1033.3	1034.9	1036.6	1037.8	1038.9	1039.9	1040.9	1042.0	1044.5
140°	1061.7	1063.1	1064.4	1065.7	1067.0	1068.2	1069.1	1070.1	1071.0	1071.9	1074.2
142.5°	1091.3	1092.6	1093.9	1095.1	1096.4	1097.4	1098.1	1098.8	1099.6	1100.3	1102.2
145°	1132.7	1134.2	1135.7	1137.1	1138.6	1139.6	1140.1	1140.5	1140.9	1141.3	1142.5
147.5°	1171.4	1172.4	1173.5	1174.4	1175.4	1176.2	1176.6	1177.1	1177.5	1177.9	1178.6
150°	1195.4	1196.0	1196.7	1197.4	1198.1	1198.6	1199.0	1199.5	1200.0	1200.4	1200.8
152.5°	1217.0	1217.3	1217.6	1217.9	1218.2	1218.5	1218.7	1219.1	1219.3	1219.6	1220.4
155°	1247.4	1247.0	1246.5	1246.0	1245.6	1245.5	1245.7	1246.0	1246.2	1246.4	1247.5
157.5°	1271.0	1270.9	1270.9	1270.8	1270.8	1270.7	1270.5	1270.2	1270.1	1269.8	1271.2
160°	1285.4	1285.2	1285.0	1284.8	1284.5	1284.3	1284.1	1283.8	1283.7	1283.4	1284.8
162.5°	1299.0	1298.5	1297.9	1297.3	1296.7	1296.3	1296.1	1295.9	1295.6	1295.4	1296.9
165°	1315.4	1314.7	1314.1	1313.5	1312.8	1312.3	1312.1	1311.8	1311.6	1311.4	1313.2
167.5°	1328.3	1327.3	1326.5	1325.6	1324.6	1324.2	1324.2	1324.2	1324.2	1324.2	1326.0
170°	1335.4	1334.6	1333.7	1332.7	1331.9	1331.5	1331.5	1331.5	1331.5	1331.5	1333.2
172.5°	1340.2	1339.2	1338.1	1337.0	1335.9	1335.5	1335.7	1335.8	1336.0	1336.2	1338.0
175°	1346.4	1345.3	1344.2	1343.1	1342.0	1341.5	1341.8	1342.0	1342.2	1342.4	1344.0
177.5°	1348.1	1347.1	1346.3	1345.4	1344.5	1344.1	1344.3	1344.5	1344.6	1344.8	1346.3
180°	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	367.5	368.1	368.7	368.9	368.9	368.8	368.7	368.6
5°	366.9	367.6	368.3	368.7	368.6	368.4	368.3	368.2
7.5°	364.7	365.6	366.4	366.9	366.8	366.6	366.5	366.4
10°	362.5	363.3	364.2	364.5	364.4	364.2	364.0	363.9
12.5°	359.4	360.2	361.0	361.4	361.2	361.0	360.8	360.7
15°	353.6	354.5	355.4	355.8	355.7	355.6	355.5	355.4
17.5°	346.0	346.9	347.7	348.0	347.8	347.8	347.7	347.5
20°	340.6	341.4	342.2	342.7	342.8	342.9	342.9	343.0
22.5°	334.6	335.6	336.7	337.2	337.1	337.0	337.0	336.9
25°	324.4	325.6	326.7	327.4	327.4	327.4	327.4	327.4
27.5°	313.8	314.9	315.9	316.4	316.5	316.6	316.6	316.7
30°	306.6	307.7	308.8	309.3	309.3	309.3	309.3	309.3
32.5°	298.8	299.9	301.0	301.7	302.0	302.1	302.4	302.6
35°	287.1	288.4	289.8	290.7	291.0	291.4	291.7	292.1
37.5°	275.0	276.6	278.1	279.0	279.2	279.6	279.8	280.1
40°	267.0	268.5	270.0	271.0	271.3	271.7	272.1	272.4
42.5°	258.6	260.3	261.9	263.0	263.6	264.0	264.5	265.0
45°	246.1	247.8	249.5	250.7	251.4	252.1	252.9	253.6
47.5°	233.4	235.4	237.3	238.5	239.0	239.6	240.1	240.7
50°	224.7	226.8	228.9	230.2	230.8	231.4	232.0	232.7
52.5°	215.9	218.0	220.2	221.6	222.4	223.2	223.9	224.6
55°	202.6	205.0	207.4	209.0	209.7	210.4	211.1	211.8
57.5°	189.0	191.4	193.8	195.4	196.3	197.2	198.0	198.8
60°	179.5	182.0	184.5	186.2	187.2	188.2	189.2	190.2
62.5°	170.5	173.0	175.5	177.2	178.1	179.0	179.9	180.9
65°	156.2	158.9	161.5	163.3	164.2	165.1	166.0	166.9
67.5°	141.9	144.8	147.7	149.6	150.3	151.1	151.9	152.6
70°	132.5	135.3	138.2	140.1	140.9	141.8	142.8	143.6
72.5°	123.0	125.9	128.8	130.8	131.6	132.5	133.5	134.3
75°	108.6	111.5	114.5	116.5	117.5	118.6	119.7	120.8
77.5°	95.1	98.2	101.3	103.2	104.1	105.0	105.7	106.6
80°	86.3	89.4	92.4	94.3	95.2	96.1	97.0	97.9
82.5°	78.3	81.3	84.4	86.3	87.2	88.1	88.9	89.9
85°	67.1	70.1	73.1	75.1	75.9	76.9	77.7	78.6
87.5°	62.3	65.5	68.7	70.9	71.8	72.8	73.8	74.7
90°	77.1	81.1	85.0	87.6	89.0	90.3	91.7	93.0
92.5°	77.1	81.5	85.9	88.6	89.7	90.8	91.9	93.0
95°	79.4	83.7	88.0	90.6	91.5	92.4	93.2	94.2
97.5°	77.9	82.3	86.8	89.5	90.7	91.8	92.9	94.0
100°	76.6	81.0	85.4	88.1	89.2	90.3	91.4	92.6
102.5°	92.8	89.8	86.8	85.9	87.2	88.5	89.8	91.1
105°	175.5	138.6	101.8	83.9	85.2	86.4	87.7	88.9
107.5°	375.9	349.4	323.0	295.3	266.4	237.5	208.7	179.8
110°	466.7	461.8	456.8	438.7	407.6	376.5	345.5	314.4



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CATALOG NUMBER: S123DIP-S340D1195U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	530.0	532.4	534.9	533.0	527.1	521.2	515.3	509.4
115°	604.2	608.6	612.9	615.9	617.5	619.1	620.7	622.2
117.5°	670.9	674.8	678.6	681.1	681.9	682.8	683.6	684.6
120°	714.7	718.6	722.4	724.6	725.2	725.8	726.5	727.1
122.5°	757.5	760.8	764.0	765.9	766.8	767.6	768.4	769.2
125°	817.7	820.0	822.3	824.1	825.1	826.2	827.2	828.4
127.5°	878.0	880.5	883.0	884.3	884.5	884.7	884.8	884.9
130°	914.3	916.9	919.5	920.8	920.8	920.9	921.0	921.2
132.5°	948.6	951.1	953.6	954.8	954.8	954.8	954.8	954.8
135°	1000.7	1003.0	1005.2	1006.3	1006.0	1005.8	1005.6	1005.4
137.5°	1047.0	1049.5	1051.9	1053.2	1053.2	1053.2	1053.2	1053.2
140°	1076.4	1078.7	1080.8	1081.9	1081.9	1081.9	1081.9	1081.9
142.5°	1104.1	1106.0	1107.9	1108.8	1108.6	1108.4	1108.2	1108.0
145°	1143.7	1144.9	1146.0	1146.8	1147.1	1147.5	1147.8	1148.1
147.5°	1179.3	1179.9	1180.6	1180.6	1179.9	1179.2	1178.5	1177.8
150°	1201.3	1201.7	1202.1	1202.1	1201.6	1201.2	1200.7	1200.1
152.5°	1221.2	1222.0	1222.8	1222.7	1221.7	1220.7	1219.7	1218.7
155°	1248.6	1249.7	1250.9	1250.7	1249.4	1248.1	1246.7	1245.4
157.5°	1272.5	1273.8	1275.1	1275.0	1273.2	1271.4	1269.7	1268.0
160°	1286.1	1287.4	1288.7	1288.7	1287.1	1285.6	1283.9	1282.4
162.5°	1298.5	1299.9	1301.5	1301.5	1300.1	1298.7	1297.4	1296.0
165°	1315.0	1316.7	1318.5	1318.6	1317.1	1315.5	1314.0	1312.4
167.5°	1327.7	1329.6	1331.4	1331.4	1329.6	1327.7	1326.0	1324.2
170°	1335.0	1336.8	1338.5	1338.5	1336.8	1335.0	1333.2	1331.5
172.5°	1339.8	1341.5	1343.3	1343.2	1341.3	1339.4	1337.4	1335.4
175°	1345.6	1347.1	1348.7	1348.5	1346.8	1345.0	1343.2	1341.4
177.5°	1347.6	1349.1	1350.5	1350.3	1348.6	1346.8	1345.0	1343.2
180°	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4	1346.4

(END OF REPORT)