

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: P331943-935

Luminaire Tested: **S123DIP-S560D1025U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331943-935
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-S560D1025U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5526.7 lumens
Efficiency: N/A
Efficacy: 124.2 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-Indirect

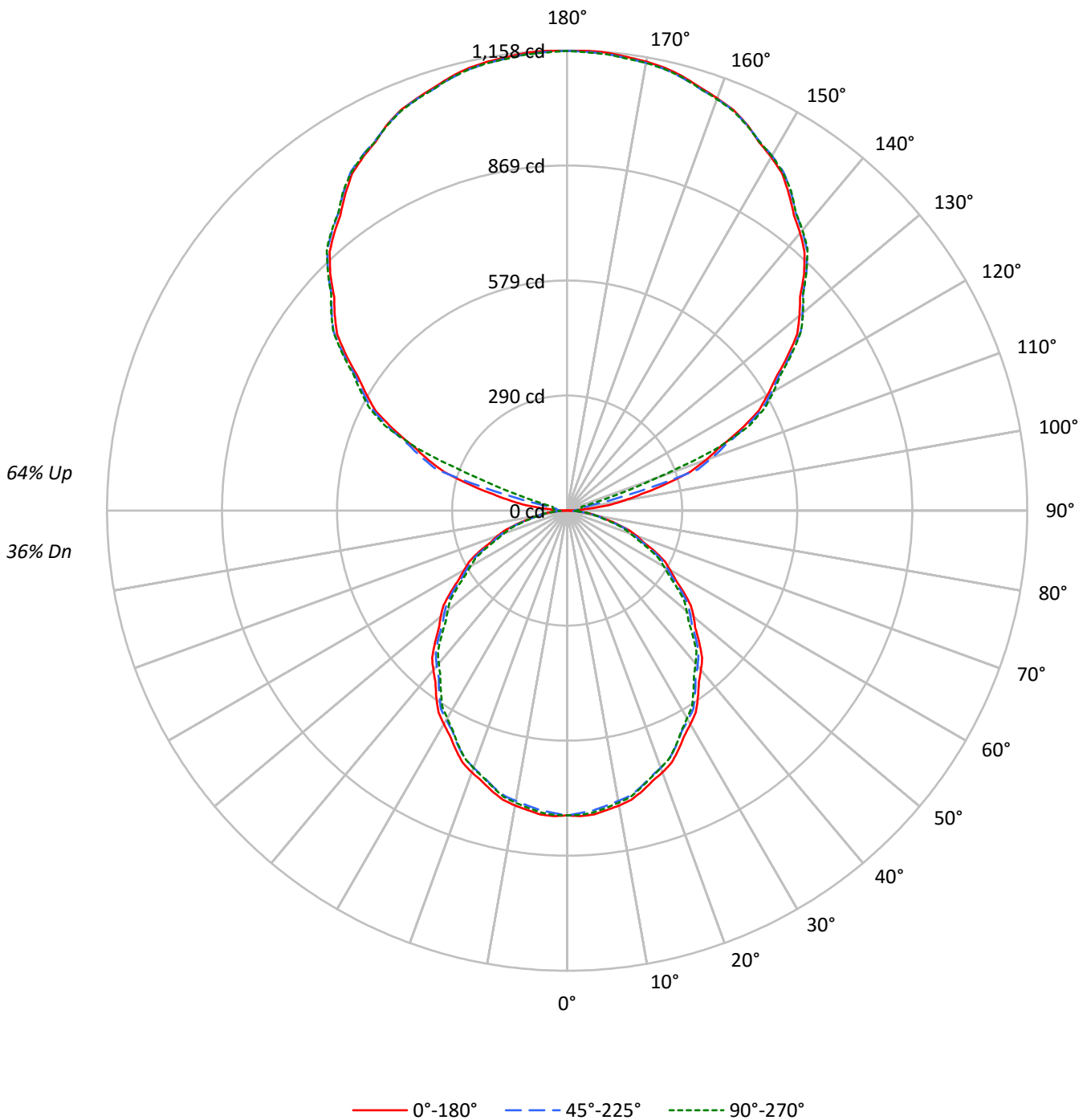
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	43	43	43	36
1	95	90	87	83	86	82	79	76	66	64	62	52	50	49	38	37	37	30
2	86	79	73	68	78	72	66	62	58	54	51	45	43	41	34	32	31	25
3	79	69	62	56	71	63	57	52	51	47	43	40	37	34	30	28	26	21
4	72	61	53	48	65	56	49	44	45	40	36	36	32	29	27	24	22	18
5	66	54	46	41	59	50	43	37	40	35	31	32	28	25	24	21	20	16
6	61	49	41	35	55	44	37	32	36	31	27	29	25	22	22	19	17	14
7	56	44	36	31	50	40	33	28	33	28	24	26	22	20	20	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	16	14	11
9	48	36	29	24	44	33	27	22	27	22	19	22	18	16	17	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8257	8257	8257
5°	8295	8182	8238
10°	8240	8110	8160
15°	8143	8018	8033
20°	8031	7887	7895
25°	7880	7732	7715
30°	7713	7558	7501
35°	7540	7376	7281
40°	7359	7173	7062
45°	7159	6987	6817
50°	6958	6759	6571
55°	6696	6523	6324
60°	6433	6247	6047
65°	6199	5947	5761
70°	5854	5605	5353
75°	5348	5157	4937
80°	4823	4624	4581
85°	4236	4076	3915



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	1.3
10°-20°	204.0	3.7
20°-30°	301.4	5.5
30°-40°	352.0	6.4
40°-50°	353.9	6.4
50°-60°	310.9	5.6
60°-70°	231.6	4.2
70°-80°	132.0	2.4
80°-90°	41.1	0.7
90°-100°	42.1	0.8
100°-110°	200.4	3.6
110°-120°	481.5	8.7
120°-130°	613.1	11.1
130°-140°	655.1	11.9
140°-150°	612.6	11.1
150°-160°	494.1	8.9
160°-170°	318.9	5.8
170°-180°	109.9	2.0
0°-30°	577.6	10.5
0°-40°	929.7	16.8
0°-60°	1594.5	28.9
0°-90°	1999.2	36.2
90°-120°	724.0	13.1
90°-150°	2604.6	47.1
90°-180°	3528.0	63.8
0°-180°	5526.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	767	767	767	767	767	
5°	768	764	757	763	762	73
15°	731	728	720	724	721	206
25°	664	659	651	651	650	305
35°	574	570	561	557	554	359
45°	470	467	459	451	448	363
55°	357	356	348	340	337	319
65°	243	240	234	228	226	240
75°	129	126	124	121	119	138
85°	34	33	33	32	32	38
90°	1	10	21	24	26	4
95°	52	20	27	32	33	65
105°	256	261	188	45	38	272
115°	480	486	493	502	505	474
125°	677	684	688	689	691	605
135°	843	848	852	854	852	649
145°	973	979	981	982	982	609
155°	1072	1070	1071	1075	1070	494
165°	1130	1128	1127	1133	1128	319
175°	1157	1153	1153	1159	1152	110
180°	1157	1157	1157	1157	1157	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	767.1	767.1	767.1	767.1	767.1	767.1	767.1	767.1	767.1	767.1	767.1
2.5°	769.6	769.2	768.8	768.3	767.8	766.9	765.6	764.3	763.1	761.8	762.9
5°	767.7	767.0	766.2	765.5	764.7	763.6	762.0	760.3	758.8	757.2	758.6
7.5°	760.2	759.5	758.7	758.0	757.2	756.0	754.4	752.7	751.1	749.4	750.7
10°	753.9	753.1	752.4	751.7	751.0	749.6	747.7	745.8	743.9	742.0	743.3
12.5°	745.5	744.8	744.2	743.6	743.0	741.8	739.9	738.1	736.4	734.6	735.6
15°	730.7	730.2	729.6	729.0	728.4	727.2	725.3	723.4	721.4	719.5	720.7
17.5°	713.8	713.0	712.2	711.4	710.7	709.4	707.5	705.6	703.7	701.7	702.6
20°	701.1	700.3	699.3	698.4	697.6	696.2	694.3	692.4	690.4	688.5	689.1
22.5°	686.8	686.0	685.1	684.2	683.3	681.9	680.0	678.1	676.2	674.3	674.8
25°	663.5	662.6	661.8	660.9	660.0	658.6	656.7	654.8	652.9	651.0	651.1
27.5°	638.6	637.7	636.9	636.0	635.2	633.7	631.6	629.6	627.6	625.5	625.6
30°	620.6	619.9	619.1	618.5	617.7	616.3	614.2	612.2	610.2	608.1	608.1
32.5°	602.7	601.8	600.7	599.8	598.8	597.5	596.0	594.3	592.8	591.2	590.4
35°	573.8	572.9	572.0	571.2	570.3	568.9	567.0	565.1	563.2	561.3	560.4
37.5°	544.2	543.1	542.0	540.9	539.8	538.3	536.3	534.4	532.4	530.5	529.5
40°	523.7	522.8	521.9	521.1	520.1	518.7	516.6	514.6	512.6	510.5	509.3
42.5°	503.1	502.1	501.1	500.1	499.1	497.6	495.5	493.5	491.5	489.4	488.2
45°	470.3	469.7	469.1	468.5	467.9	466.7	464.8	462.9	461.0	459.0	457.3
47.5°	437.6	436.8	436.0	435.1	434.3	432.9	431.2	429.4	427.6	425.8	424.0
50°	415.5	414.7	414.1	413.3	412.6	411.3	409.3	407.4	405.5	403.6	402.0
52.5°	392.3	391.8	391.3	390.8	390.3	389.0	387.0	385.0	383.0	381.0	379.6
55°	356.8	356.6	356.5	356.4	356.2	355.2	353.3	351.4	349.5	347.6	345.9
57.5°	323.0	322.5	322.0	321.6	321.1	320.0	318.5	317.0	315.5	313.9	312.5
60°	298.8	298.6	298.5	298.3	298.2	297.2	295.5	293.7	292.0	290.2	288.9
62.5°	277.2	276.7	276.4	276.0	275.6	274.6	272.8	271.0	269.2	267.5	266.2
65°	243.4	242.6	241.9	241.2	240.5	239.4	237.9	236.4	235.0	233.5	232.3
67.5°	207.6	207.0	206.3	205.7	205.0	204.1	203.0	201.9	200.8	199.8	198.7
70°	186.0	185.1	184.3	183.4	182.4	181.6	180.7	179.9	178.9	178.1	177.0
72.5°	163.3	162.6	162.0	161.4	160.7	159.9	158.9	157.9	156.9	155.9	155.0
75°	128.6	128.0	127.4	126.8	126.3	125.8	125.3	124.8	124.4	124.0	123.3
77.5°	97.9	97.6	97.2	96.9	96.6	96.2	95.7	95.1	94.5	94.0	93.6
80°	77.8	77.4	77.0	76.5	76.0	75.7	75.4	75.1	74.8	74.6	74.4
82.5°	58.3	58.2	58.1	58.0	57.9	57.9	57.9	57.8	57.7	57.7	57.3
85°	34.3	34.0	33.8	33.4	33.1	33.0	33.0	33.0	33.0	33.0	32.7
87.5°	13.9	13.9	13.9	13.9	14.0	14.2	14.6	15.0	15.3	15.8	15.8
90°	0.9	2.8	4.6	6.6	8.5	10.7	13.2	15.7	18.2	20.7	21.4
92.5°	16.0	15.4	14.9	14.4	13.9	14.6	16.4	18.3	20.1	22.0	23.2
95°	52.4	44.6	36.8	28.9	21.1	18.3	20.3	22.5	24.5	26.6	28.0
97.5°	105.4	101.9	98.3	94.8	91.3	82.7	69.0	55.2	41.4	27.6	29.2
100°	145.3	149.0	152.9	156.7	160.5	147.5	117.7	87.9	58.1	28.3	29.9
102.5°	190.6	193.4	196.1	198.9	201.6	186.8	154.2	121.7	89.1	56.6	51.8
105°	256.1	258.2	260.3	262.4	264.5	256.9	239.8	222.6	205.4	188.2	154.4
107.5°	325.2	326.9	328.6	330.3	331.9	334.2	336.8	339.6	342.2	345.0	320.2
110°	371.3	372.8	374.3	375.8	377.4	379.2	381.3	383.4	385.5	387.6	381.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	415.3	416.6	418.0	419.4	420.8	422.5	424.6	426.7	428.8	430.9	431.0
115°	480.4	481.6	482.7	483.9	485.0	486.5	488.1	489.8	491.5	493.3	495.2
117.5°	543.5	544.9	546.3	547.8	549.1	550.3	551.1	552.1	552.9	553.8	555.3
120°	582.6	584.4	586.1	587.8	589.5	590.7	591.2	591.9	592.5	593.0	594.5
122.5°	622.6	624.0	625.3	626.8	628.2	629.3	630.0	630.8	631.5	632.1	633.3
125°	677.2	678.7	680.3	681.8	683.3	684.5	685.3	686.0	686.7	687.5	687.9
127.5°	730.1	731.7	733.2	734.7	736.2	737.4	738.4	739.3	740.2	741.1	741.8
130°	763.2	764.7	766.2	767.8	769.3	770.4	771.2	772.0	772.7	773.4	774.2
132.5°	794.8	796.3	797.8	799.4	800.9	801.9	802.5	803.1	803.8	804.4	805.2
135°	843.1	844.2	845.3	846.5	847.7	848.6	849.4	850.2	850.9	851.7	852.2
137.5°	884.3	885.8	887.3	888.7	890.1	891.0	891.5	891.9	892.3	892.8	893.6
140°	911.8	913.0	914.1	915.2	916.4	917.3	917.8	918.4	919.0	919.5	920.3
142.5°	937.3	938.4	939.5	940.7	941.8	942.7	943.3	943.8	944.4	945.0	945.6
145°	972.8	974.2	975.5	976.9	978.2	979.0	979.5	979.8	980.2	980.6	980.9
147.5°	1006.3	1007.3	1008.1	1009.0	1009.9	1010.5	1010.9	1011.2	1011.7	1012.0	1012.4
150°	1027.0	1027.6	1028.1	1028.7	1029.2	1029.8	1030.1	1030.5	1030.9	1031.3	1031.7
152.5°	1045.5	1045.9	1046.1	1046.4	1046.6	1046.9	1047.1	1047.3	1047.6	1047.8	1048.4
155°	1071.7	1071.3	1070.9	1070.6	1070.1	1070.1	1070.2	1070.4	1070.7	1070.8	1071.8
157.5°	1091.9	1091.9	1091.9	1091.8	1091.8	1091.7	1091.5	1091.3	1091.1	1090.9	1092.1
160°	1104.3	1104.1	1104.0	1103.8	1103.5	1103.4	1103.2	1103.0	1102.8	1102.6	1103.8
162.5°	1116.0	1115.5	1115.0	1114.6	1114.0	1113.7	1113.5	1113.3	1113.1	1112.9	1114.2
165°	1130.1	1129.5	1128.9	1128.4	1127.8	1127.5	1127.2	1127.0	1126.9	1126.7	1128.2
167.5°	1141.1	1140.4	1139.6	1138.8	1138.1	1137.6	1137.6	1137.6	1137.6	1137.6	1139.2
170°	1147.3	1146.5	1145.8	1145.0	1144.3	1143.8	1143.8	1143.8	1143.8	1143.8	1145.4
172.5°	1151.4	1150.6	1149.6	1148.7	1147.8	1147.4	1147.5	1147.7	1147.8	1148.0	1149.5
175°	1156.8	1155.8	1154.9	1153.9	1153.0	1152.5	1152.7	1153.0	1153.1	1153.3	1154.7
177.5°	1158.1	1157.4	1156.6	1155.8	1155.1	1154.8	1154.9	1155.1	1155.2	1155.4	1156.6
180°	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	767.1	767.1	767.1	767.1	767.1	767.1	767.1	767.1
2.5°	764.1	765.3	766.5	767.0	766.9	766.7	766.6	766.5
5°	760.1	761.6	763.0	763.6	763.3	763.0	762.8	762.4
7.5°	752.0	753.3	754.7	755.2	755.0	754.8	754.7	754.5
10°	744.6	746.0	747.3	747.8	747.5	747.2	746.9	746.6
12.5°	736.5	737.5	738.5	738.8	738.7	738.5	738.3	738.1
15°	721.9	723.1	724.3	724.4	723.5	722.6	721.8	720.9
17.5°	703.4	704.2	705.1	705.2	705.0	704.6	704.3	704.0
20°	689.7	690.3	690.9	691.0	690.5	690.1	689.7	689.2
22.5°	675.3	675.7	676.2	676.1	675.6	675.0	674.5	673.9
25°	651.3	651.4	651.5	651.4	651.0	650.6	650.1	649.6
27.5°	625.8	625.9	625.9	625.8	625.2	624.7	624.1	623.5
30°	608.1	608.1	608.1	607.6	606.6	605.5	604.5	603.5
32.5°	589.6	588.8	587.9	587.2	586.7	586.2	585.6	585.0
35°	559.5	558.6	557.8	557.0	556.2	555.5	554.7	554.1
37.5°	528.4	527.4	526.3	525.6	525.1	524.6	524.2	523.7
40°	508.2	507.0	505.8	504.9	504.3	503.8	503.2	502.6
42.5°	487.1	485.9	484.7	483.8	483.2	482.7	482.1	481.5
45°	455.6	453.7	452.0	450.7	450.0	449.3	448.6	447.8
47.5°	422.3	420.6	418.9	417.7	417.1	416.4	415.8	415.1
50°	400.5	398.8	397.2	396.0	395.0	394.2	393.3	392.4
52.5°	378.2	376.9	375.5	374.3	373.4	372.6	371.7	370.8
55°	344.3	342.8	341.1	339.9	339.2	338.5	337.8	337.0
57.5°	311.1	309.6	308.2	307.0	306.2	305.4	304.5	303.7
60°	287.6	286.3	284.9	283.9	283.2	282.4	281.7	280.9
62.5°	264.8	263.6	262.3	261.3	260.8	260.4	259.8	259.3
65°	231.1	230.0	228.8	228.0	227.6	227.1	226.7	226.2
67.5°	197.7	196.7	195.6	194.8	194.2	193.6	193.0	192.3
70°	176.0	175.0	174.0	173.1	172.4	171.6	170.9	170.1
72.5°	154.1	153.2	152.3	151.6	151.3	150.8	150.5	150.1
75°	122.5	121.8	121.1	120.5	120.0	119.6	119.2	118.7
77.5°	93.1	92.6	92.0	91.8	91.8	91.8	91.8	91.8
80°	74.2	74.0	74.0	73.9	73.9	73.9	73.9	73.9
82.5°	57.1	56.8	56.6	56.4	56.3	56.1	56.1	56.0
85°	32.4	32.1	31.8	31.7	31.7	31.7	31.7	31.7
87.5°	15.8	15.8	15.8	15.9	16.0	16.1	16.2	16.3
90°	22.1	22.9	23.7	24.3	24.6	25.1	25.4	25.7
92.5°	24.5	25.7	26.9	27.6	27.8	28.1	28.3	28.5
95°	29.3	30.7	32.0	32.6	32.6	32.6	32.6	32.6
97.5°	30.7	32.3	33.8	34.6	34.9	35.0	35.2	35.4
100°	31.4	33.0	34.4	35.3	35.6	35.7	35.9	36.1
102.5°	47.1	42.4	37.6	35.4	35.7	36.1	36.4	36.8
105°	120.6	86.8	53.0	36.2	36.7	37.0	37.5	37.8
107.5°	295.4	270.6	245.8	220.7	195.2	169.7	144.2	118.7
110°	375.0	368.7	362.4	345.6	318.2	290.9	263.6	236.3



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CATALOG NUMBER: S123DIP-S560D1025U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	431.1	431.3	431.4	428.5	422.8	417.0	411.2	405.4
115°	497.1	499.0	500.9	502.3	503.0	503.8	504.5	505.3
117.5°	556.9	558.4	559.9	560.8	560.9	561.0	561.2	561.4
120°	596.1	597.5	599.1	599.9	599.9	599.9	599.9	599.9
122.5°	634.3	635.4	636.5	637.1	637.2	637.4	637.5	637.7
125°	688.3	688.6	689.1	689.4	689.8	690.2	690.6	691.0
127.5°	742.4	743.0	743.6	743.7	743.3	743.0	742.5	742.2
130°	775.0	775.8	776.5	776.7	776.4	775.9	775.6	775.2
132.5°	805.9	806.7	807.4	807.5	807.0	806.5	806.0	805.5
135°	852.8	853.4	853.9	853.9	853.4	852.8	852.2	851.7
137.5°	894.6	895.5	896.4	896.6	896.3	896.0	895.5	895.2
140°	921.1	921.9	922.6	922.8	922.4	922.0	921.7	921.3
142.5°	946.2	946.8	947.4	947.4	946.9	946.4	945.9	945.4
145°	981.4	981.7	982.1	982.3	982.3	982.3	982.3	982.3
147.5°	1012.8	1013.1	1013.6	1013.3	1012.4	1011.6	1010.6	1009.8
150°	1032.1	1032.4	1032.9	1032.7	1032.2	1031.6	1031.0	1030.4
152.5°	1049.1	1049.8	1050.5	1050.4	1049.6	1048.7	1047.8	1046.9
155°	1072.7	1073.7	1074.6	1074.5	1073.4	1072.3	1071.1	1070.0
157.5°	1093.2	1094.3	1095.5	1095.4	1093.8	1092.4	1090.9	1089.4
160°	1104.9	1106.0	1107.2	1107.1	1105.8	1104.4	1103.1	1101.7
162.5°	1115.5	1116.8	1118.1	1118.2	1117.0	1115.8	1114.7	1113.4
165°	1129.7	1131.3	1132.8	1132.9	1131.5	1130.2	1128.9	1127.6
167.5°	1140.7	1142.3	1143.8	1143.8	1142.3	1140.7	1139.2	1137.6
170°	1146.9	1148.5	1150.0	1150.0	1148.5	1146.9	1145.4	1143.8
172.5°	1151.1	1152.5	1154.1	1154.0	1152.4	1150.6	1149.0	1147.3
175°	1156.0	1157.4	1158.6	1158.6	1157.0	1155.5	1154.0	1152.4
177.5°	1157.8	1159.1	1160.3	1160.1	1158.6	1157.1	1155.5	1154.0
180°	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8

(END OF REPORT)