

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: P331949-935

Luminaire Tested: **S123DIP-S560D1195U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331949-935
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-S560D1195U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 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: 6144.3 lumens
Efficiency: N/A
Efficacy: 124.4 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

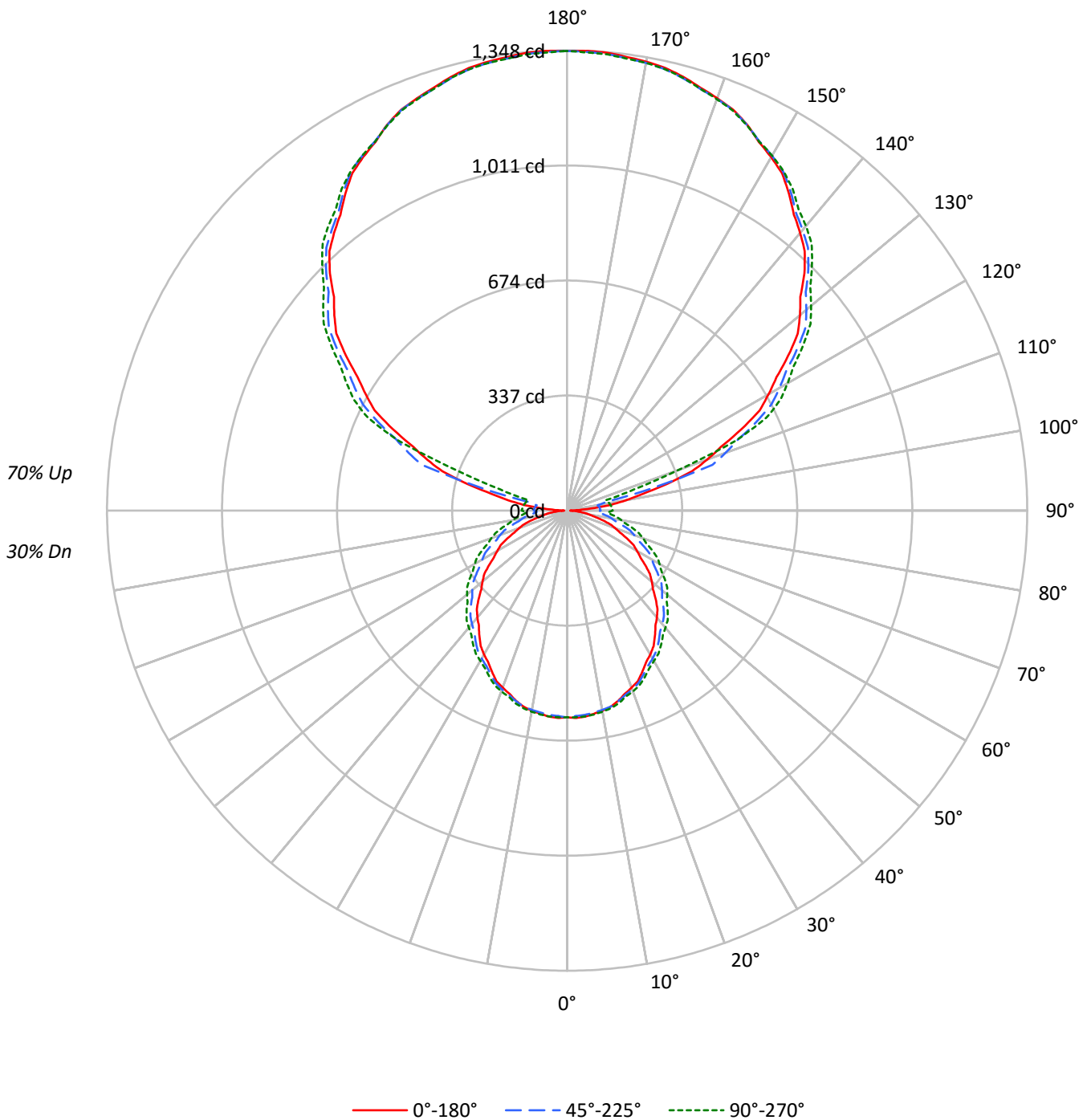
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	92	92	92	92	72	72	72	55	55	55	38	38	38	30
1	93	88	84	81	83	79	76	73	62	60	58	47	45	44	33	32	31	24
2	84	77	70	65	75	69	64	59	54	51	47	41	38	36	28	27	25	20
3	77	67	60	54	68	60	54	49	48	43	40	36	33	30	25	23	21	16
4	70	59	51	45	62	53	47	41	42	37	33	32	28	26	22	20	18	14
5	64	52	44	39	57	47	40	35	37	32	29	28	25	22	20	18	16	12
6	59	47	39	33	52	42	35	30	34	29	25	25	22	19	18	16	14	10
7	54	42	34	29	48	38	31	26	30	25	22	23	20	17	16	14	12	9
8	50	38	31	25	45	34	28	23	28	23	19	21	17	15	15	13	11	8
9	47	35	27	22	42	31	25	21	25	20	17	19	16	13	14	11	10	7
10	43	32	25	20	39	29	22	18	23	18	15	18	14	12	13	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6518	6518	6518
5°	6537	6352	6357
10°	6480	6207	6175
15°	6395	6040	5978
20°	6277	5850	5760
25°	6129	5632	5532
30°	5977	5436	5300
35°	5809	5228	5116
40°	5647	5038	4917
45°	5468	4857	4759
50°	5291	4678	4584
55°	5097	4494	4428
60°	4906	4308	4266
65°	4710	4109	4076
70°	4418	3885	3878
75°	4048	3629	3679
80°	3620	3378	3451
85°	3222	3204	3317



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.4	0.9
10°-20°	163.6	2.7
20°-30°	244.7	4.0
30°-40°	292.2	4.8
40°-50°	305.8	5.0
50°-60°	286.9	4.7
60°-70°	239.6	3.9
70°-80°	171.5	2.8
80°-90°	106.0	1.7
90°-100°	113.1	1.8
100°-110°	280.5	4.6
110°-120°	591.9	9.6
120°-130°	731.6	11.9
130°-140°	770.5	12.5
140°-150°	714.7	11.6
150°-160°	575.1	9.4
160°-170°	371.2	6.0
170°-180°	127.9	2.1
0°-30°	465.7	7.6
0°-40°	758.0	12.3
0°-60°	1350.7	22.0
0°-90°	1867.8	30.4
90°-120°	985.4	16.0
90°-150°	3202.3	52.1
90°-180°	4277.0	69.6
0°-180°	6144.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	606	605	601	606	606	57
15°	577	579	578	585	584	162
25°	521	527	530	538	538	240
35°	448	459	468	477	480	280
45°	367	383	399	411	417	283
55°	280	302	325	342	348	250
65°	193	219	248	267	274	191
75°	105	136	169	190	198	112
85°	32	65	100	122	129	34
90°	10	52	98	124	134	9
95°	68	56	96	123	130	81
105°	303	325	268	119	118	321
115°	562	577	609	634	644	555
125°	790	799	821	837	844	706
135°	983	988	999	1013	1014	756
145°	1133	1139	1141	1148	1151	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°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	608.1	607.8	607.4	607.0	606.7	606.1	605.1	604.2	603.2	602.3	603.2
5°	606.1	605.8	605.5	605.3	604.9	604.3	603.5	602.6	601.8	600.8	602.0
7.5°	600.2	600.2	600.3	600.4	600.5	600.0	599.2	598.3	597.4	596.6	598.1
10°	595.0	595.2	595.5	595.8	596.1	595.9	595.1	594.4	593.7	593.0	594.4
12.5°	588.6	589.0	589.4	589.8	590.2	590.2	589.7	589.2	588.7	588.1	589.5
15°	577.1	577.6	578.0	578.4	578.9	579.0	578.9	578.7	578.6	578.4	579.9
17.5°	562.6	563.4	564.4	565.2	566.1	566.5	566.5	566.4	566.4	566.3	567.6
20°	552.1	552.9	553.8	554.7	555.5	556.1	556.5	556.7	557.0	557.3	558.6
22.5°	541.0	541.8	542.7	543.6	544.5	545.1	545.5	546.0	546.4	546.7	548.5
25°	521.1	522.5	524.0	525.5	526.9	527.9	528.3	528.7	529.2	529.6	531.5
27.5°	501.0	502.7	504.4	506.0	507.6	508.9	509.9	510.8	511.8	512.7	514.4
30°	486.7	488.6	490.5	492.5	494.4	495.9	497.1	498.3	499.4	500.6	502.4
32.5°	470.9	473.0	475.2	477.3	479.5	481.3	482.8	484.3	485.9	487.4	489.3
35°	448.5	450.8	453.1	455.6	457.9	460.0	461.9	463.8	465.7	467.6	469.8
37.5°	424.7	427.4	430.0	432.7	435.3	437.8	440.1	442.5	444.8	447.2	449.7
40°	408.9	411.6	414.2	416.8	419.5	422.2	425.2	428.1	431.0	433.9	436.4
42.5°	391.5	394.8	398.0	401.1	404.4	407.5	410.6	413.6	416.7	419.7	422.5
45°	366.7	370.2	373.8	377.3	380.7	384.4	388.1	391.7	395.4	399.0	401.8
47.5°	340.7	344.7	348.7	352.7	356.6	360.8	365.0	369.1	373.3	377.5	380.6
50°	323.8	328.0	332.0	336.1	340.3	344.6	349.1	353.7	358.2	362.7	366.1
52.5°	305.9	310.2	314.6	318.9	323.2	328.0	332.9	337.9	342.9	348.0	351.5
55°	279.7	284.5	289.3	294.1	299.0	304.0	309.4	314.6	319.9	325.1	329.1
57.5°	254.1	259.1	264.2	269.1	274.2	279.7	285.4	291.2	297.0	302.7	306.7
60°	236.1	241.4	246.7	251.9	257.2	262.9	268.9	274.9	280.9	286.9	291.0
62.5°	219.2	224.6	230.1	235.4	240.8	246.7	253.0	259.4	265.8	272.2	276.2
65°	193.2	199.0	204.7	210.4	216.1	222.2	228.7	235.1	241.5	248.0	252.4
67.5°	166.9	173.0	179.0	185.0	191.1	197.4	204.1	210.6	217.1	223.7	228.5
70°	148.4	154.7	161.0	167.3	173.6	180.3	187.3	194.3	201.4	208.4	213.1
72.5°	131.5	137.8	144.1	150.4	156.7	163.5	170.7	178.1	185.3	192.6	197.4
75°	104.9	111.8	118.6	125.5	132.4	139.6	146.9	154.2	161.5	168.8	173.7
77.5°	81.6	88.6	95.6	102.5	109.4	116.6	124.0	131.4	138.8	146.2	151.3
80°	65.3	72.5	79.6	86.9	94.0	101.4	109.0	116.7	124.3	131.9	136.9
82.5°	51.1	58.4	65.6	72.9	80.2	87.7	95.5	103.2	111.0	118.7	123.7
85°	32.3	39.6	47.0	54.3	61.6	69.1	77.0	84.7	92.5	100.2	105.2
87.5°	17.7	25.5	33.2	41.0	48.7	56.7	64.7	72.8	80.8	88.9	94.0
90°	9.6	18.9	28.4	37.8	47.2	57.1	67.4	77.8	88.2	98.5	104.4
92.5°	26.7	32.5	38.4	44.3	50.1	57.8	67.3	76.8	86.4	95.9	102.2
95°	68.3	64.9	61.5	58.1	54.7	57.8	67.4	77.1	86.7	96.3	102.4
97.5°	129.1	130.2	131.2	132.3	133.4	129.3	120.2	111.1	101.9	92.7	98.9
100°	175.0	184.2	193.3	202.4	211.5	202.2	174.2	146.3	118.3	90.4	96.4
102.5°	227.3	234.7	242.1	249.5	257.0	245.0	213.8	182.5	151.3	120.0	118.6
105°	303.3	309.4	315.3	321.2	327.2	323.4	309.6	295.9	282.2	268.5	233.3
107.5°	383.0	388.0	392.9	397.9	402.8	409.8	419.0	428.1	437.2	446.3	421.5
110°	436.1	440.5	445.0	449.4	453.7	460.1	468.5	476.7	485.1	493.4	489.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	487.3	491.1	494.8	498.6	502.4	508.3	516.3	524.4	532.5	540.6	544.4
115°	562.5	565.6	568.7	571.8	574.8	580.1	587.3	594.6	601.8	609.2	614.8
117.5°	635.8	638.5	641.2	643.9	646.7	651.0	657.0	663.0	669.0	674.9	680.2
120°	680.9	683.5	686.3	689.1	691.8	695.9	701.4	706.9	712.4	717.9	723.1
122.5°	727.3	729.3	731.3	733.3	735.4	739.1	744.6	750.0	755.4	760.9	765.4
125°	790.2	792.0	793.8	795.6	797.4	800.8	806.0	811.1	816.2	821.4	824.9
127.5°	851.9	853.5	855.1	856.8	858.4	861.5	866.1	870.6	875.2	879.9	883.5
130°	890.3	891.9	893.5	895.2	896.8	899.5	903.4	907.1	910.9	914.8	918.4
132.5°	926.5	928.3	930.1	931.8	933.6	935.9	939.0	942.0	945.1	948.1	951.7
135°	982.7	983.8	985.0	986.2	987.4	989.2	991.7	994.2	996.7	999.2	1002.5
137.5°	1030.5	1032.1	1033.6	1035.3	1036.8	1038.3	1039.7	1041.1	1042.5	1043.9	1047.2
140°	1062.0	1063.3	1064.6	1066.0	1067.3	1068.6	1069.6	1070.7	1071.9	1073.0	1076.1
142.5°	1091.6	1092.8	1094.1	1095.3	1096.5	1097.4	1098.2	1099.0	1099.8	1100.4	1103.1
145°	1133.0	1134.5	1135.8	1137.2	1138.7	1139.6	1140.1	1140.5	1140.9	1141.3	1143.0
147.5°	1171.4	1172.4	1173.5	1174.4	1175.4	1176.2	1176.6	1177.1	1177.5	1177.9	1178.8
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°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	604.2	605.1	606.1	606.5	606.3	606.2	606.1	606.0
5°	603.2	604.3	605.5	606.1	605.9	605.7	605.6	605.5
7.5°	599.5	601.0	602.5	603.1	603.0	602.8	602.6	602.4
10°	595.9	597.4	598.8	599.3	599.1	598.8	598.5	598.2
12.5°	590.9	592.2	593.6	594.1	593.8	593.5	593.2	593.0
15°	581.3	582.8	584.3	585.0	584.8	584.6	584.5	584.4
17.5°	568.9	570.2	571.5	572.1	571.9	571.7	571.5	571.3
20°	560.0	561.3	562.6	563.4	563.4	563.6	563.8	563.9
22.5°	550.1	551.8	553.5	554.2	554.1	554.1	554.0	553.9
25°	533.4	535.4	537.3	538.2	538.2	538.2	538.2	538.2
27.5°	516.0	517.6	519.3	520.2	520.3	520.4	520.6	520.6
30°	504.1	505.8	507.6	508.5	508.5	508.5	508.5	508.5
32.5°	491.1	493.0	494.9	496.0	496.4	496.7	497.1	497.4
35°	472.0	474.2	476.4	477.8	478.4	479.0	479.6	480.2
37.5°	452.1	454.6	457.1	458.7	459.1	459.5	460.0	460.5
40°	438.9	441.4	443.9	445.5	446.1	446.7	447.2	447.8
42.5°	425.2	427.9	430.7	432.4	433.3	434.0	434.9	435.7
45°	404.6	407.3	410.2	412.2	413.3	414.5	415.7	416.8
47.5°	383.8	386.9	390.0	392.1	393.0	393.9	394.9	395.7
50°	369.5	372.9	376.3	378.4	379.4	380.5	381.5	382.5
52.5°	355.0	358.4	362.0	364.3	365.6	366.8	368.1	369.4
55°	333.0	337.0	341.0	343.5	344.7	345.9	347.1	348.3
57.5°	310.7	314.7	318.7	321.3	322.7	324.1	325.5	326.8
60°	295.2	299.2	303.3	306.2	307.8	309.4	311.0	312.6
62.5°	280.3	284.5	288.5	291.4	292.8	294.3	295.8	297.3
65°	256.8	261.1	265.6	268.5	270.0	271.5	272.9	274.4
67.5°	233.3	238.2	243.0	246.0	247.2	248.4	249.7	250.9
70°	217.8	222.5	227.2	230.2	231.7	233.2	234.6	236.1
72.5°	202.2	207.0	211.8	215.0	216.5	217.9	219.4	220.8
75°	178.5	183.4	188.2	191.5	193.2	195.0	196.7	198.5
77.5°	156.4	161.4	166.5	169.8	171.2	172.5	173.8	175.2
80°	141.9	146.9	151.9	155.1	156.5	158.0	159.5	160.9
82.5°	128.7	133.6	138.6	141.9	143.4	144.8	146.3	147.7
85°	110.2	115.2	120.2	123.4	124.8	126.3	127.8	129.2
87.5°	99.2	104.4	109.4	112.8	114.4	116.0	117.5	119.1
90°	110.3	116.1	122.0	125.9	127.9	129.8	131.6	133.5
92.5°	108.5	114.8	121.1	125.0	126.7	128.3	129.8	131.5
95°	108.5	114.6	120.7	124.5	126.0	127.4	128.9	130.4
97.5°	105.0	111.2	117.4	121.2	123.0	124.7	126.3	128.0
100°	102.5	108.5	114.5	118.4	120.0	121.7	123.5	125.1
102.5°	117.3	115.9	114.5	114.8	116.7	118.5	120.4	122.3
105°	198.0	162.8	127.6	110.8	112.6	114.3	116.1	117.9
107.5°	396.5	371.6	346.6	320.0	291.7	263.3	235.0	206.6
110°	486.3	482.8	479.2	462.2	431.5	401.0	370.3	339.8



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CATALOG NUMBER: S123DIP-S560D1195U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	548.3	552.1	555.9	555.1	549.7	544.2	538.8	533.4
115°	620.6	626.4	632.1	636.0	638.1	640.2	642.2	644.3
117.5°	685.4	690.8	696.0	699.3	700.6	702.0	703.3	704.6
120°	728.2	733.4	738.5	741.6	742.6	743.6	744.7	745.7
122.5°	769.9	774.4	778.9	781.7	782.9	784.1	785.3	786.5
125°	828.4	831.9	835.4	837.9	839.4	840.9	842.3	843.9
127.5°	887.1	890.7	894.2	896.4	896.9	897.4	898.0	898.5
130°	922.1	925.8	929.4	931.5	931.9	932.4	932.9	933.3
132.5°	955.3	958.8	962.4	964.3	964.8	965.1	965.5	965.9
135°	1005.8	1009.2	1012.4	1014.2	1014.2	1014.3	1014.3	1014.4
137.5°	1050.7	1054.0	1057.4	1059.3	1059.5	1059.8	1060.1	1060.4
140°	1079.2	1082.3	1085.3	1087.0	1087.3	1087.6	1087.9	1088.1
142.5°	1105.9	1108.5	1111.2	1112.6	1112.7	1112.8	1112.9	1113.0
145°	1144.6	1146.2	1147.8	1148.9	1149.5	1150.1	1150.7	1151.2
147.5°	1179.6	1180.3	1181.1	1181.3	1180.8	1180.3	1179.8	1179.3
150°	1201.3	1201.7	1202.1	1202.2	1201.8	1201.4	1201.1	1200.7
152.5°	1221.2	1222.0	1222.8	1222.7	1221.8	1220.8	1219.8	1218.8
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)