

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: P331945

Luminaire Tested: **S123DIP-S560D1025U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331945
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D1025U835-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6031.8 lumens
Efficiency: N/A
Efficacy: 135.5 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

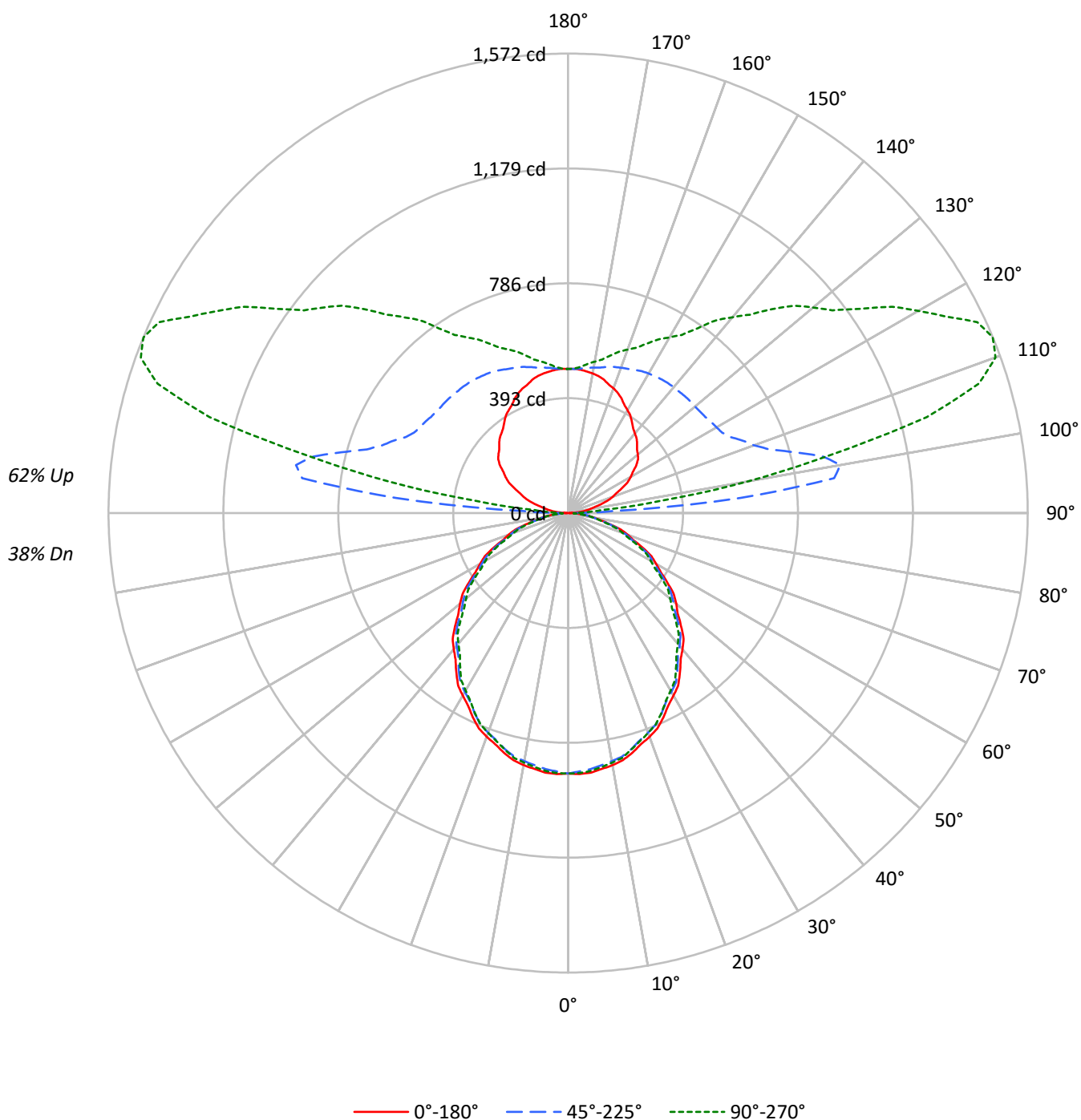
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331945

CATALOG NUMBER: S123DIP-S560D1025U835-4F0-1E-UDD-F4

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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	104	104	104	104	95	95	95	95	77	77	77		61	61	61		46
1	95	91	87	84	86	83	79	76	67	65	63		53	52	50		40
2	87	79	73	68	78	72	67	63	59	55	52		47	44	42		35
3	79	70	62	57	71	63	57	52	52	47	44		41	38	35		31
4	72	62	54	48	65	56	49	44	46	41	37		37	33	30		28
5	66	55	47	41	60	50	43	38	41	36	32		33	29	26		25
6	61	49	41	35	55	45	38	33	37	32	28		30	26	23		23
7	56	44	36	31	51	40	34	29	33	28	24		27	23	20		21
8	52	40	32	27	47	37	30	25	30	25	22		25	21	18		19
9	48	36	29	24	44	34	27	23	28	23	19		23	19	16		18
10	45	33	26	22	41	31	24	20	26	21	17		21	17	14		16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9590	9590	9590
5°	9634	9502	9568
10°	9570	9419	9477
15°	9458	9313	9331
20°	9328	9160	9170
25°	9152	8980	8961
30°	8959	8779	8712
35°	8757	8566	8456
40°	8546	8331	8202
45°	8315	8115	7917
50°	8081	7850	7633
55°	7777	7576	7345
60°	7470	7255	7025
65°	7200	6907	6691
70°	6798	6508	6219
75°	6213	5989	5735
80°	5604	5368	5318
85°	4915	4730	4545

TEST NUMBER: P331945

CATALOG NUMBER: S123DIP-S560D1025U835-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	1.4
10°-20°	237.0	3.9
20°-30°	350.0	5.8
30°-40°	408.9	6.8
40°-50°	411.1	6.8
50°-60°	361.1	6.0
60°-70°	269.0	4.5
70°-80°	153.3	2.5
80°-90°	47.8	0.8
90°-100°	274.4	4.5
100°-110°	777.0	12.9
110°-120°	764.4	12.7
120°-130°	609.7	10.1
130°-140°	480.7	8.0
140°-150°	358.8	5.9
150°-160°	250.1	4.1
160°-170°	146.9	2.4
170°-180°	47.8	0.8
0°-30°	670.9	11.1
0°-40°	1079.8	17.9
0°-60°	1851.9	30.7
0°-90°	2322.0	38.5
90°-120°	1815.8	30.1
90°-150°	3265.1	54.1
90°-180°	3710.0	61.5
0°-180°	6031.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	891	891	891	891	891	
5°	892	888	879	887	886	84
15°	849	845	836	841	837	239
25°	771	766	756	757	754	355
35°	666	662	652	647	644	417
45°	546	543	533	524	520	421
55°	414	413	404	396	391	371
65°	283	279	271	265	263	279
75°	149	146	144	140	138	160
85°	40	38	38	37	37	44
90°	2	12	25	28	29	4
95°	34	110	592	173	116	37
105°	116	171	802	1403	1270	123
115°	205	255	614	1346	1544	203
125°	284	336	573	1038	1218	252
135°	333	398	565	855	987	258
145°	380	436	558	701	772	238
155°	432	466	540	614	640	199
165°	472	486	517	548	558	133
175°	492	493	496	503	502	47
180°	493	493	493	493	493	

TEST NUMBER: P331945

CATALOG NUMBER: S123DIP-S560D1025U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	890.9	890.9	890.9	890.9	890.9	890.9	890.9	890.9	890.9	890.9	890.9
2.5°	893.9	893.4	892.9	892.3	891.8	890.7	889.2	887.7	886.3	884.8	886.1
5°	891.6	890.8	889.9	889.1	888.2	886.9	885.0	883.1	881.3	879.4	881.1
7.5°	882.9	882.1	881.2	880.4	879.5	878.1	876.2	874.2	872.3	870.4	871.9
10°	875.6	874.7	873.9	873.0	872.2	870.6	868.4	866.2	864.0	861.8	863.3
12.5°	865.8	865.0	864.3	863.6	862.9	861.5	859.4	857.3	855.3	853.2	854.3
15°	848.7	848.1	847.4	846.7	846.0	844.6	842.4	840.2	837.9	835.7	837.1
17.5°	829.0	828.1	827.2	826.3	825.4	823.9	821.7	819.5	817.3	815.0	816.0
20°	814.3	813.3	812.2	811.2	810.2	808.6	806.4	804.2	801.9	799.7	800.4
22.5°	797.7	796.7	795.7	794.7	793.6	792.0	789.8	787.6	785.4	783.2	783.7
25°	770.6	769.6	768.6	767.6	766.5	764.9	762.7	760.5	758.3	756.1	756.2
27.5°	741.7	740.7	739.7	738.7	737.7	736.0	733.6	731.3	728.9	726.5	726.6
30°	720.8	720.0	719.1	718.3	717.4	715.8	713.4	711.0	708.7	706.3	706.3
32.5°	700.0	698.9	697.7	696.6	695.5	694.0	692.2	690.3	688.5	686.7	685.7
35°	666.4	665.4	664.4	663.4	662.4	660.7	658.5	656.3	654.1	651.9	650.9
37.5°	632.1	630.8	629.5	628.2	626.9	625.2	622.9	620.7	618.4	616.2	615.0
40°	608.2	607.2	606.2	605.2	604.1	602.4	600.0	597.7	595.3	592.9	591.5
42.5°	584.3	583.2	582.0	580.8	579.7	577.9	575.5	573.2	570.8	568.4	567.0
45°	546.2	545.5	544.8	544.1	543.4	542.0	539.8	537.6	535.4	533.1	531.1
47.5°	508.3	507.3	506.4	505.4	504.4	502.8	500.8	498.7	496.6	494.5	492.5
50°	482.6	481.7	480.9	480.0	479.2	477.7	475.4	473.2	471.0	468.8	466.9
52.5°	455.6	455.0	454.5	453.9	453.3	451.8	449.5	447.2	444.8	442.5	440.9
55°	414.4	414.2	414.1	413.9	413.7	412.5	410.3	408.1	405.9	403.7	401.8
57.5°	375.2	374.6	374.0	373.5	372.9	371.7	369.9	368.2	366.4	364.6	363.0
60°	347.0	346.8	346.7	346.5	346.3	345.2	343.2	341.1	339.1	337.0	335.5
62.5°	321.9	321.4	321.0	320.6	320.1	318.9	316.8	314.8	312.7	310.7	309.2
65°	282.7	281.8	281.0	280.1	279.3	278.0	276.3	274.6	272.9	271.2	269.8
67.5°	241.1	240.4	239.6	238.9	238.1	237.1	235.8	234.5	233.2	232.0	230.8
70°	216.0	215.0	214.0	213.0	211.9	210.9	209.9	208.9	207.8	206.8	205.6
72.5°	189.7	188.9	188.2	187.4	186.7	185.7	184.6	183.4	182.2	181.1	180.0
75°	149.4	148.7	148.0	147.3	146.7	146.1	145.5	145.0	144.5	144.0	143.2
77.5°	113.7	113.3	112.9	112.6	112.2	111.7	111.1	110.5	109.8	109.2	108.7
80°	90.4	89.9	89.4	88.9	88.3	87.9	87.6	87.2	86.9	86.6	86.4
82.5°	67.7	67.6	67.5	67.4	67.3	67.2	67.2	67.1	67.0	67.0	66.6
85°	39.8	39.5	39.2	38.8	38.5	38.3	38.3	38.3	38.3	38.3	38.0
87.5°	16.3	16.3	16.3	16.5	16.5	16.6	17.1	17.5	18.0	18.5	18.1
90°	2.0	4.0	6.0	9.0	11.0	13.0	16.0	19.0	22.0	25.0	24.0
92.5°	12.4	18.4	26.8	34.5	42.9	57.7	83.8	126.8	168.9	153.5	115.8
95°	33.9	36.9	47.9	64.9	90.8	129.8	214.6	363.3	527.0	591.9	480.1
97.5°	57.9	58.9	67.5	82.2	107.8	149.9	231.0	398.7	671.6	917.3	981.4
100°	73.9	74.9	81.9	95.8	119.8	158.7	228.6	376.3	638.8	945.3	1141.9
102.5°	90.6	92.4	98.6	111.8	133.4	169.1	231.8	357.1	590.9	893.4	1149.9
105°	115.8	118.8	124.8	136.8	155.7	186.7	240.6	343.4	532.0	802.5	1089.0
107.5°	142.5	145.5	151.3	163.1	180.9	209.6	256.9	342.4	494.5	722.3	982.4
110°	161.7	164.7	169.7	180.7	197.6	225.6	270.5	346.4	480.1	676.8	915.3

TEST NUMBER: P331945

CATALOG NUMBER: S123DIP-S560D1025U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	179.3	182.3	187.3	198.2	215.2	242.4	284.1	354.4	472.1	646.4	857.0
115°	204.6	208.6	214.6	224.6	241.6	268.5	306.4	367.3	469.1	613.9	786.6
117.5°	230.0	234.6	239.6	248.7	267.7	292.7	330.2	384.5	470.9	594.7	744.0
120°	247.5	250.5	255.5	265.5	284.5	309.4	345.4	397.3	474.1	585.9	721.7
122.5°	262.7	265.7	270.7	281.5	299.7	326.2	361.3	409.3	479.7	580.3	703.3
125°	284.5	286.5	292.5	303.4	322.4	349.4	384.3	428.2	488.1	573.0	679.8
127.5°	301.1	304.0	311.4	322.6	343.6	370.5	404.3	443.8	497.7	569.4	659.0
130°	311.4	314.4	323.4	335.4	356.3	383.3	416.2	454.2	504.1	567.0	647.8
132.5°	319.4	323.2	333.0	347.4	368.3	394.5	426.6	463.8	508.9	566.2	637.4
135°	333.4	337.4	348.4	363.3	384.3	411.2	442.2	476.1	516.1	565.0	623.9
137.5°	346.6	350.8	361.5	377.5	398.3	423.2	453.0	485.3	520.8	562.8	612.1
140°	355.4	360.3	370.3	386.3	406.3	431.2	460.2	490.1	524.0	562.0	604.9
142.5°	364.9	369.1	379.9	394.3	414.2	437.6	465.8	494.9	526.4	560.4	598.5
145°	380.3	383.3	392.3	407.3	424.2	447.2	473.1	500.1	528.0	558.0	589.9
147.5°	395.9	397.7	406.5	419.4	435.8	455.4	479.1	503.3	528.0	554.2	581.5
150°	406.3	407.3	415.2	428.2	442.2	460.2	483.1	504.1	528.0	551.0	575.9
152.5°	416.6	416.8	424.8	436.2	448.6	465.8	485.5	505.7	525.6	547.0	569.6
155°	432.2	432.2	438.2	448.2	459.2	473.1	490.1	506.1	523.0	540.0	560.0
157.5°	444.6	445.4	450.2	459.0	468.3	479.1	492.7	507.1	519.7	533.8	549.2
160°	454.2	454.2	458.2	466.1	473.1	483.1	495.1	507.1	518.1	529.0	542.0
162.5°	461.4	461.4	464.6	470.9	477.1	485.5	495.9	506.3	514.9	524.2	534.8
165°	472.1	471.1	473.1	478.1	482.1	489.1	497.1	504.1	510.1	517.1	525.0
167.5°	480.3	479.1	480.1	483.9	486.7	491.1	496.9	502.5	505.3	509.9	515.7
170°	485.1	483.1	484.1	487.1	489.1	491.1	496.1	500.1	502.1	505.1	510.1
172.5°	488.3	487.1	487.3	489.5	490.7	491.9	496.1	499.3	499.7	501.1	504.5
175°	492.1	491.1	490.1	492.1	492.1	493.1	495.1	497.1	496.1	496.1	498.1
177.5°	493.9	493.1	492.3	493.1	493.1	493.1	493.9	495.5	493.9	493.1	493.9
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1

TEST NUMBER: P331945

CATALOG NUMBER: S123DIP-S560D1025U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	890.9	890.9	890.9	890.9	890.9	890.9	890.9	890.9
2.5°	887.5	888.8	890.2	890.8	890.7	890.5	890.4	890.3
5°	882.8	884.5	886.2	886.9	886.5	886.2	885.9	885.5
7.5°	873.4	874.9	876.5	877.1	876.9	876.7	876.5	876.3
10°	864.8	866.4	867.9	868.5	868.2	867.8	867.5	867.1
12.5°	855.4	856.6	857.7	858.1	857.9	857.7	857.5	857.3
15°	838.5	839.8	841.2	841.3	840.3	839.3	838.3	837.3
17.5°	817.0	817.9	818.9	819.1	818.8	818.4	818.0	817.6
20°	801.1	801.8	802.4	802.5	802.0	801.5	801.0	800.5
22.5°	784.3	784.8	785.4	785.3	784.7	784.0	783.4	782.7
25°	756.4	756.6	756.7	756.6	756.1	755.6	755.0	754.5
27.5°	726.8	726.9	727.0	726.8	726.1	725.5	724.8	724.2
30°	706.3	706.3	706.3	705.7	704.5	703.3	702.1	700.9
32.5°	684.8	683.8	682.8	682.0	681.4	680.8	680.1	679.5
35°	649.8	648.8	647.8	646.9	646.0	645.2	644.3	643.5
37.5°	613.7	612.5	611.3	610.4	609.9	609.3	608.8	608.2
40°	590.2	588.8	587.5	586.4	585.7	585.1	584.4	583.7
42.5°	565.7	564.3	562.9	561.9	561.2	560.6	559.9	559.2
45°	529.1	527.0	525.0	523.5	522.7	521.8	521.0	520.1
47.5°	490.5	488.5	486.5	485.1	484.4	483.6	482.9	482.1
50°	465.1	463.2	461.3	459.9	458.8	457.8	456.8	455.8
52.5°	439.3	437.7	436.1	434.7	433.7	432.7	431.7	430.7
55°	399.9	398.1	396.2	394.8	394.0	393.1	392.3	391.4
57.5°	361.3	359.6	358.0	356.6	355.6	354.7	353.7	352.7
60°	334.0	332.5	330.9	329.7	328.9	328.0	327.2	326.3
62.5°	307.6	306.1	304.6	303.5	302.9	302.4	301.8	301.2
65°	268.4	267.1	265.7	264.8	264.3	263.8	263.3	262.7
67.5°	229.6	228.4	227.2	226.2	225.5	224.8	224.1	223.4
70°	204.4	203.3	202.1	201.0	200.2	199.3	198.5	197.6
72.5°	179.0	177.9	176.9	176.1	175.7	175.2	174.8	174.3
75°	142.3	141.5	140.6	139.9	139.4	138.9	138.4	137.9
77.5°	108.1	107.5	106.9	106.6	106.6	106.6	106.6	106.6
80°	86.2	86.0	85.9	85.8	85.8	85.8	85.8	85.8
82.5°	66.3	66.0	65.7	65.5	65.4	65.2	65.1	65.0
85°	37.6	37.3	36.9	36.8	36.8	36.8	36.8	36.8
87.5°	18.2	18.3	18.3	18.7	18.5	18.7	18.9	18.7
90°	25.0	26.0	27.0	28.9	27.9	28.9	29.9	28.9
92.5°	84.0	66.7	58.9	53.7	51.9	48.9	49.9	48.1
95°	359.3	243.6	190.7	154.7	135.8	126.8	119.8	115.8
97.5°	895.8	717.5	588.7	469.3	395.7	350.8	323.8	315.2
100°	1176.9	1096.0	979.2	837.5	736.7	663.8	624.9	625.9
102.5°	1270.3	1267.7	1199.6	1109.8	1031.3	973.6	941.1	918.1
105°	1297.6	1397.5	1416.4	1390.5	1344.5	1306.6	1274.7	1269.7
107.5°	1219.0	1381.1	1468.5	1504.1	1504.9	1492.1	1481.3	1472.1
110°	1143.9	1327.6	1453.3	1523.2	1551.2	1559.2	1557.2	1555.2

TEST NUMBER: P331945

CATALOG NUMBER: S123DIP-S560D1025U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1069.6	1257.3	1398.2	1488.1	1539.2	1563.9	1571.5	1571.9
115°	971.2	1144.9	1291.6	1400.4	1475.3	1519.2	1539.2	1544.2
117.5°	900.0	1049.9	1181.6	1292.0	1370.1	1420.4	1449.2	1455.9
120°	862.4	997.2	1117.0	1217.8	1296.6	1352.5	1376.5	1382.5
122.5°	832.9	954.9	1065.9	1159.5	1229.6	1279.9	1306.2	1313.8
125°	793.6	902.4	998.2	1078.0	1141.9	1185.8	1210.8	1217.8
127.5°	759.2	856.2	942.7	1015.3	1072.2	1109.8	1132.3	1138.7
130°	737.7	827.5	908.3	976.2	1029.1	1065.1	1086.0	1094.0
132.5°	717.7	800.3	875.6	940.3	990.0	1025.9	1044.5	1050.1
135°	690.7	761.6	826.5	883.4	932.3	962.2	980.2	987.2
137.5°	666.2	724.3	780.2	829.5	870.6	901.0	916.1	920.7
140°	651.8	702.7	750.6	793.6	831.5	859.4	875.4	874.4
142.5°	638.2	682.0	723.5	760.8	793.2	817.9	832.3	831.3
145°	621.9	654.8	686.7	715.7	740.6	761.6	769.6	771.6
147.5°	608.5	634.6	660.4	681.0	699.9	714.1	721.7	722.5
150°	598.9	621.9	642.8	661.8	676.8	687.7	693.7	693.7
152.5°	590.1	609.9	628.5	644.2	656.0	666.2	669.8	669.8
155°	576.9	592.9	607.9	619.9	628.9	636.8	638.8	639.8
157.5°	563.0	576.3	587.9	597.3	605.1	611.1	612.7	612.5
160°	555.0	566.0	575.9	582.9	589.9	595.9	595.9	594.9
162.5°	545.4	554.8	564.0	570.2	574.8	579.9	579.9	578.9
165°	533.0	539.0	546.0	551.0	555.0	559.0	558.0	558.0
167.5°	522.2	526.8	530.8	534.4	536.2	539.0	538.0	538.0
170°	515.1	518.1	522.0	524.0	525.0	527.0	526.0	526.0
172.5°	508.7	510.9	514.1	515.3	515.5	517.5	515.7	514.9
175°	500.1	501.1	503.1	503.1	503.1	504.1	503.1	502.1
177.5°	494.7	495.5	496.3	496.3	495.5	496.3	494.7	494.7
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1

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