

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: P331925

Luminaire Tested: **S123DIP-S560D585U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331925
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-S560D585U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4661.4 lumens
Efficiency: N/A
Efficacy: 142.1 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: General Diffuse

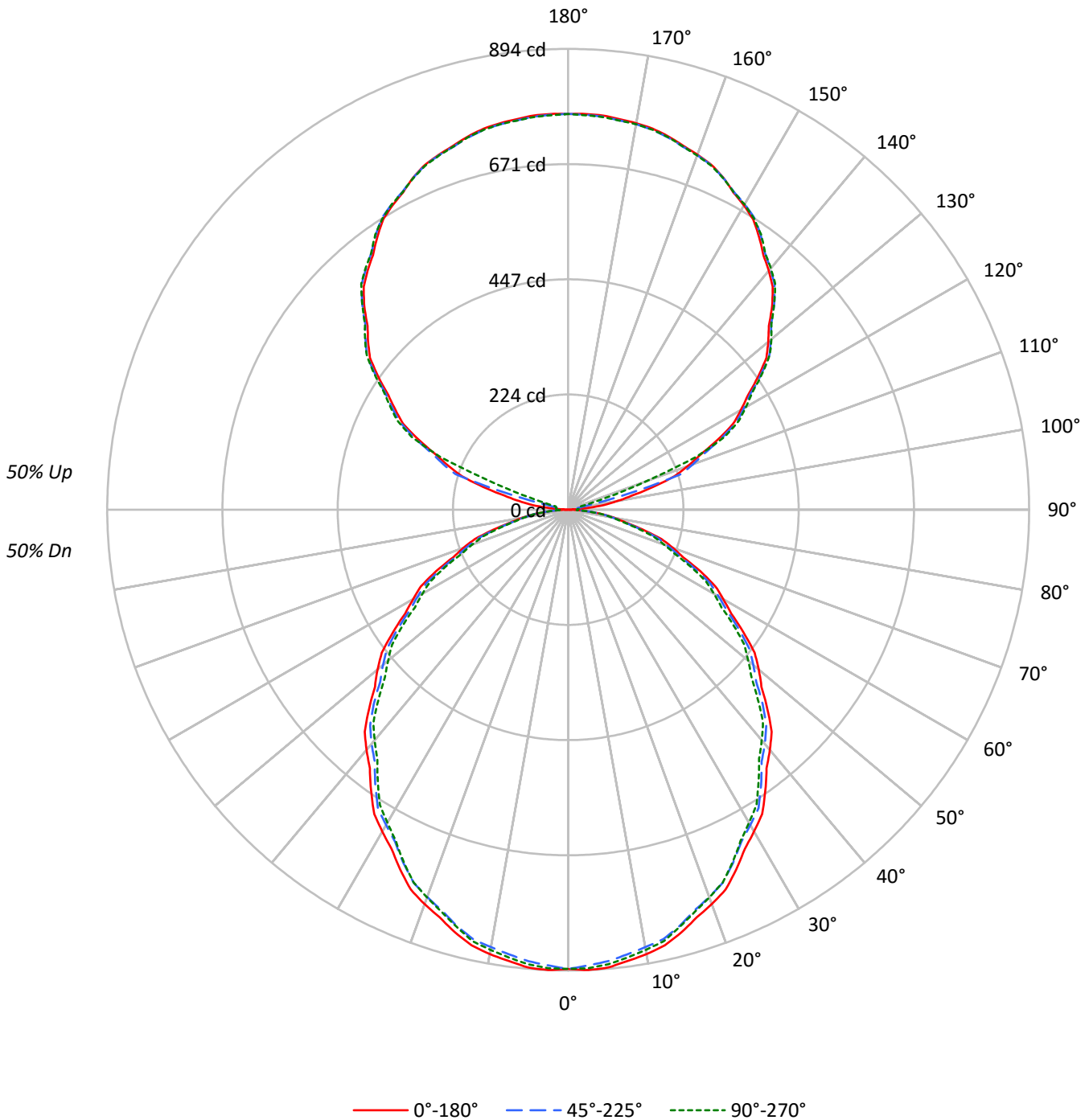
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331925

CATALOG NUMBER: S123DIP-S560D585U835-4F0-1E-UDD-F

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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	98	93	89	86	90	86	83	80	73	70	68	61	59	57	49	48	47	42
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	40	35
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	34	30
4	74	63	55	49	68	59	52	46	50	45	40	42	38	35	34	31	29	25
5	68	56	48	42	62	52	45	40	45	39	35	38	33	30	31	28	25	22
6	63	51	42	37	58	47	40	34	40	35	30	34	30	26	28	25	22	19
7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	26	22	20	17
8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	22	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	15	13

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: P331925

CATALOG NUMBER: S123DIP-S560D585U835-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	1.8
10°-20°	237.0	5.1
20°-30°	350.0	7.5
30°-40°	408.9	8.8
40°-50°	411.1	8.8
50°-60°	361.1	7.7
60°-70°	269.0	5.8
70°-80°	153.3	3.3
80°-90°	46.1	1.0
90°-100°	27.9	0.6
100°-110°	133.0	2.9
110°-120°	319.5	6.9
120°-130°	406.9	8.7
130°-140°	434.7	9.3
140°-150°	406.5	8.7
150°-160°	327.9	7.0
160°-170°	211.6	4.5
170°-180°	72.9	1.6
0°-30°	670.9	14.4
0°-40°	1079.8	23.2
0°-60°	1851.9	39.7
0°-90°	2320.3	49.8
90°-120°	480.5	10.3
90°-150°	1728.6	37.1
90°-180°	2341.0	50.2
0°-180°	4661.4	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°	1	6	14	16	17	4
95°	35	13	18	21	22	43
105°	170	173	125	30	25	180
115°	319	322	327	333	335	315
125°	449	454	456	457	459	401
135°	560	563	565	567	565	431
145°	646	650	651	652	652	404
155°	711	710	711	713	710	328
165°	750	748	748	752	748	212
175°	768	765	765	769	765	73
180°	768	768	768	768	768	



TEST NUMBER: P331925

CATALOG NUMBER: S123DIP-S560D585U835-4F0-1E-UDD-F

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°	16.0	15.9	15.7	15.6	15.4	15.4	15.6	15.8	16.0	16.2	16.2
90°	0.6	1.8	3.1	4.4	5.6	7.1	8.7	10.4	12.0	13.7	14.2
92.5°	10.6	10.3	9.9	9.5	9.2	9.6	10.9	12.1	13.4	14.6	15.4
95°	34.8	29.6	24.4	19.2	14.0	12.1	13.5	14.9	16.3	17.7	18.6
97.5°	69.9	67.6	65.3	62.9	60.6	54.9	45.7	36.6	27.5	18.4	19.4
100°	96.4	98.9	101.5	104.0	106.5	97.9	78.1	58.4	38.6	18.8	19.8
102.5°	126.5	128.3	130.2	132.0	133.8	123.9	102.3	80.7	59.1	37.5	34.4
105°	170.0	171.4	172.8	174.1	175.5	170.5	159.1	147.7	136.3	124.9	102.5
107.5°	215.8	216.9	218.1	219.2	220.3	221.7	223.5	225.3	227.1	228.9	212.5
110°	246.4	247.4	248.4	249.4	250.4	251.7	253.0	254.4	255.8	257.2	253.0



TEST NUMBER: P331925

CATALOG NUMBER: S123DIP-S560D585U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.6	276.5	277.4	278.3	279.2	280.4	281.8	283.2	284.6	286.0	286.1
115°	318.8	319.6	320.3	321.1	321.9	322.8	324.0	325.1	326.2	327.4	328.7
117.5°	360.7	361.6	362.6	363.5	364.4	365.2	365.8	366.4	367.0	367.5	368.6
120°	386.7	387.8	389.0	390.1	391.3	392.0	392.4	392.8	393.2	393.5	394.6
122.5°	413.2	414.1	415.0	416.0	416.9	417.6	418.1	418.6	419.1	419.6	420.3
125°	449.4	450.5	451.5	452.5	453.5	454.3	454.8	455.3	455.8	456.3	456.5
127.5°	484.6	485.6	486.6	487.6	488.6	489.4	490.0	490.7	491.3	491.9	492.3
130°	506.5	507.5	508.5	509.5	510.5	511.3	511.8	512.3	512.8	513.3	513.8
132.5°	527.5	528.5	529.5	530.5	531.5	532.2	532.6	533.0	533.4	533.9	534.4
135°	559.5	560.3	561.0	561.8	562.6	563.2	563.7	564.2	564.7	565.2	565.6
137.5°	586.9	587.9	588.8	589.8	590.7	591.4	591.6	591.9	592.2	592.5	593.1
140°	605.1	605.9	606.7	607.4	608.2	608.8	609.1	609.5	609.9	610.3	610.8
142.5°	622.0	622.8	623.6	624.3	625.1	625.6	626.0	626.4	626.8	627.2	627.6
145°	645.6	646.5	647.4	648.3	649.2	649.8	650.0	650.3	650.5	650.8	651.0
147.5°	667.9	668.5	669.1	669.6	670.2	670.6	670.9	671.1	671.4	671.7	671.9
150°	681.6	682.0	682.3	682.7	683.1	683.4	683.7	683.9	684.2	684.4	684.7
152.5°	693.9	694.1	694.2	694.4	694.6	694.8	694.9	695.1	695.2	695.4	695.8
155°	711.2	711.0	710.7	710.5	710.2	710.2	710.3	710.4	710.5	710.7	711.3
157.5°	724.7	724.7	724.6	724.6	724.6	724.5	724.4	724.3	724.1	724.0	724.8
160°	732.9	732.8	732.7	732.5	732.4	732.3	732.1	732.0	731.9	731.8	732.5
162.5°	740.7	740.3	740.0	739.7	739.3	739.1	739.0	738.9	738.7	738.6	739.5
165°	750.0	749.6	749.3	748.9	748.5	748.2	748.1	748.0	747.9	747.7	748.8
167.5°	757.3	756.8	756.3	755.8	755.3	755.0	755.0	755.0	755.0	755.0	756.1
170°	761.4	760.9	760.4	759.9	759.4	759.1	759.1	759.1	759.1	759.1	760.2
172.5°	764.2	763.6	762.9	762.3	761.7	761.5	761.6	761.7	761.8	761.9	762.9
175°	767.7	767.1	766.4	765.8	765.2	764.9	765.0	765.2	765.3	765.4	766.3
177.5°	768.6	768.1	767.6	767.1	766.6	766.4	766.5	766.6	766.7	766.8	767.6
180°	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7



TEST NUMBER: P331925

CATALOG NUMBER: S123DIP-S560D585U835-4F0-1E-UDD-F

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°	16.2	16.1	16.1	16.1	16.1	16.2	16.2	16.3
90°	14.7	15.2	15.7	16.1	16.4	16.6	16.9	17.1
92.5°	16.2	17.0	17.8	18.3	18.5	18.6	18.8	18.9
95°	19.5	20.3	21.2	21.7	21.7	21.7	21.7	21.7
97.5°	20.4	21.4	22.4	23.0	23.1	23.2	23.4	23.5
100°	20.8	21.9	22.9	23.4	23.6	23.7	23.8	24.0
102.5°	31.2	28.1	25.0	23.5	23.7	24.0	24.2	24.4
105°	80.0	57.6	35.2	24.1	24.3	24.6	24.8	25.1
107.5°	196.0	179.6	163.1	146.5	129.5	112.6	95.7	78.8
110°	248.9	244.7	240.5	229.3	211.2	193.1	175.0	156.8



TEST NUMBER: P331925

CATALOG NUMBER: S123DIP-S560D585U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	286.1	286.2	286.3	284.4	280.6	276.7	272.9	269.1
115°	329.9	331.2	332.5	333.3	333.8	334.4	334.9	335.4
117.5°	369.6	370.6	371.6	372.2	372.3	372.4	372.5	372.6
120°	395.6	396.6	397.6	398.1	398.1	398.1	398.1	398.1
122.5°	421.0	421.7	422.4	422.8	422.9	423.0	423.1	423.2
125°	456.8	457.0	457.3	457.6	457.8	458.1	458.3	458.6
127.5°	492.7	493.1	493.5	493.6	493.3	493.1	492.8	492.6
130°	514.3	514.8	515.3	515.5	515.2	515.0	514.7	514.5
132.5°	534.9	535.4	535.9	536.0	535.6	535.2	534.9	534.5
135°	566.0	566.4	566.7	566.7	566.4	566.0	565.6	565.2
137.5°	593.7	594.3	594.9	595.1	594.8	594.6	594.3	594.1
140°	611.3	611.8	612.3	612.4	612.2	611.9	611.7	611.4
142.5°	628.0	628.4	628.8	628.8	628.5	628.1	627.7	627.4
145°	651.3	651.5	651.8	651.9	651.9	651.9	651.9	651.9
147.5°	672.2	672.4	672.7	672.5	671.9	671.3	670.8	670.2
150°	684.9	685.2	685.4	685.4	685.0	684.6	684.2	683.9
152.5°	696.3	696.7	697.2	697.1	696.6	696.0	695.4	694.8
155°	711.9	712.6	713.2	713.1	712.4	711.6	710.9	710.1
157.5°	725.5	726.3	727.1	726.9	725.9	725.0	724.0	723.0
160°	733.3	734.0	734.8	734.7	733.9	733.0	732.1	731.2
162.5°	740.3	741.2	742.1	742.1	741.3	740.5	739.7	739.0
165°	749.8	750.8	751.8	751.9	751.0	750.1	749.2	748.3
167.5°	757.1	758.1	759.1	759.1	758.1	757.1	756.1	755.0
170°	761.2	762.2	763.2	763.2	762.2	761.2	760.2	759.1
172.5°	763.9	764.9	765.9	765.9	764.8	763.7	762.5	761.4
175°	767.2	768.1	769.0	768.9	767.9	766.9	765.9	764.8
177.5°	768.4	769.2	770.0	769.9	768.9	767.9	766.9	765.9
180°	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7

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