

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: P331923-927

Luminaire Tested: **S123DIP-S560D585U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331923-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D585U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3467.4 lumens
Efficiency: N/A
Efficacy: 105.7 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: General Diffuse

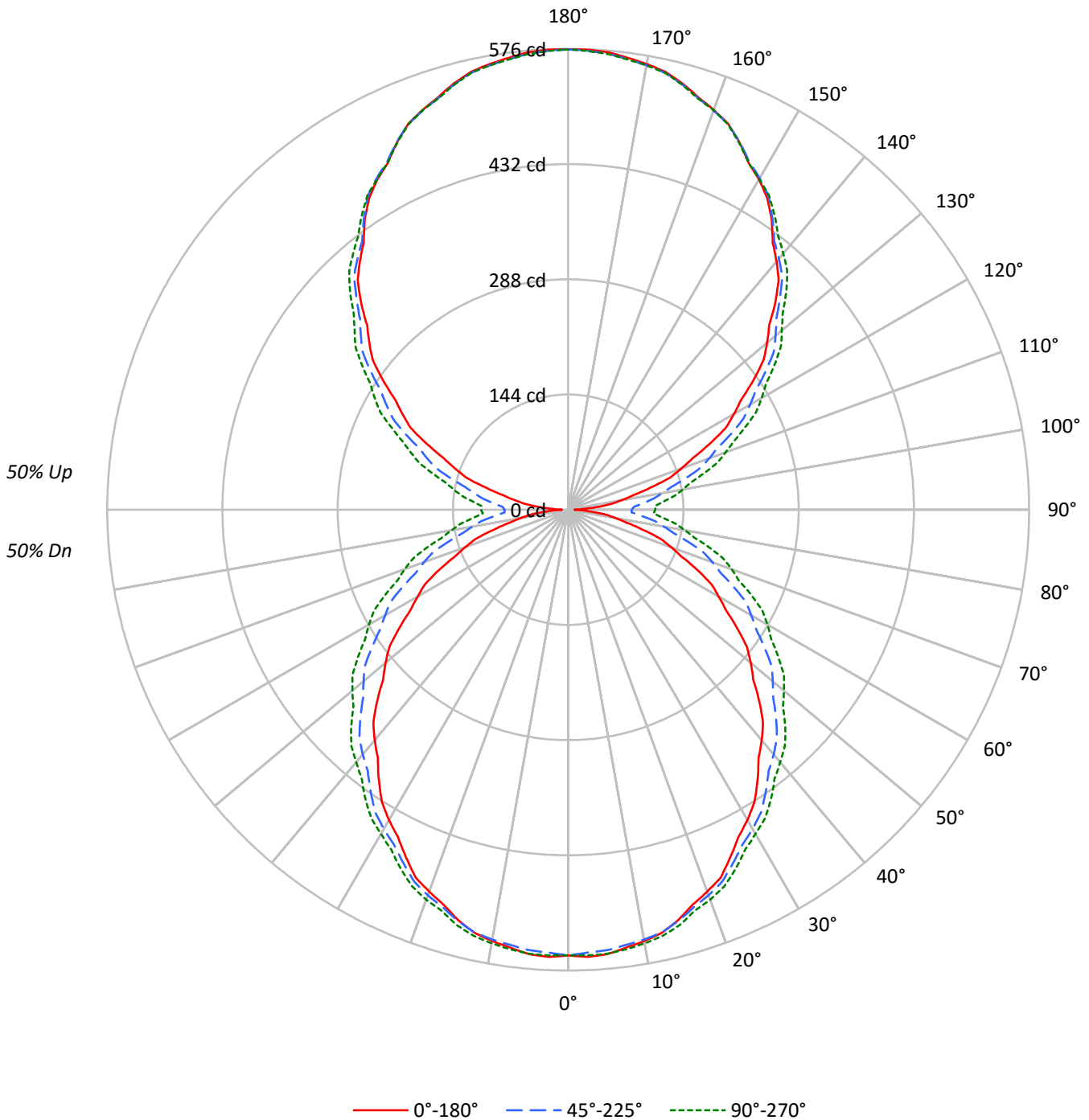
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331923-927

CATALOG NUMBER: S123DIP-S560D585U927-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





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CATALOG NUMBER: S123DIP-S560D585U927-4F0-1E-UDD-D1

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	97	92	88	84	89	85	81	78	71	69	66		59	57	55		48	46	45	40
2	88	80	73	68	80	73	68	63	62	58	54		51	48	45		41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45		45	41	38		36	33	31	27
4	73	61	53	47	67	57	49	44	48	42	38		40	36	32		32	29	26	23
5	67	55	46	40	61	50	43	37	43	37	32		36	31	28		29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28		32	28	24		26	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25		29	25	21		24	20	18	15
8	52	40	32	27	48	37	30	25	32	26	22		27	22	19		22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	20		24	20	17		20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18		23	18	15		19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5997	5997	5997
5°	6015	5845	5849
10°	5961	5711	5682
15°	5884	5558	5501
20°	5774	5383	5300
25°	5639	5182	5090
30°	5500	5002	4877
35°	5344	4810	4707
40°	5195	4636	4524
45°	5031	4469	4378
50°	4868	4304	4219
55°	4689	4134	4074
60°	4513	3964	3925
65°	4335	3780	3750
70°	4066	3576	3568
75°	3724	3338	3386
80°	3326	3109	3176
85°	2963	2948	3053



TEST NUMBER: P331923-927

CATALOG NUMBER: S123DIP-S560D585U927-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.8	1.5
10°-20°	150.5	4.3
20°-30°	225.2	6.5
30°-40°	268.9	7.8
40°-50°	281.3	8.1
50°-60°	264.0	7.6
60°-70°	220.5	6.4
70°-80°	157.8	4.5
80°-90°	95.8	2.8
90°-100°	96.5	2.8
100°-110°	155.5	4.5
110°-120°	219.7	6.3
120°-130°	267.5	7.7
130°-140°	289.5	8.3
140°-150°	278.8	8.0
150°-160°	233.4	6.7
160°-170°	155.4	4.5
170°-180°	54.4	1.6
0°-30°	428.5	12.4
0°-40°	697.4	20.1
0°-60°	1242.7	35.8
0°-90°	1716.7	49.5
90°-120°	471.8	13.6
90°-150°	1307.5	37.7
90°-180°	1751.0	50.5
0°-180°	3467.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	557	557	557	557	557	
5°	558	556	553	557	557	53
15°	531	533	532	538	538	149
25°	479	485	487	495	495	221
35°	413	422	430	439	442	258
45°	337	352	367	378	384	260
55°	257	277	299	315	320	230
65°	178	202	228	246	252	176
75°	96	125	155	175	183	103
85°	30	60	92	112	119	31
90°	8	43	79	101	109	7
95°	33	60	94	113	120	35
105°	106	123	152	168	176	114
115°	195	204	225	239	244	193
125°	283	285	301	311	314	252
135°	366	368	374	383	385	282
145°	443	443	445	449	450	276
155°	506	507	507	508	506	233
165°	552	550	550	553	550	155
175°	574	572	572	574	572	54
180°	575	575	575	575	575	



TEST NUMBER: P331923-927

CATALOG NUMBER: S123DIP-S560D585U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	559.5	559.2	558.9	558.5	558.2	557.6	556.7	555.9	555.0	554.1	555.0
5°	557.7	557.4	557.1	556.9	556.6	556.0	555.2	554.4	553.7	552.8	553.9
7.5°	552.2	552.2	552.3	552.4	552.5	552.1	551.3	550.5	549.7	548.9	550.2
10°	547.4	547.6	547.9	548.2	548.4	548.3	547.6	546.9	546.2	545.6	546.9
12.5°	541.5	541.9	542.3	542.6	543.0	543.0	542.6	542.1	541.6	541.1	542.4
15°	531.0	531.4	531.8	532.2	532.6	532.7	532.6	532.4	532.3	532.2	533.5
17.5°	517.6	518.4	519.3	520.1	520.9	521.3	521.2	521.1	521.1	521.0	522.2
20°	507.9	508.7	509.5	510.3	511.1	511.7	512.0	512.2	512.5	512.8	514.0
22.5°	497.7	498.5	499.3	500.2	501.0	501.5	501.9	502.3	502.7	503.0	504.6
25°	479.4	480.8	482.1	483.5	484.8	485.7	486.1	486.5	486.9	487.3	489.0
27.5°	461.0	462.5	464.1	465.6	467.1	468.3	469.1	470.0	470.9	471.7	473.2
30°	447.8	449.6	451.3	453.1	454.9	456.3	457.3	458.4	459.5	460.6	462.2
32.5°	433.2	435.2	437.2	439.2	441.2	442.8	444.3	445.6	447.0	448.5	450.2
35°	412.6	414.8	416.9	419.1	421.3	423.3	425.0	426.7	428.5	430.2	432.3
37.5°	390.8	393.2	395.6	398.1	400.5	402.8	405.0	407.1	409.2	411.5	413.8
40°	376.2	378.7	381.1	383.5	386.0	388.5	391.2	393.9	396.6	399.3	401.6
42.5°	360.2	363.2	366.1	369.1	372.1	374.9	377.8	380.6	383.4	386.2	388.7
45°	337.4	340.6	343.9	347.1	350.3	353.6	357.0	360.4	363.8	367.1	369.7
47.5°	313.5	317.2	320.8	324.5	328.1	331.9	335.8	339.6	343.5	347.4	350.2
50°	297.9	301.7	305.5	309.3	313.1	317.0	321.2	325.4	329.5	333.7	336.8
52.5°	281.5	285.4	289.5	293.4	297.4	301.7	306.3	310.9	315.5	320.2	323.4
55°	257.3	261.7	266.2	270.6	275.1	279.7	284.6	289.5	294.3	299.1	302.8
57.5°	233.8	238.4	243.0	247.6	252.3	257.3	262.6	267.9	273.2	278.5	282.2
60°	217.2	222.1	227.0	231.8	236.6	241.9	247.4	252.9	258.4	264.0	267.8
62.5°	201.7	206.7	211.7	216.6	221.6	227.0	232.8	238.7	244.5	250.4	254.1
65°	177.8	183.1	188.3	193.6	198.8	204.5	210.4	216.3	222.2	228.1	232.2
67.5°	153.5	159.1	164.7	170.2	175.9	181.6	187.7	193.8	199.8	205.8	210.2
70°	136.6	142.4	148.1	153.9	159.7	165.9	172.3	178.8	185.3	191.8	196.1
72.5°	121.0	126.8	132.6	138.4	144.2	150.4	157.1	163.8	170.5	177.2	181.6
75°	96.5	102.8	109.2	115.5	121.8	128.4	135.1	141.9	148.6	155.3	159.8
77.5°	75.1	81.5	87.9	94.3	100.7	107.3	114.1	120.9	127.7	134.5	139.2
80°	60.0	66.7	73.3	79.9	86.5	93.3	100.3	107.3	114.4	121.4	126.0
82.5°	47.0	53.7	60.4	67.1	73.8	80.7	87.9	95.0	102.1	109.2	113.8
85°	29.7	36.4	43.3	50.0	56.7	63.6	70.8	78.0	85.1	92.2	96.8
87.5°	16.2	23.1	30.1	37.0	43.9	50.9	58.1	65.2	72.3	79.5	84.1
90°	8.3	15.9	23.5	31.2	38.8	46.7	54.9	63.1	71.2	79.4	84.4
92.5°	18.3	25.0	31.6	38.3	44.9	52.0	59.5	67.0	74.5	82.1	86.8
95°	33.4	39.3	45.2	51.3	57.2	63.8	71.3	78.7	86.1	93.5	98.1
97.5°	53.3	58.5	63.8	69.1	74.4	80.5	87.4	94.3	101.2	108.1	112.5
100°	66.9	71.9	76.8	81.7	86.6	92.4	99.1	105.8	112.5	119.2	123.4
102.5°	82.7	86.9	91.2	95.5	99.7	105.2	111.9	118.7	125.5	132.2	136.3
105°	106.5	110.0	113.4	116.8	120.3	125.3	132.1	138.7	145.4	152.2	155.9
107.5°	133.6	136.5	139.3	142.3	145.1	149.5	155.3	161.2	167.1	172.9	176.9
110°	150.5	153.1	155.7	158.4	161.0	165.1	170.7	176.3	181.9	187.5	191.4



TEST NUMBER: P331923-927

CATALOG NUMBER: S123DIP-S560D585U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.6	170.7	172.8	174.9	177.1	180.7	185.9	191.2	196.4	201.6	205.5
115°	195.0	197.0	198.9	200.8	202.7	206.0	210.7	215.3	220.0	224.7	228.0
117.5°	222.2	223.5	224.7	225.9	227.0	229.8	234.1	238.4	242.6	247.0	250.2
120°	238.8	240.0	241.3	242.6	243.8	246.4	250.4	254.4	258.3	262.3	265.2
122.5°	256.4	257.2	258.0	258.8	259.6	262.0	266.0	270.0	273.9	277.9	280.7
125°	282.9	283.2	283.4	283.8	284.1	286.1	289.8	293.5	297.2	301.0	303.3
127.5°	307.8	308.3	308.8	309.3	309.8	311.6	314.7	317.7	320.7	323.7	325.7
130°	324.5	325.1	325.7	326.5	327.1	328.7	331.1	333.4	335.8	338.3	340.4
132.5°	340.6	341.4	342.1	342.9	343.7	345.1	347.0	349.0	350.9	352.8	354.7
135°	365.8	366.3	366.8	367.3	367.7	368.7	370.0	371.5	372.8	374.1	376.2
137.5°	389.2	389.6	390.0	390.4	390.8	391.6	392.7	393.7	394.8	395.9	397.7
140°	405.0	405.5	406.0	406.5	407.0	407.5	408.1	408.5	409.0	409.6	411.5
142.5°	419.9	420.3	420.6	421.0	421.4	421.8	422.0	422.2	422.6	422.8	424.5
145°	443.0	443.1	443.1	443.1	443.2	443.4	443.7	444.0	444.3	444.7	445.6
147.5°	462.6	463.0	463.3	463.7	464.1	464.4	464.7	464.9	465.2	465.5	465.8
150°	476.7	476.9	477.1	477.3	477.5	477.7	477.9	478.1	478.3	478.5	478.5
152.5°	488.3	488.5	488.9	489.1	489.4	489.6	489.7	489.8	490.0	490.0	490.2
155°	506.5	506.5	506.5	506.5	506.5	506.6	506.7	506.8	506.9	507.0	507.4
157.5°	522.0	522.0	521.8	521.7	521.6	521.6	521.7	521.7	521.8	521.9	522.3
160°	531.8	531.6	531.4	531.2	531.0	530.9	530.9	530.9	530.9	530.9	531.4
162.5°	540.5	540.2	540.0	539.6	539.4	539.3	539.4	539.5	539.6	539.6	540.1
165°	551.7	551.4	551.1	550.8	550.5	550.3	550.3	550.3	550.3	550.3	551.0
167.5°	560.6	560.2	559.8	559.4	559.0	558.9	559.0	559.0	559.1	559.2	559.8
170°	565.7	565.3	564.9	564.5	564.1	563.9	563.9	563.9	563.9	563.9	564.6
172.5°	569.7	569.3	568.9	568.5	568.1	567.9	567.9	567.9	567.9	567.9	568.5
175°	573.9	573.5	573.1	572.7	572.3	572.0	572.0	572.0	572.0	572.0	572.7
177.5°	575.6	575.3	575.0	574.6	574.3	574.1	574.1	574.1	574.1	574.1	574.6
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2



TEST NUMBER: P331923-927

CATALOG NUMBER: S123DIP-S560D585U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	555.9	556.7	557.6	558.0	557.9	557.8	557.7	557.5
5°	555.0	556.0	557.1	557.6	557.5	557.3	557.2	557.1
7.5°	551.6	552.9	554.4	554.9	554.8	554.6	554.4	554.3
10°	548.3	549.6	551.0	551.4	551.2	551.0	550.6	550.4
12.5°	543.7	544.9	546.1	546.6	546.4	546.1	545.8	545.6
15°	534.9	536.2	537.6	538.2	538.1	537.9	537.8	537.7
17.5°	523.5	524.7	525.9	526.4	526.2	526.0	525.9	525.6
20°	515.2	516.4	517.6	518.3	518.4	518.6	518.7	518.8
22.5°	506.1	507.7	509.2	509.9	509.8	509.8	509.7	509.6
25°	490.8	492.6	494.3	495.2	495.2	495.2	495.2	495.2
27.5°	474.8	476.3	477.8	478.6	478.7	478.8	479.0	479.0
30°	463.8	465.4	467.1	467.9	467.9	467.9	467.9	467.9
32.5°	451.9	453.6	455.3	456.4	456.7	457.0	457.3	457.6
35°	434.3	436.3	438.3	439.6	440.1	440.7	441.2	441.8
37.5°	416.0	418.3	420.6	422.0	422.4	422.8	423.3	423.7
40°	403.9	406.2	408.4	409.9	410.4	411.0	411.5	412.0
42.5°	391.2	393.7	396.2	397.8	398.6	399.3	400.1	400.8
45°	372.2	374.8	377.4	379.2	380.2	381.4	382.5	383.5
47.5°	353.2	356.0	358.9	360.8	361.6	362.4	363.3	364.1
50°	339.9	343.1	346.2	348.2	349.1	350.1	351.0	352.0
52.5°	326.6	329.8	333.0	335.2	336.4	337.5	338.7	339.8
55°	306.4	310.1	313.7	316.1	317.2	318.2	319.3	320.4
57.5°	285.9	289.5	293.2	295.6	296.9	298.2	299.4	300.7
60°	271.6	275.3	279.1	281.7	283.2	284.6	286.1	287.6
62.5°	257.9	261.7	265.5	268.1	269.4	270.8	272.2	273.5
65°	236.2	240.3	244.4	247.1	248.4	249.8	251.1	252.5
67.5°	214.7	219.1	223.6	226.3	227.4	228.5	229.7	230.8
70°	200.4	204.7	209.1	211.8	213.2	214.5	215.9	217.2
72.5°	186.0	190.4	194.9	197.8	199.2	200.5	201.8	203.2
75°	164.2	168.7	173.2	176.2	177.8	179.4	181.0	182.7
77.5°	143.9	148.5	153.2	156.2	157.5	158.7	159.9	161.2
80°	130.6	135.1	139.7	142.7	144.0	145.4	146.7	148.1
82.5°	118.4	122.9	127.5	130.6	131.9	133.2	134.6	135.9
85°	101.4	106.0	110.6	113.5	114.9	116.2	117.6	118.9
87.5°	88.8	93.5	98.2	101.2	102.6	103.9	105.4	106.7
90°	89.4	94.3	99.3	102.7	104.2	105.8	107.3	108.8
92.5°	91.7	96.4	101.2	104.2	105.3	106.5	107.6	108.7
95°	102.7	107.3	111.9	114.8	116.1	117.5	118.8	120.2
97.5°	117.0	121.4	126.0	128.8	130.2	131.5	132.8	134.1
100°	127.6	131.8	136.1	138.9	140.5	142.0	143.6	145.1
102.5°	140.5	144.5	148.6	151.3	152.7	153.9	155.3	156.5
105°	159.7	163.5	167.2	169.8	171.3	172.7	174.1	175.5
107.5°	180.8	184.7	188.7	191.2	192.3	193.3	194.4	195.4
110°	195.3	199.2	203.1	205.5	206.4	207.3	208.2	209.1



TEST NUMBER: P331923-927

CATALOG NUMBER: S123DIP-S560D585U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	209.3	213.2	217.1	219.6	220.8	221.9	223.1	224.2
115°	231.3	234.6	238.0	240.2	241.1	242.1	243.1	244.1
117.5°	253.3	256.5	259.8	261.7	262.4	263.2	264.0	264.8
120°	268.2	271.2	274.3	276.2	276.9	277.7	278.4	279.1
122.5°	283.4	286.1	288.8	290.6	291.2	291.8	292.6	293.2
125°	305.8	308.2	310.6	312.1	312.7	313.2	313.8	314.3
127.5°	327.9	330.0	332.1	333.4	333.8	334.3	334.8	335.2
130°	342.5	344.7	346.9	348.0	348.1	348.2	348.3	348.4
132.5°	356.7	358.7	360.7	361.9	362.3	362.6	363.0	363.4
135°	378.3	380.2	382.3	383.6	384.0	384.5	384.9	385.4
137.5°	399.3	401.1	402.7	403.8	404.1	404.3	404.6	405.0
140°	413.4	415.3	417.2	418.2	418.2	418.1	418.1	418.0
142.5°	426.2	427.9	429.6	430.6	430.6	430.8	430.9	431.0
145°	446.6	447.6	448.5	449.1	449.2	449.4	449.5	449.6
147.5°	466.1	466.4	466.8	466.9	466.8	466.7	466.5	466.4
150°	478.5	478.5	478.5	478.3	478.0	477.7	477.4	477.1
152.5°	490.4	490.6	490.8	490.6	490.1	489.6	489.2	488.7
155°	507.8	508.2	508.6	508.4	507.7	507.0	506.4	505.6
157.5°	522.8	523.2	523.6	523.5	522.9	522.4	521.8	521.3
160°	532.0	532.4	532.9	533.0	532.6	532.2	531.8	531.4
162.5°	540.6	541.1	541.6	541.5	540.9	540.3	539.6	539.0
165°	551.6	552.2	552.8	552.7	552.0	551.3	550.6	549.9
167.5°	560.5	561.1	561.7	561.7	561.1	560.5	559.8	559.2
170°	565.3	566.0	566.7	566.7	566.0	565.3	564.6	563.9
172.5°	569.1	569.7	570.4	570.4	569.7	568.9	568.2	567.5
175°	573.2	573.9	574.5	574.4	573.7	573.0	572.3	571.6
177.5°	575.1	575.6	576.1	576.0	575.4	574.9	574.3	573.8
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2

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