

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: P332279-930

Luminaire Tested: **S123RDIP-S560D585U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332279-930
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: S123RDIP-S560D585U930-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3650.1 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

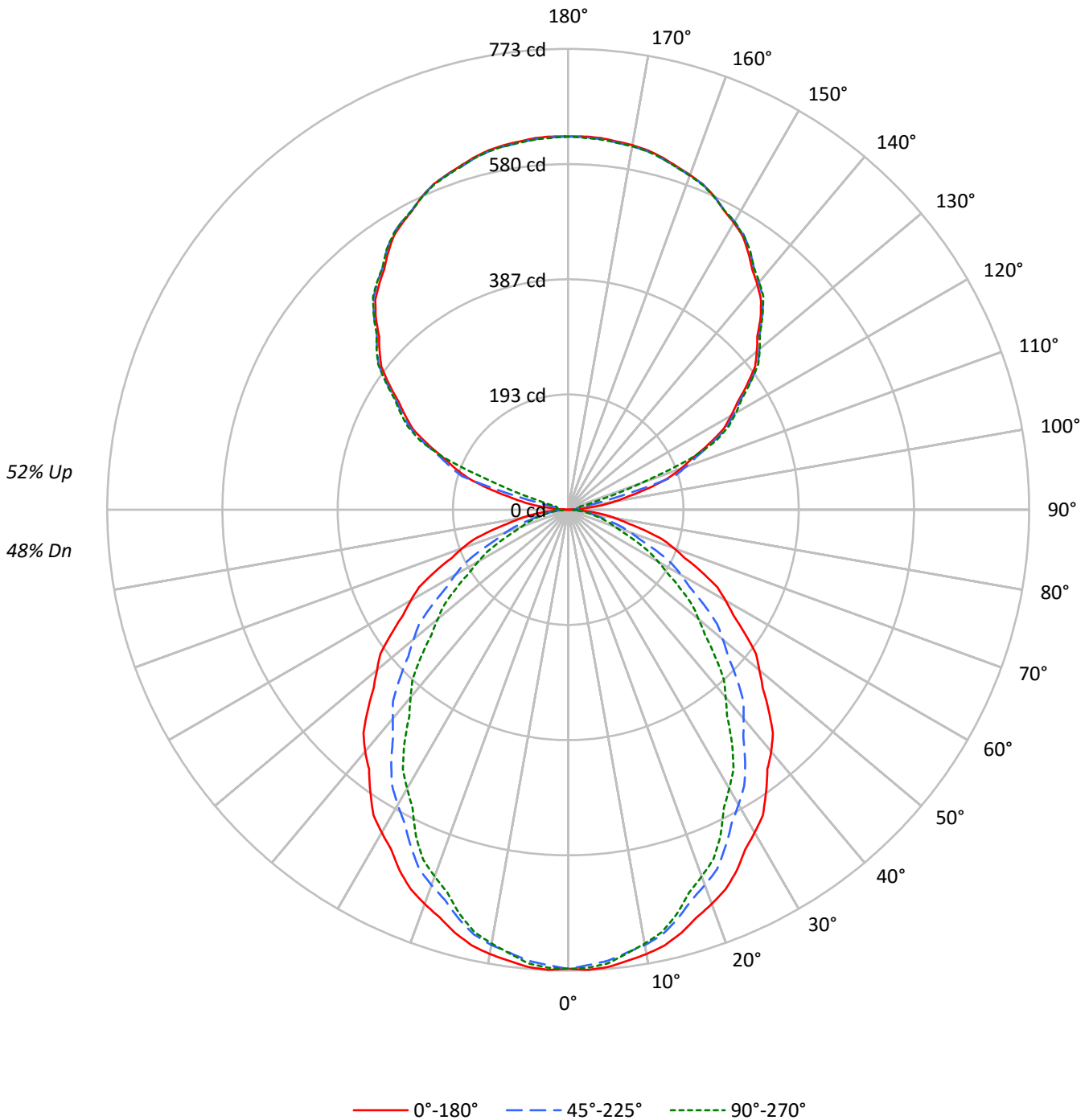
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332279-930

CATALOG NUMBER: S123RDIP-S560D585U930-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332279-930

CATALOG NUMBER: S123RDIP-S560D585U930-4F0-1E-UDD-F

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	98	98	98	98	82	82	82	67	67	67	54	54	54	48
1	98	93	90	86	90	86	83	80	72	70	68	60	58	57	48	47	46	41
2	89	82	76	71	82	76	70	66	64	60	57	53	50	48	43	41	39	35
3	81	72	65	59	75	67	61	56	57	52	48	47	44	41	38	36	34	30
4	75	64	56	50	68	59	53	47	50	45	41	42	38	35	34	32	29	26
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	31	28	26	23
6	63	51	43	38	58	48	41	36	41	35	31	34	30	27	28	25	23	20
7	59	46	39	33	54	43	36	31	37	32	28	31	27	24	26	23	20	18
8	54	42	35	29	50	39	33	28	34	28	25	29	24	21	24	21	18	16
9	51	39	31	26	47	36	29	25	31	26	22	26	22	19	22	19	17	14
10	47	35	28	24	44	33	27	22	29	23	20	24	20	18	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8289	8289	8289
5°	8321	8206	8253
10°	8273	8103	8075
15°	8184	7913	7830
20°	8062	7676	7497
25°	7936	7410	7172
30°	7771	7102	6714
35°	7599	6795	6294
40°	7442	6433	5774
45°	7234	6075	5305
50°	7006	5668	4779
55°	6775	5204	4290
60°	6562	4706	3750
65°	6283	4167	3212
70°	5936	3500	2593
75°	5427	2753	2441
80°	4841	2442	2244
85°	4088	2149	2001



TEST NUMBER: P332279-930

CATALOG NUMBER: S123RDIP-S560D585U930-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	2.0
10°-20°	201.2	5.5
20°-30°	289.7	7.9
30°-40°	326.3	8.9
40°-50°	312.2	8.6
50°-60°	255.7	7.0
60°-70°	172.5	4.7
70°-80°	86.8	2.4
80°-90°	24.7	0.7
90°-100°	22.8	0.6
100°-110°	108.4	3.0
110°-120°	260.5	7.1
120°-130°	331.7	9.1
130°-140°	354.4	9.7
140°-150°	331.4	9.1
150°-160°	267.4	7.3
160°-170°	172.6	4.7
170°-180°	59.5	1.6
0°-30°	563.2	15.4
0°-40°	889.5	24.4
0°-60°	1457.4	39.9
0°-90°	1741.4	47.7
90°-120°	391.7	10.7
90°-150°	1409.3	38.6
90°-180°	1909.0	52.3
0°-180°	3650.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	770	770	770	770	770	
5°	770	767	760	765	764	73
15°	734	727	710	707	703	207
25°	668	652	624	611	604	307
35°	578	555	517	491	479	362
45°	475	446	399	365	348	367
55°	361	329	277	242	229	324
65°	247	212	164	134	126	244
75°	130	100	66	60	59	139
85°	33	20	17	16	16	37
90°	0	5	11	13	14	3
95°	28	11	14	18	18	35
105°	139	141	102	24	20	147
115°	260	263	267	271	274	257
125°	366	370	372	373	374	327
135°	456	459	461	462	461	351
145°	526	530	531	531	532	329
155°	580	579	579	581	579	267
165°	612	610	610	613	610	173
175°	626	624	624	627	624	60
180°	626	626	626	626	626	



TEST NUMBER: P332279-930

CATALOG NUMBER: S123RDIP-S560D585U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	770.1	770.1	770.1	770.1	770.1	770.1	770.1	770.1	770.1	770.1	770.1
2.5°	772.6	772.1	771.7	771.2	770.8	769.9	768.6	767.2	765.9	764.6	765.8
5°	770.1	769.4	768.7	768.0	767.3	766.1	764.4	762.8	761.1	759.5	760.7
7.5°	763.0	762.2	761.4	760.7	759.9	758.5	756.4	754.2	752.0	749.8	750.5
10°	756.9	755.9	755.0	754.0	753.1	751.3	748.9	746.3	743.8	741.4	741.4
12.5°	748.4	747.4	746.2	745.2	744.1	742.1	739.0	736.0	732.9	729.9	729.8
15°	734.4	733.0	731.4	729.9	728.4	725.6	721.8	717.9	714.0	710.1	709.4
17.5°	716.8	715.1	713.3	711.5	709.7	706.4	701.4	696.5	691.5	686.6	685.2
20°	703.8	701.6	699.4	697.2	695.0	691.2	685.9	680.7	675.4	670.1	668.3
22.5°	689.3	686.8	684.3	681.7	679.1	675.1	669.4	663.8	658.3	652.6	650.4
25°	668.2	664.8	661.3	657.9	654.4	649.5	643.0	636.7	630.3	623.9	621.0
27.5°	642.6	638.8	635.0	631.1	627.3	621.8	614.7	607.6	600.5	593.5	589.4
30°	625.2	621.0	616.9	612.7	608.5	602.5	594.8	587.0	579.2	571.4	566.7
32.5°	607.6	603.0	598.3	593.5	588.8	582.4	574.1	565.9	557.7	549.4	544.3
35°	578.3	573.3	568.3	563.4	558.3	551.5	542.9	534.3	525.7	517.1	511.1
37.5°	548.6	543.1	537.5	531.9	526.4	519.0	509.8	500.7	491.5	482.2	475.5
40°	529.6	523.5	517.4	511.3	505.2	497.2	487.4	477.5	467.7	457.8	450.5
42.5°	508.1	502.0	495.9	489.8	483.7	475.6	465.4	455.2	445.0	434.8	426.9
45°	475.2	469.0	462.8	456.6	450.3	441.8	431.1	420.4	409.8	399.1	391.2
47.5°	442.4	435.5	428.7	421.8	415.0	406.3	395.5	384.8	374.1	363.5	354.9
50°	418.4	411.9	405.4	398.8	392.3	383.4	372.2	361.0	349.8	338.5	329.9
52.5°	397.0	389.9	382.8	375.7	368.7	359.5	348.4	337.3	326.1	315.0	306.1
55°	361.0	354.2	347.4	340.6	333.8	324.5	312.7	300.9	289.1	277.3	269.2
57.5°	327.8	320.3	312.9	305.5	298.1	288.5	276.6	264.8	252.9	241.1	233.5
60°	304.8	297.2	289.5	281.8	274.3	264.6	253.2	241.7	230.1	218.6	211.1
62.5°	281.8	274.2	266.5	258.9	251.3	241.7	230.2	218.7	207.1	195.6	188.6
65°	246.7	239.0	231.5	223.8	216.1	206.9	196.1	185.3	174.5	163.6	156.9
67.5°	211.6	203.9	196.2	188.4	180.8	171.7	161.3	150.9	140.6	130.1	125.1
70°	188.6	181.1	173.7	166.2	158.7	150.0	140.3	130.6	120.9	111.2	106.3
72.5°	165.6	158.2	150.8	143.5	136.1	128.0	119.2	110.3	101.5	92.7	88.7
75°	130.5	123.8	117.2	110.6	103.9	96.7	89.1	81.4	73.9	66.2	64.8
77.5°	98.6	92.5	86.5	80.5	74.4	69.0	64.1	59.2	54.2	49.3	48.6
80°	78.1	72.4	66.7	61.0	55.3	51.0	48.1	45.2	42.2	39.4	38.9
82.5°	58.6	53.6	48.8	43.9	38.9	35.8	34.4	33.1	31.7	30.3	29.9
85°	33.1	30.1	27.0	24.0	20.9	19.2	18.8	18.3	17.9	17.4	17.2
87.5°	12.1	11.1	10.0	9.0	8.0	7.7	7.9	8.2	8.5	8.7	8.7
90°	0.5	1.5	2.5	3.6	4.6	5.8	7.1	8.5	9.8	11.2	11.6
92.5°	8.6	8.4	8.1	7.7	7.5	7.8	8.9	9.9	10.9	11.9	12.6
95°	28.4	24.1	19.9	15.7	11.4	9.9	11.0	12.1	13.3	14.4	15.2
97.5°	57.0	55.1	53.2	51.3	49.4	44.8	37.3	29.8	22.4	15.0	15.8
100°	78.6	80.6	82.8	84.8	86.8	79.8	63.7	47.6	31.5	15.3	16.1
102.5°	103.1	104.6	106.2	107.6	109.1	101.0	83.4	65.8	48.2	30.6	28.0
105°	138.6	139.7	140.9	141.9	143.1	139.0	129.7	120.4	111.1	101.8	83.6
107.5°	175.9	176.8	177.8	178.7	179.6	180.8	182.2	183.7	185.2	186.6	173.3
110°	200.9	201.7	202.5	203.3	204.2	205.2	206.3	207.4	208.6	209.7	206.3



TEST NUMBER: P332279-930

CATALOG NUMBER: S123RDIP-S560D585U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	224.7	225.4	226.2	226.9	227.6	228.6	229.8	230.9	232.0	233.2	233.3
115°	259.9	260.6	261.1	261.8	262.4	263.2	264.2	265.1	266.0	266.9	268.0
117.5°	294.1	294.8	295.6	296.4	297.1	297.7	298.2	298.7	299.2	299.6	300.5
120°	315.3	316.2	317.2	318.0	319.0	319.6	319.9	320.2	320.6	320.8	321.7
122.5°	336.9	337.6	338.3	339.2	339.9	340.5	340.9	341.3	341.7	342.1	342.7
125°	366.4	367.3	368.1	368.9	369.7	370.4	370.8	371.2	371.6	372.0	372.2
127.5°	395.1	395.9	396.7	397.5	398.4	399.0	399.5	400.1	400.6	401.0	401.4
130°	412.9	413.8	414.6	415.4	416.2	416.9	417.3	417.7	418.1	418.5	418.9
132.5°	430.1	430.9	431.7	432.5	433.3	433.9	434.2	434.6	434.9	435.3	435.7
135°	456.2	456.8	457.4	458.0	458.7	459.2	459.6	460.0	460.4	460.8	461.1
137.5°	478.5	479.3	480.0	480.9	481.6	482.2	482.3	482.6	482.8	483.1	483.6
140°	493.3	494.0	494.6	495.2	495.9	496.4	496.6	496.9	497.3	497.6	498.0
142.5°	507.1	507.8	508.4	509.0	509.6	510.1	510.4	510.7	511.0	511.4	511.7
145°	526.4	527.1	527.8	528.6	529.3	529.8	529.9	530.2	530.4	530.6	530.8
147.5°	544.5	545.0	545.5	545.9	546.4	546.7	547.0	547.1	547.4	547.6	547.8
150°	555.7	556.0	556.3	556.6	556.9	557.2	557.4	557.6	557.8	558.0	558.2
152.5°	565.7	565.9	566.0	566.1	566.3	566.5	566.6	566.7	566.8	567.0	567.3
155°	579.8	579.7	579.4	579.3	579.0	579.0	579.1	579.2	579.3	579.4	579.9
157.5°	590.8	590.8	590.8	590.8	590.8	590.7	590.6	590.5	590.4	590.3	590.9
160°	597.5	597.5	597.4	597.2	597.1	597.0	596.9	596.8	596.7	596.6	597.2
162.5°	603.9	603.6	603.3	603.1	602.8	602.6	602.5	602.4	602.3	602.2	602.9
165°	611.5	611.1	610.9	610.6	610.3	610.0	609.9	609.8	609.8	609.6	610.5
167.5°	617.4	617.0	616.6	616.2	615.8	615.6	615.6	615.6	615.6	615.6	616.4
170°	620.8	620.4	620.0	619.5	619.1	618.9	618.9	618.9	618.9	618.9	619.8
172.5°	623.1	622.6	622.0	621.5	621.0	620.9	620.9	621.0	621.1	621.2	622.0
175°	625.9	625.4	624.8	624.4	623.9	623.6	623.7	623.9	623.9	624.0	624.8
177.5°	626.6	626.2	625.8	625.4	625.0	624.8	624.9	625.0	625.1	625.2	625.8
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



TEST NUMBER: P332279-930

CATALOG NUMBER: S123RDIP-S560D585U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	770.1	770.1	770.1	770.1	770.1	770.1	770.1	770.1
2.5°	767.0	768.3	769.5	770.0	769.7	769.5	769.3	769.1
5°	761.9	763.2	764.4	764.9	764.7	764.3	764.1	763.8
7.5°	751.2	751.9	752.6	752.7	752.2	751.8	751.3	750.8
10°	741.6	741.8	741.8	741.6	740.9	740.2	739.6	738.8
12.5°	729.7	729.6	729.5	729.0	728.2	727.4	726.7	725.9
15°	708.7	708.0	707.4	706.5	705.5	704.6	703.6	702.6
17.5°	683.7	682.2	680.7	679.3	677.8	676.4	674.9	673.5
20°	666.5	664.7	662.9	661.2	659.5	657.9	656.2	654.5
22.5°	648.2	645.9	643.7	641.7	640.2	638.6	637.1	635.5
25°	618.1	615.1	612.3	610.0	608.5	607.0	605.4	603.9
27.5°	585.3	581.3	577.2	574.1	571.7	569.4	567.0	564.7
30°	562.0	557.3	552.6	549.1	546.9	544.7	542.4	540.2
32.5°	539.2	533.9	528.8	525.1	522.8	520.4	518.0	515.8
35°	505.2	499.2	493.3	489.0	486.5	484.0	481.5	479.0
37.5°	468.7	461.9	455.2	450.3	447.2	444.1	441.0	437.9
40°	443.4	436.1	428.9	423.7	420.5	417.4	414.2	410.9
42.5°	419.1	411.2	403.2	397.9	395.0	392.2	389.3	386.5
45°	383.3	375.4	367.5	361.8	358.5	355.1	351.8	348.5
47.5°	346.3	337.7	329.1	323.3	320.3	317.3	314.4	311.4
50°	321.3	312.7	304.1	298.2	295.0	291.8	288.6	285.4
52.5°	297.2	288.2	279.2	273.4	270.5	267.7	264.8	262.0
55°	261.2	253.2	245.1	239.7	236.9	234.2	231.4	228.6
57.5°	225.8	218.3	210.7	205.7	203.3	201.0	198.6	196.2
60°	203.6	196.1	188.6	183.7	181.3	179.0	176.6	174.2
62.5°	181.5	174.5	167.4	162.7	160.2	157.7	155.2	152.8
65°	150.0	143.2	136.4	132.2	130.8	129.2	127.7	126.1
67.5°	120.0	114.9	109.8	106.5	104.8	103.2	101.6	100.0
70°	101.4	96.6	91.7	88.5	87.0	85.5	84.0	82.4
72.5°	84.7	80.8	76.8	74.5	73.9	73.2	72.6	71.9
75°	63.4	62.0	60.7	59.8	59.5	59.3	58.9	58.7
77.5°	47.9	47.1	46.3	45.8	45.6	45.2	45.0	44.7
80°	38.5	38.1	37.7	37.3	37.1	36.8	36.5	36.2
82.5°	29.5	29.1	28.7	28.5	28.4	28.4	28.3	28.2
85°	17.0	16.6	16.4	16.2	16.2	16.2	16.2	16.2
87.5°	8.6	8.6	8.6	8.6	8.5	8.4	8.3	8.3
90°	12.0	12.4	12.8	13.1	13.4	13.5	13.8	13.9
92.5°	13.2	13.9	14.5	14.9	15.1	15.2	15.3	15.4
95°	15.9	16.6	17.3	17.7	17.7	17.7	17.7	17.7
97.5°	16.6	17.4	18.3	18.8	18.8	18.9	19.1	19.2
100°	17.0	17.9	18.7	19.1	19.2	19.3	19.4	19.6
102.5°	25.4	22.9	20.4	19.2	19.3	19.6	19.7	19.9
105°	65.2	47.0	28.7	19.6	19.8	20.1	20.2	20.5
107.5°	159.8	146.4	133.0	119.4	105.6	91.8	78.0	64.2
110°	202.9	199.5	196.1	186.9	172.2	157.4	142.7	127.8



TEST NUMBER: P332279-930

CATALOG NUMBER: S123RDIP-S560D585U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	233.3	233.3	233.4	231.9	228.8	225.6	222.5	219.4
115°	269.0	270.0	271.1	271.7	272.1	272.6	273.0	273.5
117.5°	301.3	302.1	303.0	303.5	303.5	303.6	303.7	303.8
120°	322.5	323.3	324.2	324.6	324.6	324.6	324.6	324.6
122.5°	343.2	343.8	344.4	344.7	344.8	344.9	345.0	345.0
125°	372.4	372.6	372.8	373.1	373.2	373.5	373.7	373.9
127.5°	401.7	402.0	402.4	402.4	402.2	402.0	401.8	401.6
130°	419.3	419.7	420.1	420.3	420.0	419.9	419.6	419.5
132.5°	436.1	436.5	436.9	437.0	436.7	436.3	436.1	435.8
135°	461.5	461.8	462.0	462.0	461.8	461.5	461.1	460.8
137.5°	484.0	484.5	485.0	485.2	484.9	484.8	484.5	484.4
140°	498.4	498.8	499.2	499.3	499.1	498.9	498.7	498.5
142.5°	512.0	512.3	512.7	512.7	512.4	512.1	511.8	511.5
145°	531.0	531.2	531.4	531.5	531.5	531.5	531.5	531.5
147.5°	548.0	548.2	548.5	548.3	547.8	547.3	546.9	546.4
150°	558.4	558.6	558.8	558.8	558.5	558.2	557.8	557.6
152.5°	567.7	568.0	568.4	568.3	567.9	567.4	567.0	566.5
155°	580.4	581.0	581.5	581.4	580.8	580.2	579.6	578.9
157.5°	591.5	592.2	592.8	592.6	591.8	591.1	590.3	589.5
160°	597.9	598.4	599.1	599.0	598.3	597.6	596.9	596.1
162.5°	603.6	604.3	605.0	605.0	604.4	603.7	603.1	602.5
165°	611.3	612.1	612.9	613.0	612.3	611.6	610.8	610.1
167.5°	617.3	618.1	618.9	618.9	618.1	617.3	616.4	615.6
170°	620.6	621.4	622.2	622.2	621.4	620.6	619.8	618.9
172.5°	622.8	623.6	624.4	624.4	623.5	622.6	621.7	620.8
175°	625.5	626.2	627.0	626.9	626.1	625.3	624.4	623.5
177.5°	626.5	627.1	627.8	627.7	626.9	626.1	625.3	624.4
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9

(END OF REPORT)