

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: P331253-935

Luminaire Tested: **S122DIP-S290D530U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331253-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIP-S290D530U935-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2658.8 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

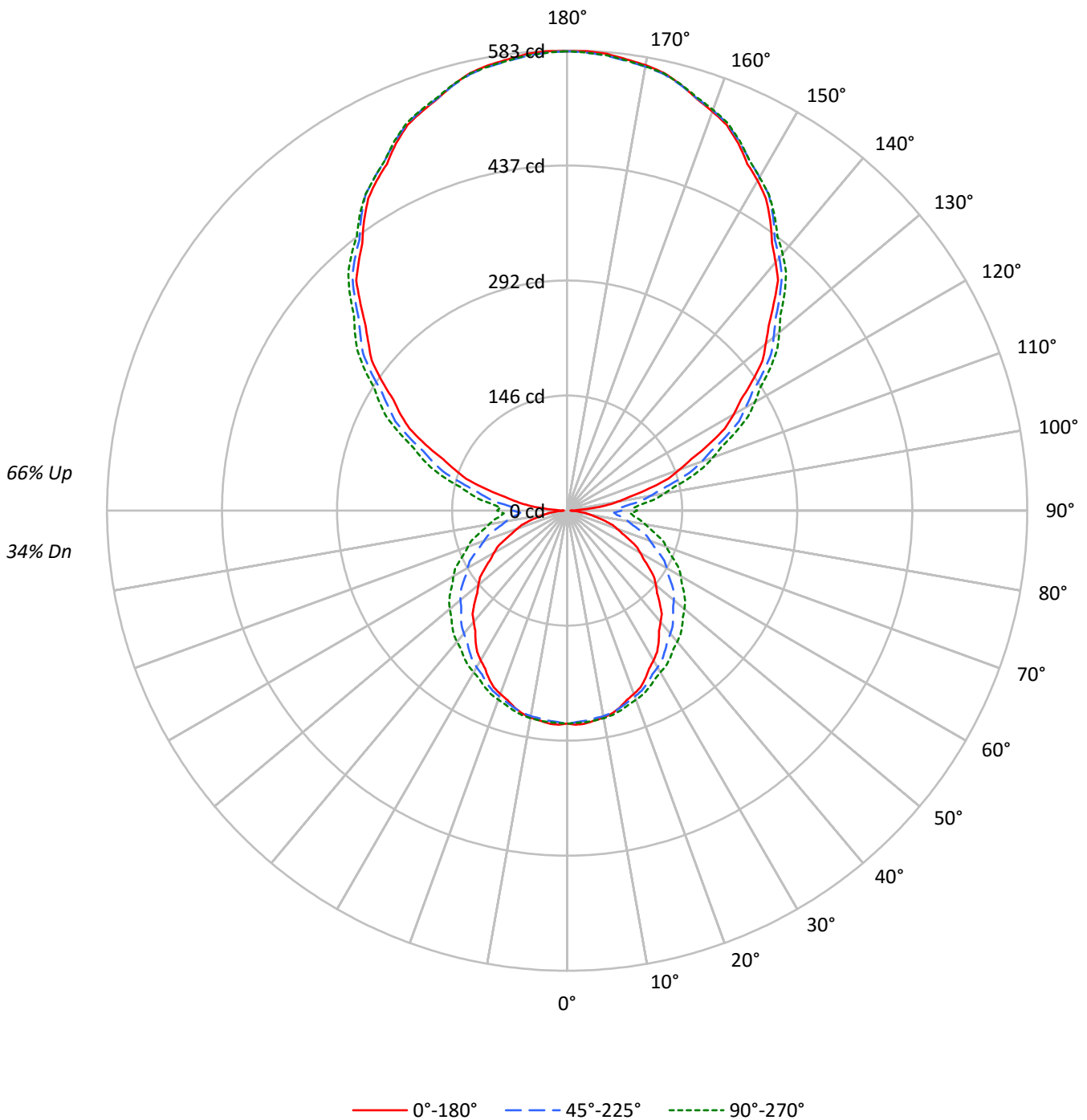
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331253-935

CATALOG NUMBER: S122DIP-S290D530U935-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P331253-935

CATALOG NUMBER: S122DIP-S290D530U935-4F0-1E-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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	34
1	93	89	84	81	84	80	76	73	64	61	59	49	47	46	35	34	33	27
2	84	77	70	65	76	69	64	59	55	51	48	42	40	37	30	29	27	22
3	77	67	60	54	69	61	54	49	48	44	40	37	34	31	27	24	23	18
4	70	59	51	45	63	53	46	41	43	38	34	33	29	26	24	21	19	15
5	64	52	44	38	57	47	40	35	38	33	29	29	25	23	21	19	17	13
6	59	47	39	33	53	42	35	30	34	29	25	26	22	20	19	16	14	11
7	54	42	34	28	49	38	31	26	31	25	22	24	20	17	17	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9
9	47	35	27	22	42	31	25	20	25	20	17	20	16	13	15	12	10	8
10	44	32	24	20	39	29	22	18	23	18	15	18	15	12	14	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4358	4358	4358
5°	4379	4195	4179
10°	4352	4070	4026
15°	4290	3939	3863
20°	4215	3798	3707
25°	4141	3663	3565
30°	4034	3524	3423
35°	3928	3389	3323
40°	3818	3275	3223
45°	3709	3172	3137
50°	3596	3079	3053
55°	3474	2979	2968
60°	3329	2876	2878
65°	3174	2756	2769
70°	3001	2623	2653
75°	2784	2499	2544
80°	2445	2366	2436
85°	2110	2255	2350



TEST NUMBER: P331253-935

CATALOG NUMBER: S122DIP-S290D530U935-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.6	1.0
10°-20°	73.3	2.8
20°-30°	111.1	4.2
30°-40°	135.3	5.1
40°-50°	145.6	5.5
50°-60°	141.4	5.3
60°-70°	123.5	4.6
70°-80°	95.1	3.6
80°-90°	66.1	2.5
90°-100°	80.8	3.0
100°-110°	146.6	5.5
110°-120°	216.9	8.2
120°-130°	269.2	10.1
130°-140°	293.9	11.1
140°-150°	284.1	10.7
150°-160°	237.6	8.9
160°-170°	157.6	5.9
170°-180°	55.1	2.1
0°-30°	210.0	7.9
0°-40°	345.4	13.0
0°-60°	632.4	23.8
0°-90°	917.0	34.5
90°-120°	444.3	16.7
90°-150°	1291.5	48.6
90°-180°	1742.0	65.5
0°-180°	2658.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	270	270	270	270	270	
5°	271	269	267	269	269	26
15°	258	259	259	262	262	73
25°	235	237	241	245	247	108
35°	202	209	216	225	228	126
45°	166	177	190	202	206	128
55°	127	142	162	175	181	114
65°	87	106	129	145	150	86
75°	48	70	95	111	117	51
85°	14	38	63	79	85	15
90°	4	33	69	83	89	4
95°	29	52	76	91	95	32
105°	108	121	142	156	161	114
115°	198	206	222	233	236	196
125°	286	291	302	311	314	256
135°	370	376	380	388	390	286
145°	449	452	455	458	458	280
155°	513	515	516	518	517	236
165°	558	558	558	561	559	157
175°	581	579	578	581	579	55
180°	582	582	582	582	582	



TEST NUMBER: P331253-935

CATALOG NUMBER: S122DIP-S290D530U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9
2.5°	271.5	271.2	271.0	270.8	270.6	270.3	269.8	269.3	268.8	268.3	268.6
5°	270.7	270.4	270.2	269.9	269.6	269.2	268.7	268.2	267.7	267.2	267.7
7.5°	268.2	268.0	267.9	267.7	267.5	267.3	266.8	266.5	266.0	265.6	266.3
10°	266.4	266.2	266.0	265.9	265.7	265.4	265.2	264.9	264.7	264.4	265.1
12.5°	263.2	263.3	263.3	263.4	263.4	263.3	263.1	262.9	262.7	262.5	263.2
15°	258.1	258.3	258.5	258.6	258.8	258.9	258.9	258.9	258.9	258.9	259.7
17.5°	251.6	251.9	252.3	252.7	253.0	253.4	253.7	253.9	254.2	254.5	255.3
20°	247.2	247.6	248.1	248.5	248.9	249.3	249.7	250.0	250.4	250.7	251.7
22.5°	242.5	243.0	243.5	244.0	244.5	245.0	245.5	246.0	246.5	246.9	247.9
25°	234.7	235.3	235.9	236.5	237.1	237.8	238.6	239.4	240.1	240.9	241.9
27.5°	225.3	226.3	227.3	228.3	229.3	230.2	231.1	232.0	233.0	233.9	235.2
30°	219.0	220.2	221.3	222.4	223.5	224.7	225.8	227.0	228.1	229.2	230.6
32.5°	212.2	213.4	214.6	215.9	217.2	218.5	219.9	221.2	222.6	223.9	225.5
35°	202.2	203.7	205.2	206.6	208.1	209.7	211.4	213.0	214.6	216.3	218.2
37.5°	191.4	193.1	194.8	196.6	198.2	200.2	202.3	204.4	206.6	208.7	210.9
40°	184.3	186.1	188.0	189.9	191.8	194.0	196.3	198.7	201.0	203.4	205.6
42.5°	177.4	179.3	181.2	183.0	185.0	187.3	190.0	192.7	195.4	198.0	200.5
45°	165.8	168.2	170.6	172.9	175.2	177.9	181.0	184.0	187.0	190.1	192.8
47.5°	154.5	157.0	159.6	162.1	164.7	167.8	171.3	174.9	178.5	182.0	184.9
50°	146.7	149.4	152.1	154.7	157.5	160.7	164.7	168.6	172.5	176.4	179.3
52.5°	139.1	142.0	144.8	147.7	150.5	153.9	158.1	162.2	166.3	170.5	173.5
55°	127.1	130.3	133.4	136.5	139.7	143.4	148.0	152.5	157.0	161.5	164.7
57.5°	115.2	118.7	122.3	125.8	129.3	133.4	138.0	142.6	147.2	151.9	155.2
60°	106.8	110.6	114.3	118.0	121.7	126.1	131.0	136.0	140.9	145.9	149.2
62.5°	99.3	103.1	107.0	110.9	114.8	119.2	124.2	129.1	134.1	139.1	142.5
65°	86.8	91.1	95.3	99.6	103.8	108.6	113.7	118.8	124.0	129.1	132.7
67.5°	75.4	79.9	84.3	88.8	93.2	98.1	103.3	108.6	113.8	119.1	122.7
70°	67.2	71.8	76.3	80.8	85.3	90.3	95.7	101.1	106.5	111.8	115.6
72.5°	59.8	64.4	69.1	73.7	78.4	83.4	88.9	94.4	99.9	105.3	109.0
75°	48.1	53.0	57.9	62.7	67.6	72.8	78.4	83.9	89.5	95.1	98.8
77.5°	36.9	41.9	47.0	52.1	57.3	62.6	68.3	73.9	79.6	85.2	88.9
80°	29.4	34.6	40.0	45.2	50.5	56.1	61.6	67.3	72.9	78.6	82.2
82.5°	23.1	28.3	33.6	38.7	44.0	49.5	55.2	61.0	66.6	72.3	76.0
85°	14.1	19.5	24.9	30.2	35.6	41.1	46.7	52.3	57.8	63.4	67.0
87.5°	7.7	13.2	18.7	24.1	29.5	35.3	41.3	47.4	53.4	59.4	62.9
90°	4.4	10.8	17.1	23.4	29.8	36.9	44.9	52.9	60.9	68.8	72.1
92.5°	12.3	18.0	23.7	29.3	35.0	40.7	46.7	52.6	58.5	64.4	67.8
95°	28.7	33.8	39.0	44.2	49.3	54.7	60.1	65.5	70.9	76.4	79.7
97.5°	49.4	54.0	58.5	63.2	67.8	72.8	78.2	83.6	89.0	94.5	97.6
100°	65.1	69.1	73.3	77.3	81.5	86.1	91.3	96.5	101.7	106.9	110.1
102.5°	81.3	84.9	88.5	92.2	95.8	100.2	105.4	110.5	115.6	120.8	124.0
105°	107.5	110.4	113.2	116.1	118.9	122.7	127.4	132.2	136.9	141.6	144.9
107.5°	134.3	136.8	139.3	141.8	144.3	147.7	152.1	156.4	160.7	165.1	168.1
110°	151.3	153.7	156.1	158.5	160.9	164.2	168.5	172.7	177.0	181.2	184.0



TEST NUMBER: P331253-935

CATALOG NUMBER: S122DIP-S290D530U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	170.1	172.3	174.4	176.5	178.7	181.7	185.6	189.6	193.6	197.5	200.0
115°	197.9	199.6	201.2	202.8	204.4	207.1	210.8	214.5	218.1	221.8	224.3
117.5°	225.2	226.8	228.3	229.7	231.3	233.5	236.5	239.5	242.5	245.6	247.8
120°	243.7	245.0	246.2	247.4	248.6	250.6	253.1	255.7	258.3	261.0	263.4
122.5°	260.6	261.8	262.9	264.2	265.4	267.3	269.9	272.6	275.3	277.9	280.0
125°	286.5	287.5	288.5	289.5	290.5	292.1	294.6	297.0	299.5	302.0	304.0
127.5°	312.2	313.3	314.4	315.6	316.8	318.3	320.1	322.0	323.8	325.7	327.4
130°	328.3	329.6	331.0	332.3	333.6	335.1	336.7	338.3	339.9	341.5	343.4
132.5°	346.3	347.4	348.4	349.6	350.6	351.9	353.4	354.8	356.2	357.7	359.2
135°	370.1	371.3	372.5	373.7	374.9	376.1	377.1	378.2	379.3	380.4	382.1
137.5°	395.5	396.5	397.4	398.4	399.4	400.2	400.9	401.6	402.2	402.9	404.4
140°	410.9	411.7	412.7	413.5	414.4	415.3	415.9	416.6	417.4	418.1	419.5
142.5°	426.5	427.5	428.3	429.2	430.2	430.8	431.2	431.6	432.0	432.4	433.6
145°	448.8	449.5	450.3	451.1	451.9	452.5	453.1	453.8	454.5	455.1	455.7
147.5°	468.9	469.8	470.7	471.7	472.5	473.2	473.6	474.1	474.5	475.0	475.3
150°	482.7	483.3	484.0	484.6	485.3	485.8	486.2	486.6	487.1	487.6	487.8
152.5°	494.8	495.5	496.1	496.8	497.4	498.0	498.5	499.0	499.6	500.2	500.5
155°	513.1	513.4	513.8	514.0	514.4	514.7	515.1	515.4	515.7	516.0	516.6
157.5°	528.7	528.9	529.1	529.3	529.6	529.8	529.9	530.2	530.4	530.5	531.3
160°	538.1	538.3	538.6	538.7	539.0	539.2	539.2	539.3	539.5	539.6	540.3
162.5°	546.7	546.8	546.8	546.9	546.9	547.0	547.1	547.3	547.3	547.4	548.2
165°	558.3	558.1	558.0	557.9	557.8	557.8	557.8	557.8	557.8	557.8	558.5
167.5°	567.8	567.6	567.2	566.9	566.5	566.4	566.4	566.4	566.3	566.3	567.1
170°	573.0	572.7	572.3	572.0	571.7	571.4	571.4	571.2	571.1	571.0	571.8
172.5°	576.5	576.2	575.8	575.5	575.2	575.0	574.9	574.8	574.6	574.5	575.3
175°	580.8	580.5	580.1	579.9	579.5	579.3	579.0	578.9	578.6	578.3	579.1
177.5°	582.6	582.3	582.0	581.8	581.5	581.3	581.2	581.0	580.8	580.7	581.2
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8



TEST NUMBER: P331253-935

CATALOG NUMBER: S122DIP-S290D530U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9
2.5°	269.0	269.3	269.7	269.8	269.7	269.5	269.4	269.2
5°	268.2	268.7	269.2	269.4	269.3	269.2	269.1	269.1
7.5°	266.9	267.5	268.2	268.5	268.4	268.3	268.2	268.1
10°	265.8	266.5	267.2	267.5	267.4	267.3	267.3	267.2
12.5°	263.9	264.6	265.3	265.6	265.5	265.4	265.4	265.3
15°	260.5	261.3	262.1	262.4	262.3	262.3	262.2	262.1
17.5°	256.1	256.9	257.7	258.1	258.1	258.1	258.1	258.1
20°	252.6	253.6	254.5	255.0	255.0	255.0	255.0	255.0
22.5°	248.9	249.9	250.8	251.3	251.5	251.6	251.8	251.9
25°	243.1	244.1	245.1	245.7	246.0	246.2	246.5	246.8
27.5°	236.5	237.9	239.2	240.0	240.1	240.3	240.5	240.7
30°	232.0	233.4	234.8	235.6	235.8	236.1	236.3	236.6
32.5°	227.0	228.7	230.3	231.4	231.8	232.3	232.7	233.2
35°	220.2	222.1	223.9	225.2	225.8	226.4	227.0	227.6
37.5°	212.9	215.1	217.2	218.6	219.2	219.9	220.5	221.1
40°	207.9	210.2	212.4	214.0	214.7	215.5	216.3	217.1
42.5°	203.0	205.4	207.9	209.6	210.3	211.1	211.9	212.7
45°	195.4	198.2	200.9	202.7	203.5	204.4	205.3	206.1
47.5°	187.7	190.5	193.3	195.2	196.1	197.1	198.0	199.0
50°	182.3	185.3	188.2	190.2	191.1	192.1	193.0	194.0
52.5°	176.5	179.5	182.5	184.6	185.6	186.7	187.7	188.6
55°	167.8	170.9	174.1	176.2	177.3	178.5	179.6	180.7
57.5°	158.6	162.0	165.3	167.6	168.8	169.9	171.0	172.2
60°	152.5	155.8	159.1	161.4	162.6	163.8	165.1	166.3
62.5°	146.0	149.6	153.1	155.4	156.5	157.6	158.9	160.0
65°	136.2	139.7	143.4	145.7	146.8	147.9	149.0	150.2
67.5°	126.2	129.8	133.5	135.9	137.0	138.2	139.4	140.6
70°	119.3	123.0	126.8	129.2	130.3	131.3	132.3	133.4
72.5°	112.6	116.3	119.9	122.4	123.6	124.9	126.2	127.4
75°	102.5	106.2	110.0	112.4	113.6	114.7	115.8	116.9
77.5°	92.6	96.3	100.0	102.5	103.8	105.0	106.2	107.4
80°	85.9	89.5	93.2	95.7	96.9	98.1	99.3	100.5
82.5°	79.6	83.3	87.0	89.4	90.5	91.7	92.8	93.9
85°	70.7	74.3	78.0	80.4	81.6	82.8	84.0	85.2
87.5°	66.5	69.9	73.4	75.8	76.9	78.0	79.2	80.3
90°	75.3	78.6	81.9	84.0	85.2	86.4	87.5	88.7
92.5°	71.3	74.8	78.3	80.5	81.5	82.7	83.7	84.7
95°	83.0	86.3	89.6	91.7	92.5	93.3	94.2	95.0
97.5°	100.9	104.1	107.3	109.4	110.5	111.4	112.4	113.4
100°	113.3	116.5	119.8	121.7	122.6	123.5	124.3	125.2
102.5°	127.3	130.4	133.7	135.8	136.6	137.4	138.3	139.1
105°	148.2	151.4	154.7	156.8	157.7	158.7	159.6	160.7
107.5°	171.1	174.1	177.1	178.8	179.3	179.7	180.2	180.6
110°	186.8	189.6	192.3	194.1	194.7	195.4	196.0	196.6



TEST NUMBER: P331253-935

CATALOG NUMBER: S122DIP-S290D530U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	202.6	205.1	207.6	209.2	209.9	210.7	211.4	212.1
115°	226.8	229.3	231.8	233.4	234.0	234.6	235.2	235.9
117.5°	250.1	252.4	254.8	256.2	256.8	257.4	257.9	258.5
120°	265.8	268.2	270.7	272.2	272.9	273.5	274.1	274.7
122.5°	282.1	284.2	286.3	287.7	288.3	288.8	289.4	290.0
125°	306.0	308.1	310.0	311.4	312.1	312.8	313.4	314.1
127.5°	329.2	331.0	332.8	333.8	334.2	334.7	335.1	335.5
130°	345.3	347.1	349.0	350.0	350.3	350.5	350.8	351.0
132.5°	360.8	362.3	363.9	364.8	365.2	365.5	365.8	366.2
135°	383.8	385.6	387.3	388.3	388.7	389.0	389.4	389.8
137.5°	405.9	407.4	408.9	409.7	409.9	410.1	410.2	410.4
140°	420.9	422.3	423.7	424.4	424.5	424.6	424.6	424.7
142.5°	434.8	436.0	437.2	437.8	437.8	437.8	437.9	437.9
145°	456.4	457.0	457.6	458.0	458.0	458.0	458.0	458.0
147.5°	475.6	475.9	476.2	476.3	476.0	475.9	475.6	475.4
150°	488.2	488.5	488.9	488.9	488.5	488.2	487.8	487.6
152.5°	500.9	501.4	501.8	501.8	501.4	500.9	500.5	500.2
155°	517.1	517.6	518.2	518.3	518.0	517.6	517.3	517.0
157.5°	532.0	532.8	533.6	533.6	533.1	532.6	532.1	531.5
160°	540.9	541.6	542.2	542.3	541.9	541.5	541.0	540.5
162.5°	548.9	549.7	550.4	550.5	550.0	549.5	549.0	548.5
165°	559.3	560.1	560.8	560.9	560.3	559.8	559.3	558.7
167.5°	567.8	568.6	569.4	569.5	568.9	568.3	567.7	567.1
170°	572.6	573.3	574.0	574.1	573.4	572.8	572.1	571.5
172.5°	576.1	576.9	577.6	577.6	577.0	576.4	575.7	575.1
175°	579.9	580.7	581.4	581.5	580.8	580.1	579.5	578.9
177.5°	581.7	582.2	582.7	582.7	582.2	581.7	581.2	580.7
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8

(END OF REPORT)