

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: P331244-930

Luminaire Tested: **S122DIP-S290D330U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331244-930
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-S290D330U930-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1930.8 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

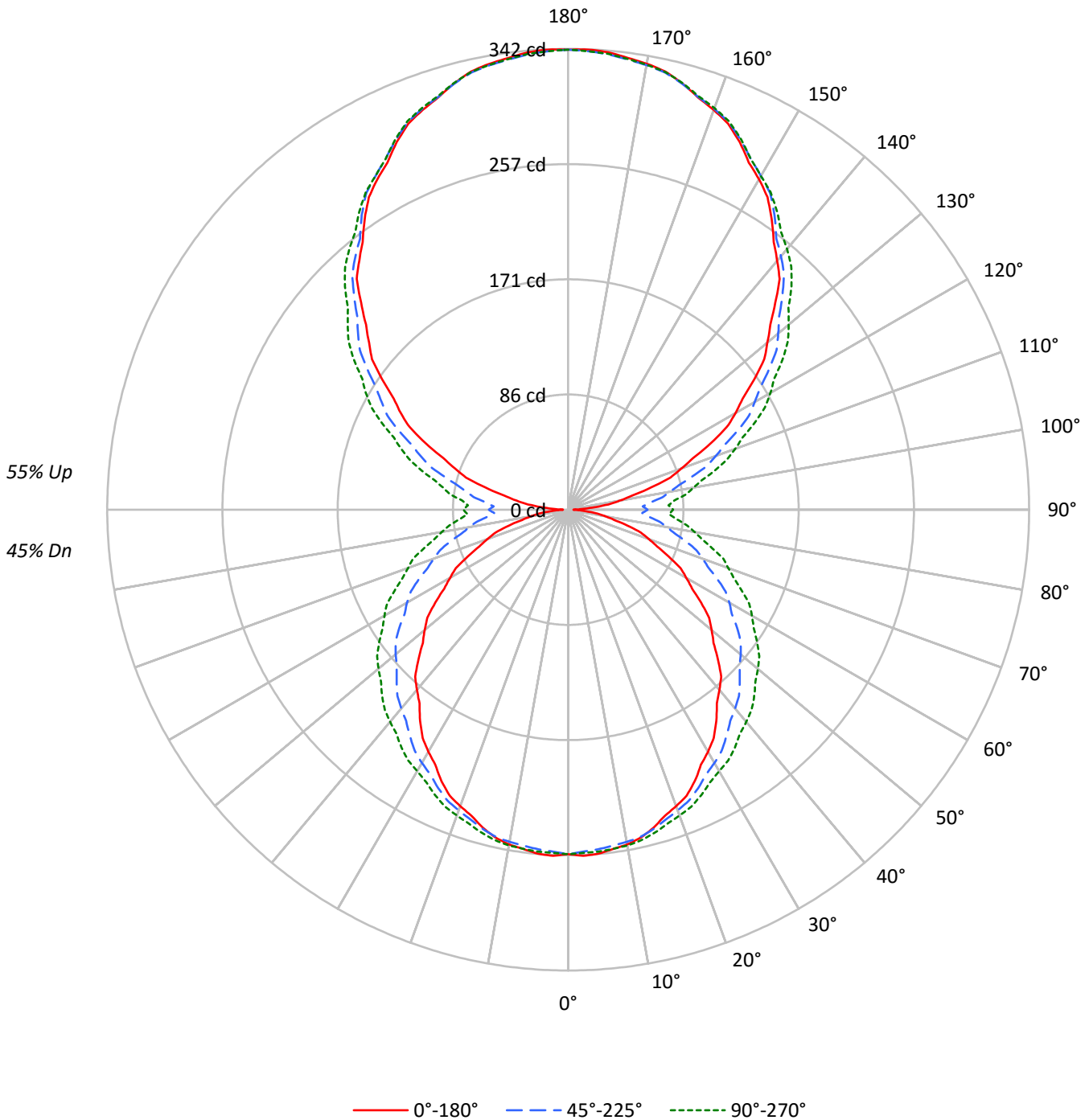
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331244-930

CATALOG NUMBER: S122DIP-S290D330U930-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P331244-930

CATALOG NUMBER: S122DIP-S290D330U930-4F0-1E-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	106	106	106	106	97	97	97	97	81	81	81	65	65	65	51	51	51	45
1	95	90	86	82	87	83	79	76	69	66	63	55	53	52	43	42	41	35
2	86	78	72	66	78	72	66	61	59	55	51	48	45	42	37	35	33	28
3	78	68	60	54	71	63	56	50	52	47	42	42	38	35	33	30	28	23
4	71	60	52	45	65	55	48	42	46	40	36	37	33	30	29	26	24	20
5	65	53	45	39	59	49	41	36	41	35	31	33	29	25	26	23	20	17
6	60	48	39	33	55	44	36	31	37	31	26	30	25	22	23	20	18	15
7	55	43	35	29	50	39	32	27	33	27	23	27	23	19	21	18	16	13
8	51	39	31	25	47	36	29	24	30	24	20	25	20	17	19	16	14	11
9	48	35	28	23	44	33	26	21	27	22	18	23	18	15	18	15	12	10
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	17	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4127	4127	4127
5°	4146	3973	3957
10°	4121	3855	3812
15°	4063	3730	3659
20°	3992	3597	3511
25°	3922	3468	3376
30°	3821	3336	3241
35°	3720	3209	3148
40°	3615	3101	3051
45°	3512	3004	2971
50°	3404	2917	2891
55°	3289	2822	2810
60°	3151	2723	2724
65°	3006	2608	2622
70°	2844	2485	2512
75°	2639	2365	2410
80°	2312	2240	2305
85°	2005	2134	2226



TEST NUMBER: P331244-930

CATALOG NUMBER: S122DIP-S290D330U930-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.2	1.3
10°-20°	69.4	3.6
20°-30°	105.2	5.4
30°-40°	128.2	6.6
40°-50°	137.9	7.1
50°-60°	133.9	6.9
60°-70°	116.9	6.1
70°-80°	90.0	4.7
80°-90°	61.8	3.2
90°-100°	63.2	3.3
100°-110°	97.6	5.1
110°-120°	134.9	7.0
120°-130°	162.2	8.4
130°-140°	174.2	9.0
140°-150°	167.0	8.6
150°-160°	139.4	7.2
160°-170°	92.4	4.8
170°-180°	32.3	1.7
0°-30°	198.9	10.3
0°-40°	327.1	16.9
0°-60°	598.8	31.0
0°-90°	867.5	44.9
90°-120°	295.7	15.3
90°-150°	799.1	41.4
90°-180°	1063.0	55.1
0°-180°	1930.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	256	255	253	255	255	24
15°	244	245	245	248	248	69
25°	222	225	228	232	234	102
35°	192	198	205	213	216	120
45°	157	167	180	191	195	121
55°	120	134	153	166	171	108
65°	82	101	122	137	142	82
75°	46	66	90	105	111	48
85°	13	36	60	75	81	14
90°	4	29	59	73	78	3
95°	18	38	61	74	79	19
105°	64	76	95	108	113	68
115°	117	123	139	149	153	115
125°	168	171	182	191	194	151
135°	217	220	225	232	234	168
145°	263	265	267	269	270	165
155°	301	302	303	304	303	138
165°	328	327	327	329	328	92
175°	341	340	339	341	340	32
180°	341	341	341	341	341	



TEST NUMBER: P331244-930

CATALOG NUMBER: S122DIP-S290D330U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6
2.5°	257.1	256.8	256.7	256.4	256.2	255.9	255.4	255.0	254.5	254.0	254.4
5°	256.3	256.1	255.8	255.6	255.3	254.9	254.5	254.0	253.5	253.0	253.5
7.5°	254.0	253.8	253.6	253.5	253.3	253.1	252.7	252.3	251.9	251.5	252.2
10°	252.3	252.1	251.9	251.8	251.6	251.4	251.1	250.9	250.6	250.4	251.0
12.5°	249.2	249.3	249.3	249.4	249.4	249.3	249.2	249.0	248.7	248.6	249.2
15°	244.4	244.6	244.8	244.9	245.1	245.2	245.2	245.2	245.2	245.2	245.9
17.5°	238.2	238.6	238.9	239.3	239.6	239.9	240.2	240.4	240.7	241.0	241.7
20°	234.1	234.5	234.9	235.3	235.7	236.1	236.4	236.8	237.1	237.4	238.3
22.5°	229.7	230.1	230.6	231.1	231.5	232.0	232.4	232.9	233.4	233.8	234.7
25°	222.3	222.8	223.4	224.0	224.5	225.2	225.9	226.7	227.4	228.1	229.1
27.5°	213.4	214.3	215.2	216.1	217.1	218.0	218.8	219.7	220.6	221.5	222.7
30°	207.4	208.5	209.5	210.6	211.7	212.8	213.9	214.9	216.0	217.0	218.3
32.5°	200.9	202.1	203.3	204.5	205.7	206.9	208.2	209.5	210.8	212.0	213.5
35°	191.5	192.9	194.3	195.7	197.1	198.5	200.2	201.7	203.3	204.8	206.6
37.5°	181.2	182.9	184.5	186.1	187.7	189.6	191.6	193.6	195.6	197.6	199.7
40°	174.5	176.3	178.1	179.9	181.6	183.7	185.9	188.2	190.4	192.6	194.7
42.5°	168.0	169.7	171.5	173.3	175.2	177.3	179.9	182.5	185.0	187.5	189.9
45°	157.0	159.2	161.5	163.7	165.9	168.4	171.4	174.2	177.1	180.0	182.5
47.5°	146.3	148.7	151.2	153.5	156.0	158.9	162.2	165.6	169.0	172.4	175.0
50°	138.9	141.5	144.0	146.5	149.1	152.2	156.0	159.6	163.3	167.1	169.8
52.5°	131.8	134.4	137.1	139.8	142.5	145.8	149.7	153.6	157.5	161.4	164.3
55°	120.3	123.4	126.3	129.2	132.2	135.8	140.1	144.4	148.7	153.0	156.0
57.5°	109.1	112.4	115.8	119.1	122.5	126.3	130.7	135.0	139.4	143.8	147.0
60°	101.1	104.7	108.2	111.7	115.3	119.4	124.1	128.7	133.5	138.1	141.3
62.5°	94.0	97.7	101.3	105.0	108.7	112.8	117.6	122.2	126.9	131.7	134.9
65°	82.2	86.3	90.3	94.3	98.3	102.8	107.6	112.5	117.4	122.2	125.6
67.5°	71.4	75.7	79.8	84.1	88.3	92.9	97.8	102.8	107.8	112.8	116.2
70°	63.7	68.0	72.2	76.6	80.8	85.5	90.6	95.7	100.9	105.9	109.5
72.5°	56.6	61.0	65.4	69.8	74.3	79.0	84.2	89.4	94.6	99.7	103.2
75°	45.6	50.1	54.8	59.4	64.0	68.9	74.2	79.5	84.7	90.0	93.5
77.5°	34.9	39.7	44.5	49.3	54.2	59.3	64.7	70.0	75.3	80.6	84.2
80°	27.8	32.8	37.8	42.8	47.9	53.1	58.4	63.8	69.1	74.4	77.9
82.5°	21.9	26.8	31.8	36.7	41.7	46.9	52.3	57.7	63.1	68.5	72.0
85°	13.4	18.4	23.6	28.6	33.8	38.9	44.2	49.5	54.7	60.0	63.4
87.5°	7.3	12.4	17.4	22.5	27.6	32.9	38.4	43.9	49.5	55.0	58.4
90°	4.0	9.5	15.1	20.6	26.2	32.3	39.0	45.7	52.3	58.9	62.1
92.5°	8.6	13.5	18.6	23.6	28.5	33.8	39.1	44.6	50.0	55.4	58.6
95°	17.9	22.4	27.0	31.5	36.0	40.8	45.8	50.9	55.9	61.1	64.2
97.5°	29.9	34.0	38.0	42.0	46.0	50.5	55.4	60.4	65.4	70.4	73.5
100°	39.1	42.7	46.3	49.8	53.4	57.6	62.4	67.2	72.0	76.8	79.8
102.5°	48.6	51.8	55.0	58.1	61.3	65.3	70.0	74.7	79.4	84.1	87.2
105°	63.8	66.4	69.0	71.5	74.1	77.6	82.0	86.4	90.8	95.2	98.2
107.5°	79.5	81.7	83.9	86.1	88.3	91.4	95.5	99.6	103.7	107.8	110.6
110°	89.4	91.4	93.4	95.4	97.4	100.5	104.5	108.5	112.6	116.6	119.3



TEST NUMBER: P331244-930

CATALOG NUMBER: S122DIP-S290D330U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	100.4	102.2	104.0	105.7	107.5	110.2	114.1	117.8	121.6	125.4	127.8
115°	116.7	118.0	119.3	120.6	121.9	124.3	127.8	131.4	135.0	138.6	141.0
117.5°	132.6	133.7	134.8	135.9	137.0	139.1	142.1	145.2	148.3	151.3	153.6
120°	143.4	144.2	145.1	145.9	146.8	148.5	151.4	154.2	156.9	159.7	162.0
122.5°	153.3	154.1	154.8	155.6	156.3	158.0	160.8	163.5	166.2	169.0	171.0
125°	168.4	168.9	169.5	170.1	170.7	172.2	174.6	177.1	179.5	182.0	184.0
127.5°	183.4	184.1	184.7	185.4	186.0	187.3	189.1	191.0	193.0	194.9	196.7
130°	192.9	193.6	194.4	195.1	195.8	197.1	198.6	200.2	201.9	203.4	205.3
132.5°	203.5	204.1	204.6	205.3	205.9	206.8	208.2	209.5	210.9	212.3	213.9
135°	217.3	218.0	218.7	219.4	220.0	220.9	221.8	222.8	223.8	224.7	226.4
137.5°	232.2	232.8	233.3	233.8	234.4	235.0	235.5	236.0	236.5	237.1	238.6
140°	241.2	241.7	242.1	242.6	243.1	243.6	244.1	244.6	245.1	245.6	246.9
142.5°	250.4	250.9	251.4	251.8	252.3	252.7	253.0	253.2	253.5	253.7	254.9
145°	263.3	263.7	264.2	264.6	265.1	265.5	265.9	266.3	266.6	267.0	267.6
147.5°	275.1	275.7	276.1	276.7	277.2	277.6	277.9	278.2	278.4	278.7	278.8
150°	283.2	283.6	283.9	284.3	284.7	285.0	285.3	285.5	285.8	286.0	286.3
152.5°	290.3	290.7	291.1	291.5	291.8	292.2	292.4	292.8	293.1	293.4	293.7
155°	301.0	301.2	301.4	301.6	301.7	302.0	302.1	302.3	302.6	302.7	303.0
157.5°	310.1	310.3	310.4	310.5	310.7	310.8	311.0	311.0	311.1	311.3	311.7
160°	315.7	315.8	315.9	316.1	316.2	316.3	316.3	316.4	316.5	316.6	316.9
162.5°	320.7	320.8	320.8	320.8	320.9	320.9	321.0	321.1	321.1	321.1	321.6
165°	327.5	327.4	327.3	327.3	327.3	327.2	327.2	327.2	327.2	327.2	327.7
167.5°	333.1	333.0	332.8	332.6	332.4	332.3	332.2	332.2	332.2	332.2	332.6
170°	336.1	336.0	335.7	335.6	335.4	335.3	335.2	335.1	335.1	335.0	335.4
172.5°	338.2	338.0	337.9	337.6	337.5	337.3	337.3	337.2	337.1	337.0	337.5
175°	340.8	340.6	340.4	340.1	340.0	339.8	339.7	339.6	339.4	339.3	339.7
177.5°	341.8	341.6	341.4	341.4	341.2	341.0	341.0	340.9	340.7	340.6	341.0
180°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4



TEST NUMBER: P331244-930

CATALOG NUMBER: S122DIP-S290D330U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6
2.5°	254.7	255.0	255.4	255.5	255.4	255.2	255.1	254.9
5°	254.0	254.5	254.9	255.1	255.0	254.9	254.9	254.8
7.5°	252.7	253.3	254.0	254.2	254.1	254.0	254.0	253.9
10°	251.7	252.3	253.0	253.3	253.2	253.2	253.1	253.0
12.5°	249.9	250.5	251.2	251.5	251.4	251.4	251.3	251.2
15°	246.6	247.4	248.2	248.5	248.4	248.3	248.3	248.2
17.5°	242.6	243.3	244.0	244.4	244.4	244.4	244.4	244.4
20°	239.2	240.1	241.0	241.5	241.5	241.5	241.5	241.5
22.5°	235.7	236.6	237.5	238.0	238.1	238.2	238.4	238.6
25°	230.2	231.1	232.1	232.7	232.9	233.2	233.4	233.7
27.5°	224.0	225.3	226.5	227.2	227.4	227.6	227.7	228.0
30°	219.6	221.0	222.3	223.1	223.3	223.6	223.8	224.0
32.5°	215.0	216.5	218.1	219.1	219.5	220.0	220.4	220.8
35°	208.5	210.3	212.1	213.3	213.9	214.4	215.0	215.6
37.5°	201.6	203.7	205.7	207.0	207.6	208.2	208.8	209.4
40°	196.9	199.0	201.1	202.6	203.3	204.1	204.8	205.5
42.5°	192.2	194.5	196.9	198.4	199.2	199.9	200.6	201.4
45°	185.1	187.7	190.2	191.9	192.7	193.6	194.4	195.2
47.5°	177.7	180.3	183.0	184.8	185.7	186.6	187.5	188.4
50°	172.6	175.5	178.2	180.1	181.0	181.9	182.8	183.7
52.5°	167.1	170.0	172.8	174.8	175.8	176.8	177.7	178.6
55°	158.9	161.8	164.9	166.8	167.9	169.0	170.1	171.1
57.5°	150.2	153.4	156.5	158.7	159.8	160.9	161.9	163.1
60°	144.4	147.6	150.7	152.8	153.9	155.1	156.3	157.4
62.5°	138.3	141.6	145.0	147.2	148.2	149.3	150.4	151.5
65°	129.0	132.3	135.7	137.9	139.0	140.1	141.1	142.2
67.5°	119.5	122.9	126.4	128.7	129.7	130.9	132.0	133.1
70°	113.0	116.5	120.1	122.4	123.4	124.3	125.3	126.3
72.5°	106.6	110.1	113.6	115.9	117.1	118.3	119.5	120.7
75°	97.1	100.6	104.2	106.5	107.5	108.6	109.7	110.7
77.5°	87.7	91.2	94.7	97.1	98.2	99.4	100.5	101.7
80°	81.4	84.8	88.3	90.6	91.7	92.9	94.0	95.1
82.5°	75.4	78.9	82.3	84.6	85.7	86.8	87.9	88.9
85°	66.9	70.4	73.9	76.1	77.3	78.4	79.6	80.7
87.5°	61.7	65.1	68.4	70.6	71.7	72.7	73.8	74.8
90°	65.3	68.5	71.7	73.7	74.8	75.8	76.9	77.9
92.5°	61.9	65.1	68.4	70.5	71.5	72.5	73.5	74.5
95°	67.3	70.4	73.5	75.5	76.4	77.3	78.1	79.0
97.5°	76.5	79.6	82.6	84.5	85.5	86.5	87.5	88.4
100°	82.9	85.9	88.9	90.9	91.7	92.6	93.4	94.2
102.5°	90.3	93.3	96.3	98.2	99.1	99.9	100.8	101.6
105°	101.3	104.3	107.3	109.3	110.1	111.0	111.9	112.8
107.5°	113.4	116.3	119.0	120.7	121.4	122.0	122.6	123.2
110°	121.9	124.5	127.2	128.8	129.6	130.3	130.9	131.7



TEST NUMBER: P331244-930

CATALOG NUMBER: S122DIP-S290D330U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	130.4	132.8	135.3	136.9	137.7	138.4	139.2	140.0
115°	143.4	145.8	148.2	149.8	150.5	151.2	151.9	152.6
117.5°	155.9	158.2	160.5	161.9	162.6	163.2	163.9	164.5
120°	164.3	166.6	168.9	170.4	171.1	171.9	172.6	173.3
122.5°	173.2	175.2	177.3	178.7	179.3	179.9	180.6	181.2
125°	186.1	188.1	190.0	191.4	192.1	192.8	193.5	194.1
127.5°	198.4	200.3	202.1	203.3	203.7	204.3	204.8	205.4
130°	207.2	209.0	210.8	212.0	212.4	212.8	213.2	213.5
132.5°	215.5	217.1	218.7	219.8	220.3	220.7	221.2	221.6
135°	228.0	229.7	231.4	232.4	232.9	233.3	233.8	234.3
137.5°	240.0	241.5	243.0	243.9	244.1	244.4	244.8	245.0
140°	248.2	249.6	250.9	251.6	251.8	252.1	252.3	252.6
142.5°	255.9	257.1	258.1	258.8	258.9	259.2	259.3	259.5
145°	268.2	268.7	269.2	269.6	269.8	269.9	270.1	270.2
147.5°	279.1	279.2	279.5	279.6	279.5	279.5	279.4	279.4
150°	286.4	286.6	286.8	286.8	286.6	286.4	286.3	286.0
152.5°	293.9	294.2	294.4	294.4	294.2	293.9	293.7	293.4
155°	303.4	303.7	304.0	304.1	303.9	303.7	303.5	303.3
157.5°	312.1	312.6	313.0	313.1	312.7	312.4	312.2	311.9
160°	317.3	317.7	318.1	318.1	317.9	317.6	317.4	317.2
162.5°	322.0	322.5	322.9	322.9	322.7	322.4	322.0	321.7
165°	328.1	328.6	329.0	329.1	328.7	328.4	328.1	327.8
167.5°	333.1	333.5	334.0	334.1	333.8	333.4	333.0	332.7
170°	335.9	336.3	336.8	336.8	336.5	336.1	335.7	335.3
172.5°	337.9	338.4	338.8	338.9	338.5	338.1	337.8	337.4
175°	340.2	340.6	341.1	341.1	340.8	340.4	340.0	339.6
177.5°	341.3	341.5	341.9	341.9	341.5	341.3	341.0	340.6
180°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4

(END OF REPORT)