

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: P331272-930

Luminaire Tested: **S122DIP-S290D925U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331272-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIP-S290D925U930-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3923.1 lumens
Efficiency: N/A
Efficacy: 105.2 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: Semi-Indirect

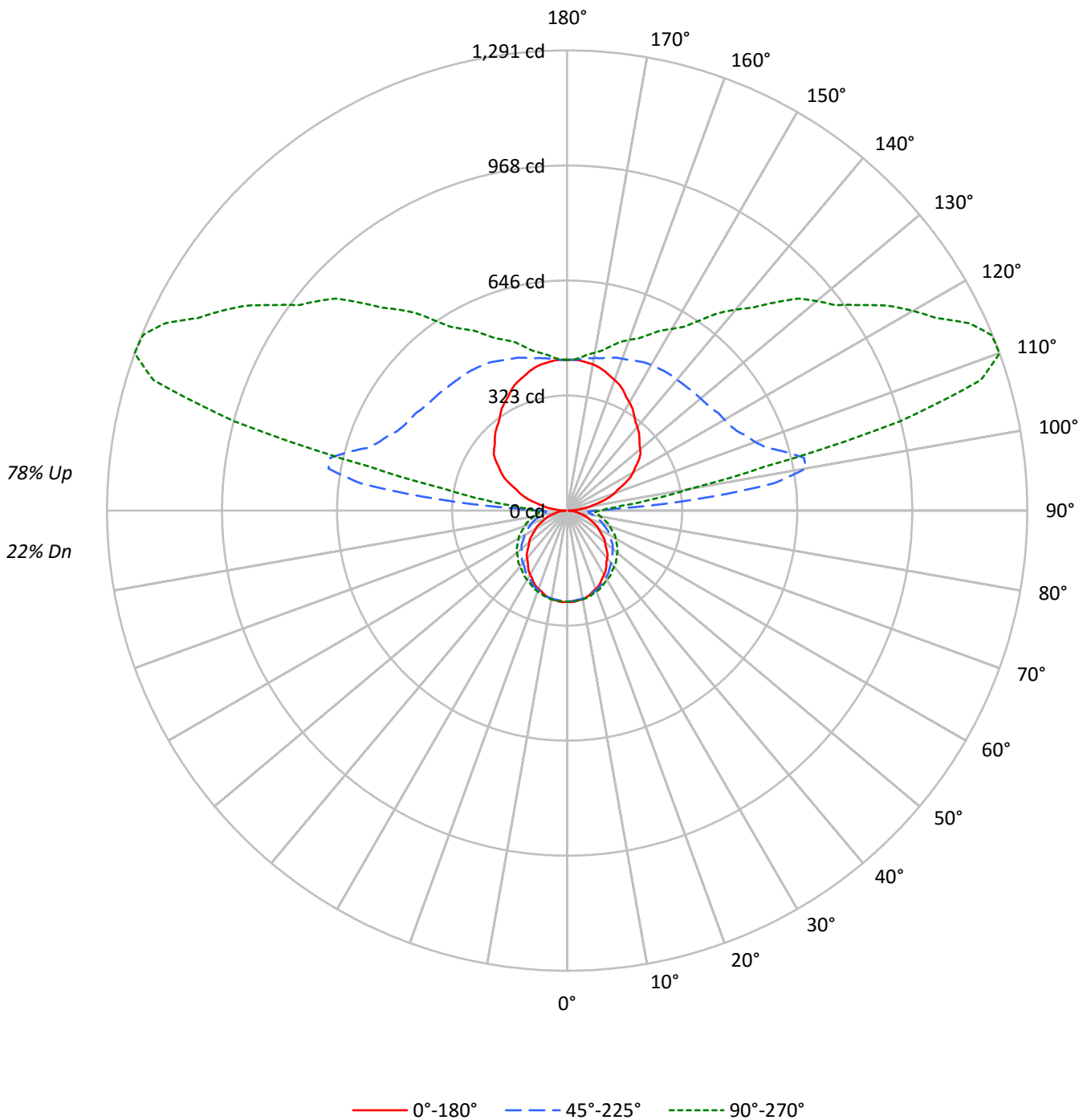
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331272-930

CATALOG NUMBER: S122DIP-S290D925U930-4F0-1E-UDD-D4

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	101	101	101	101	89	89	89	89	68	68	68	48	48	48	31	31	31	22
1	91	86	82	79	80	77	73	70	58	56	54	41	40	39	26	25	24	17
2	82	75	69	64	73	67	61	57	51	47	44	36	34	32	22	21	20	14
3	75	66	58	53	66	58	52	47	44	40	37	32	29	27	20	18	17	11
4	68	58	50	44	60	51	45	40	39	35	31	28	25	22	17	16	14	10
5	63	51	43	37	55	46	39	34	35	30	26	25	22	19	16	14	12	8
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11	7
7	53	41	33	28	47	37	30	25	28	23	20	20	17	15	13	11	9	6
8	49	37	30	24	43	33	27	22	25	21	17	18	15	13	12	10	8	6
9	45	34	26	21	40	30	24	19	23	19	15	17	14	11	11	9	7	5
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	7	5

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: P331272-930

CATALOG NUMBER: S122DIP-S290D925U930-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.2	0.6
10°-20°	69.4	1.8
20°-30°	105.2	2.7
30°-40°	128.2	3.3
40°-50°	137.9	3.5
50°-60°	133.9	3.4
60°-70°	116.9	3.0
70°-80°	90.0	2.3
80°-90°	64.2	1.6
90°-100°	210.8	5.4
100°-110°	604.5	15.4
110°-120°	630.0	16.1
120°-130°	513.3	13.1
130°-140°	407.9	10.4
140°-150°	305.5	7.8
150°-160°	214.1	5.5
160°-170°	126.0	3.2
170°-180°	41.0	1.0
0°-30°	198.9	5.1
0°-40°	327.1	8.3
0°-60°	598.8	15.3
0°-90°	870.0	22.2
90°-120°	1445.3	36.8
90°-150°	2672.0	68.1
90°-180°	3053.0	77.8
0°-180°	3923.1	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	36	77	90	95	4
95°	32	91	362	177	154	33
105°	101	163	635	1122	966	108
115°	176	227	527	1074	1244	175
125°	245	290	498	866	1005	217
135°	287	342	483	720	826	222
145°	327	376	477	594	652	205
155°	372	402	463	524	544	171
165°	405	417	443	470	478	114
175°	422	423	426	432	430	40
180°	423	423	423	423	423	



TEST NUMBER: P331272-930

CATALOG NUMBER: S122DIP-S290D925U930-4F0-1E-UDD-D4

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°	7.4	12.8	18.3	23.6	28.9	34.4	40.5	46.9	53.2	58.5	61.8
90°	4.5	11.7	19.7	26.2	32.5	40.0	49.3	60.3	70.4	76.6	79.0
92.5°	13.4	22.2	32.4	40.5	50.5	62.9	86.3	117.3	145.4	152.0	138.8
95°	31.5	38.6	50.5	61.8	78.7	102.6	145.0	220.7	320.0	361.6	324.8
97.5°	49.0	56.8	68.9	83.4	101.8	128.0	179.8	283.2	444.7	583.9	613.7
100°	65.2	70.8	81.1	97.2	116.5	143.1	190.9	294.7	475.1	679.9	800.1
102.5°	79.9	84.5	94.6	110.4	130.1	156.5	200.9	293.6	460.7	681.0	868.2
105°	101.1	106.8	114.9	129.5	149.7	175.9	218.3	295.1	433.6	634.8	854.1
107.5°	124.5	129.0	136.4	149.6	169.3	195.2	236.4	303.6	418.7	585.5	779.5
110°	139.8	144.7	151.2	163.5	182.2	208.6	248.5	311.1	414.4	561.7	732.7



TEST NUMBER: P331272-930

CATALOG NUMBER: S122DIP-S290D925U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	154.1	158.7	165.7	177.0	194.8	221.7	260.0	319.2	413.2	545.3	699.4
115°	176.4	181.4	187.2	197.9	215.1	239.3	278.0	331.3	414.0	526.7	657.8
117.5°	199.2	203.0	208.5	217.7	233.9	258.7	294.5	344.5	417.1	516.0	630.2
120°	213.4	217.0	222.3	229.9	246.5	271.2	306.1	353.4	419.3	509.7	615.3
122.5°	227.1	229.9	234.9	243.0	259.4	284.5	317.3	361.1	422.3	505.3	602.4
125°	244.8	247.3	252.2	262.0	278.2	302.3	334.3	373.5	426.6	497.6	583.6
127.5°	259.2	262.4	269.1	279.7	295.3	319.8	350.3	385.3	431.4	492.1	566.1
130°	267.7	270.8	278.8	290.2	306.4	330.0	360.2	392.8	435.2	489.0	554.5
132.5°	275.4	279.2	288.0	299.9	316.7	340.2	368.7	400.3	439.0	486.6	544.9
135°	286.8	290.1	299.8	312.0	330.8	353.9	380.7	410.1	443.4	483.3	531.4
137.5°	297.8	301.7	311.5	324.5	343.0	364.4	390.4	417.4	447.3	481.0	521.5
140°	306.3	309.5	319.2	332.1	349.9	371.1	395.7	421.1	448.9	479.2	515.5
142.5°	314.8	317.3	326.4	339.2	356.4	376.3	400.1	424.7	450.4	478.6	510.1
145°	327.1	330.4	338.5	350.7	367.0	384.9	406.8	429.7	452.4	476.8	503.4
147.5°	340.8	343.2	351.0	362.2	375.8	391.8	412.4	432.4	453.1	473.9	496.8
150°	349.9	352.3	358.8	369.4	381.6	396.2	415.0	433.7	452.4	472.0	491.5
152.5°	359.0	360.1	366.6	375.9	387.5	400.8	417.6	434.3	451.1	468.7	486.9
155°	371.9	372.7	377.6	386.5	395.4	407.6	421.5	435.3	449.1	463.0	478.4
157.5°	382.6	383.4	387.3	395.1	402.3	412.5	424.3	435.3	445.4	457.1	470.5
160°	389.8	390.6	393.8	400.3	406.8	415.8	425.6	435.3	443.4	453.2	464.6
162.5°	396.9	396.4	399.7	404.9	410.7	417.8	426.2	434.6	441.5	450.0	459.4
165°	405.2	404.4	406.0	410.9	415.0	419.9	427.2	432.9	437.7	443.4	450.8
167.5°	412.1	411.1	412.5	415.6	418.6	421.7	427.1	431.8	434.0	437.7	442.3
170°	416.6	415.0	415.8	418.2	419.9	422.3	426.4	430.5	432.1	434.5	437.7
172.5°	419.2	418.2	417.8	420.2	421.2	423.0	425.7	428.5	429.5	430.6	433.3
175°	422.3	421.5	420.7	422.3	422.3	423.1	424.8	426.4	425.6	426.4	427.2
177.5°	423.8	422.5	421.8	423.1	423.1	423.1	423.8	425.1	423.8	423.1	423.8
180°	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1



TEST NUMBER: P331272-930

CATALOG NUMBER: S122DIP-S290D925U930-4F0-1E-UDD-D4

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°	65.0	68.0	71.7	74.0	75.1	76.1	77.2	78.3
90°	81.5	83.2	88.1	91.1	92.0	93.0	94.0	95.0
92.5°	123.6	116.8	113.2	110.2	110.6	108.9	110.6	110.2
95°	262.0	215.6	184.5	168.6	159.1	153.5	152.1	153.8
97.5°	543.0	455.6	370.6	313.8	275.9	256.8	246.0	240.1
100°	786.0	688.2	579.8	483.2	416.6	382.5	359.9	346.1
102.5°	944.6	924.8	846.3	743.9	671.4	612.5	584.0	565.1
105°	1026.2	1121.0	1134.6	1109.5	1060.1	1010.5	976.4	965.9
107.5°	961.8	1103.0	1190.4	1231.7	1238.9	1237.1	1230.9	1216.8
110°	907.0	1055.3	1162.1	1230.6	1266.5	1282.9	1291.1	1291.2



TEST NUMBER: P331272-930

CATALOG NUMBER: S122DIP-S290D925U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	856.8	999.2	1113.1	1191.4	1241.0	1267.8	1282.5	1287.8
115°	794.5	922.3	1031.3	1116.8	1175.5	1213.8	1235.9	1244.1
117.5°	746.8	859.2	958.3	1038.6	1098.3	1138.7	1161.8	1168.9
120°	722.6	825.8	914.4	990.0	1047.9	1087.0	1111.5	1120.5
122.5°	703.1	797.8	881.7	950.1	1002.0	1040.3	1062.1	1069.8
125°	674.5	760.5	834.4	896.8	944.8	976.5	997.5	1004.8
127.5°	646.2	724.1	793.7	851.4	893.3	923.0	941.3	947.2
130°	628.0	700.0	766.3	821.3	861.9	890.1	907.1	914.3
132.5°	610.5	677.2	738.2	789.9	829.8	858.1	873.8	880.3
135°	586.0	641.5	696.9	743.7	779.3	806.8	822.1	826.1
137.5°	566.1	612.5	656.6	697.4	729.9	753.5	767.0	772.4
140°	553.4	593.8	632.6	669.3	695.8	717.5	730.1	735.5
142.5°	543.2	577.5	610.7	641.4	666.6	686.2	697.6	699.0
145°	529.0	556.4	582.1	606.2	626.1	640.3	648.9	651.8
147.5°	518.3	539.5	559.3	576.7	593.0	604.2	609.9	611.6
150°	511.0	528.9	546.0	560.6	572.8	582.6	587.5	588.3
152.5°	503.9	520.4	534.9	547.6	557.2	565.7	569.2	569.4
155°	493.9	507.0	519.1	528.1	537.0	542.7	546.0	544.4
157.5°	482.3	493.3	503.5	510.5	516.8	521.5	523.0	523.0
160°	475.2	484.1	493.1	498.8	504.5	508.6	509.4	509.4
162.5°	468.1	475.6	483.3	487.7	493.4	496.2	497.0	496.4
165°	457.3	463.0	468.7	472.0	475.2	478.4	478.4	477.6
167.5°	447.0	451.4	455.3	458.3	459.7	461.5	461.4	460.4
170°	441.8	444.3	447.5	449.1	450.0	452.4	451.6	450.0
172.5°	435.9	437.7	440.3	441.3	442.1	443.3	442.5	441.5
175°	429.7	430.5	431.3	432.1	432.1	432.9	432.1	430.5
177.5°	425.1	425.1	425.7	425.7	425.7	425.7	425.1	423.8
180°	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1

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