

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: P331274-940

Luminaire Tested: **S122DIP-S290D925U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331274-940
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-S290D925U940-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4024.6 lumens
Efficiency: N/A
Efficacy: 107.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

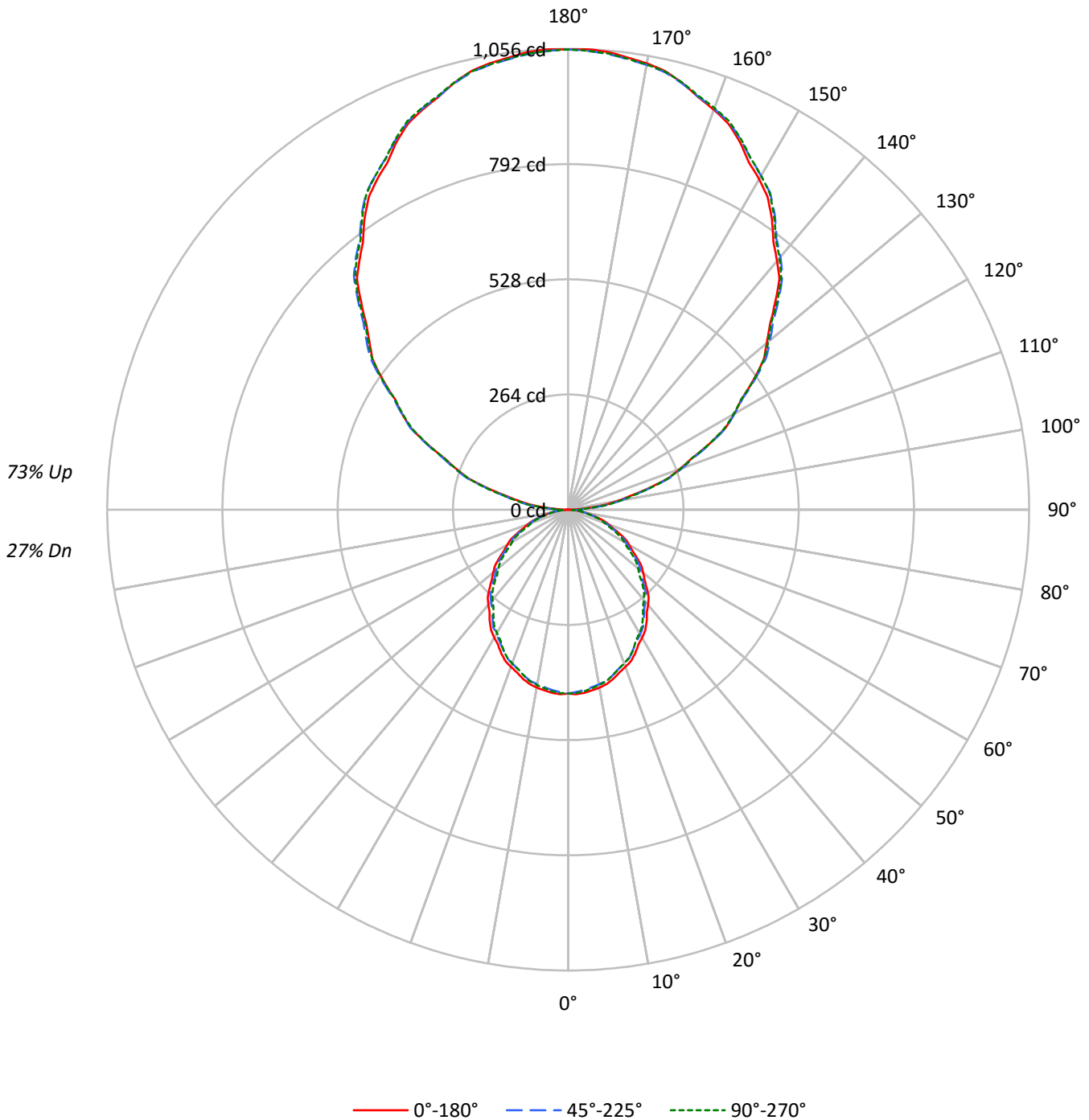
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331274-940

CATALOG NUMBER: S122DIP-S290D925U940-4F0-1E-UDD-F1

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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	27
1	93	88	85	81	82	79	76	73	62	59	58	45	44	43	31	30	29	22
2	84	77	71	66	75	69	64	60	54	50	48	40	38	36	27	26	25	19
3	77	68	61	55	68	61	55	50	47	43	40	35	33	30	24	22	21	16
4	70	60	52	46	62	54	47	42	42	38	34	31	28	26	21	19	18	14
5	64	53	45	40	57	48	41	36	38	33	29	28	25	22	19	17	16	12
6	59	47	40	34	53	43	36	31	34	29	25	25	22	19	17	15	14	10
7	55	43	35	30	49	38	32	27	30	26	22	23	20	17	16	14	12	9
8	50	39	31	26	45	35	28	24	28	23	19	21	18	15	15	12	11	8
9	47	35	28	23	42	32	25	21	25	21	17	19	16	14	13	11	10	7
10	44	32	25	21	39	29	23	19	23	19	15	18	14	12	12	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6801	6801	6801
5°	6827	6729	6770
10°	6787	6661	6694
15°	6703	6574	6569
20°	6584	6445	6438
25°	6465	6285	6285
30°	6315	6139	6087
35°	6173	5964	5876
40°	5994	5788	5678
45°	5818	5613	5476
50°	5627	5433	5242
55°	5427	5225	5027
60°	5205	4970	4789
65°	4967	4722	4504
70°	4664	4414	4206
75°	4242	4067	3968
80°	3766	3654	3468
85°	3075	2927	2631



TEST NUMBER: P331274-940

CATALOG NUMBER: S122DIP-S290D925U940-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.6	1.0
10°-20°	111.5	2.8
20°-30°	163.8	4.1
30°-40°	190.3	4.7
40°-50°	190.1	4.7
50°-60°	165.8	4.1
60°-70°	122.6	3.0
70°-80°	69.4	1.7
80°-90°	22.9	0.6
90°-100°	66.8	1.7
100°-110°	207.5	5.2
110°-120°	354.7	8.8
120°-130°	466.5	11.6
130°-140°	523.6	13.0
140°-150°	513.4	12.8
150°-160°	430.6	10.7
160°-170°	285.6	7.1
170°-180°	99.8	2.5
0°-30°	314.9	7.8
0°-40°	505.2	12.6
0°-60°	861.1	21.4
0°-90°	1076.0	26.7
90°-120°	629.1	15.6
90°-150°	2132.6	53.0
90°-180°	2949.0	73.3
0°-180°	4024.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	421	421	421	421	421	
5°	421	420	415	418	418	40
15°	401	398	393	395	393	113
25°	363	360	353	354	353	167
35°	313	309	303	300	298	195
45°	255	252	246	242	240	197
55°	193	190	186	181	179	172
65°	130	128	124	120	118	129
75°	68	67	65	63	64	73
85°	17	16	16	15	14	19
90°	1	12	31	30	30	3
95°	46	55	57	57	55	53
105°	191	194	196	197	198	202
115°	356	361	360	358	356	352
125°	518	525	523	521	520	463
135°	670	679	682	681	678	517
145°	813	820	825	826	822	508
155°	930	933	935	939	937	428
165°	1012	1011	1011	1017	1013	285
175°	1053	1050	1048	1054	1049	100
180°	1054	1054	1054	1054	1054	



TEST NUMBER: P331274-940

CATALOG NUMBER: S122DIP-S290D925U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	421.2	421.2	421.2	421.2	421.2	421.2	421.2	421.2	421.2	421.2	421.2
2.5°	423.2	422.8	422.5	422.1	421.8	421.2	420.4	419.6	418.8	418.0	418.7
5°	421.2	420.9	420.5	420.2	419.8	419.2	418.2	417.2	416.2	415.2	415.9
7.5°	417.6	417.0	416.4	415.9	415.4	414.6	413.6	412.5	411.5	410.5	411.3
10°	414.0	413.4	412.8	412.1	411.4	410.6	409.6	408.5	407.4	406.3	407.0
12.5°	409.1	408.6	408.0	407.4	406.9	406.1	405.0	403.9	402.9	401.8	402.3
15°	401.0	400.5	399.9	399.4	398.9	398.1	396.8	395.7	394.5	393.3	393.7
17.5°	390.7	390.1	389.6	389.1	388.5	387.6	386.5	385.2	384.1	382.9	383.3
20°	383.2	382.6	382.1	381.6	381.0	380.1	378.9	377.6	376.4	375.1	375.4
22.5°	375.8	375.0	374.3	373.4	372.7	371.8	370.6	369.3	368.2	367.0	367.0
25°	362.9	362.2	361.5	360.8	360.1	358.9	357.4	355.9	354.4	352.8	353.0
27.5°	348.4	347.8	347.1	346.4	345.8	344.8	343.7	342.4	341.3	340.0	339.7
30°	338.7	338.0	337.2	336.5	335.7	334.7	333.4	332.1	330.6	329.3	329.0
32.5°	328.2	327.7	327.2	326.5	326.0	324.9	323.5	322.2	320.7	319.3	318.8
35°	313.2	312.2	311.3	310.4	309.5	308.4	306.9	305.5	304.1	302.6	302.0
37.5°	296.0	295.2	294.4	293.6	292.8	291.8	290.3	288.9	287.4	286.0	285.3
40°	284.4	283.7	282.9	282.2	281.5	280.4	278.9	277.5	276.1	274.6	273.8
42.5°	273.0	272.3	271.6	270.9	270.2	269.0	267.6	266.2	264.7	263.3	262.4
45°	254.8	254.1	253.5	252.9	252.3	251.3	249.9	248.6	247.3	245.8	244.9
47.5°	236.7	236.0	235.5	234.9	234.3	233.3	231.8	230.5	229.1	227.7	226.6
50°	224.0	223.6	223.1	222.7	222.2	221.3	220.1	218.8	217.6	216.3	215.1
52.5°	211.7	211.1	210.5	209.9	209.3	208.4	207.2	206.1	204.8	203.7	202.6
55°	192.8	192.3	191.7	191.2	190.6	189.8	188.8	187.7	186.6	185.6	184.4
57.5°	173.9	173.4	173.0	172.5	172.1	171.3	170.1	169.0	167.7	166.6	165.5
60°	161.2	160.9	160.5	160.2	159.8	159.0	157.7	156.5	155.2	153.9	152.9
62.5°	148.9	148.3	147.8	147.2	146.6	145.8	144.8	143.9	142.9	142.0	141.0
65°	130.0	129.5	128.9	128.4	127.9	127.2	126.3	125.4	124.5	123.6	122.7
67.5°	110.8	110.4	109.9	109.5	109.1	108.5	107.6	106.8	106.0	105.2	104.6
70°	98.8	98.4	98.1	97.7	97.4	96.8	96.0	95.2	94.3	93.5	92.9
72.5°	86.5	86.1	85.8	85.4	85.1	84.6	84.1	83.6	83.1	82.6	81.9
75°	68.0	67.9	67.7	67.5	67.3	67.1	66.6	66.1	65.6	65.2	64.6
77.5°	51.5	51.2	50.9	50.6	50.3	50.0	49.8	49.7	49.5	49.3	49.0
80°	40.5	40.4	40.3	40.2	40.1	40.0	39.9	39.7	39.5	39.3	39.1
82.5°	30.1	30.1	30.1	30.1	30.1	30.0	29.9	29.8	29.7	29.6	29.2
85°	16.6	16.5	16.4	16.3	16.2	16.1	16.1	16.0	15.9	15.8	15.5
87.5°	6.0	6.3	6.7	7.0	7.3	7.8	8.6	9.3	10.1	10.8	10.4
90°	0.9	3.3	5.6	8.0	10.3	13.7	18.1	22.5	26.8	31.1	30.8
92.5°	15.9	17.6	19.4	21.0	22.8	24.2	25.2	26.2	27.3	28.3	28.4
95°	46.3	48.2	50.2	52.2	54.2	55.4	55.7	56.2	56.5	57.0	57.0
97.5°	84.5	86.3	88.0	89.8	91.5	92.7	93.5	94.3	95.0	95.8	95.8
100°	113.0	114.6	116.2	117.8	119.3	120.5	121.0	121.6	122.3	122.8	122.8
102.5°	142.9	144.2	145.4	146.7	147.9	149.0	149.7	150.5	151.2	152.0	152.1
105°	191.4	191.9	192.5	193.1	193.7	194.2	194.6	195.0	195.4	195.7	196.2
107.5°	240.0	240.9	241.8	242.7	243.6	244.0	244.0	244.0	244.0	244.0	244.2
110°	271.4	272.6	273.8	275.0	276.2	276.8	276.8	276.8	276.8	276.8	276.8



TEST NUMBER: P331274-940

CATALOG NUMBER: S122DIP-S290D925U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	305.6	306.7	308.0	309.2	310.3	310.9	310.7	310.5	310.4	310.2	309.8
115°	356.0	357.1	358.3	359.5	360.7	361.1	360.7	360.3	359.9	359.5	359.4
117.5°	406.2	407.7	409.3	410.9	412.5	412.7	411.6	410.5	409.4	408.3	407.8
120°	439.6	441.2	442.7	444.3	445.9	445.9	444.3	442.7	441.2	439.6	439.6
122.5°	470.2	472.1	474.0	475.9	477.8	478.2	477.1	476.0	474.9	473.8	473.3
125°	517.9	519.7	521.5	523.3	525.0	525.7	525.0	524.4	523.9	523.3	522.6
127.5°	564.4	566.6	568.9	571.1	573.4	574.2	573.5	572.7	572.0	571.3	570.6
130°	593.5	596.1	598.7	601.3	603.9	604.9	604.5	604.1	603.8	603.3	603.0
132.5°	626.3	628.4	630.5	632.6	634.7	635.8	635.9	636.0	636.0	636.1	635.3
135°	670.1	672.3	674.4	676.6	678.8	680.1	680.5	680.8	681.3	681.6	681.4
137.5°	716.2	717.9	719.7	721.5	723.3	724.4	725.0	725.5	726.0	726.5	726.4
140°	744.0	745.7	747.5	749.3	751.1	752.4	753.4	754.4	755.5	756.4	756.4
142.5°	772.4	774.2	776.0	777.8	779.5	780.8	781.4	782.1	782.7	783.5	783.6
145°	813.3	814.8	816.1	817.5	818.9	820.2	821.4	822.5	823.8	824.9	825.1
147.5°	849.8	851.5	853.2	854.8	856.5	857.7	858.5	859.3	860.1	860.9	861.3
150°	874.8	875.9	877.1	878.3	879.5	880.5	881.3	882.1	882.9	883.7	884.2
152.5°	896.8	898.0	899.2	900.4	901.6	902.7	903.6	904.6	905.4	906.4	907.2
155°	930.0	930.5	931.1	931.7	932.3	932.9	933.5	934.1	934.7	935.2	936.3
157.5°	958.2	958.6	959.0	959.4	959.8	960.2	960.6	960.9	961.3	961.6	963.0
160°	975.4	975.7	976.1	976.5	976.9	977.2	977.4	977.6	977.8	977.9	979.2
162.5°	991.0	991.0	991.1	991.2	991.3	991.4	991.7	991.8	992.0	992.2	993.5
165°	1011.8	1011.6	1011.4	1011.2	1011.0	1010.9	1010.9	1010.9	1010.9	1010.9	1012.3
167.5°	1029.2	1028.7	1028.1	1027.4	1026.9	1026.5	1026.5	1026.4	1026.4	1026.4	1027.8
170°	1038.5	1037.9	1037.3	1036.7	1036.1	1035.7	1035.5	1035.4	1035.1	1034.9	1036.3
172.5°	1044.9	1044.3	1043.7	1043.1	1042.5	1042.1	1042.0	1041.7	1041.5	1041.3	1042.8
175°	1052.8	1052.1	1051.5	1051.0	1050.3	1049.9	1049.5	1049.1	1048.7	1048.3	1049.6
177.5°	1056.0	1055.4	1055.0	1054.5	1054.0	1053.6	1053.3	1053.0	1052.7	1052.4	1053.3
180°	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5



TEST NUMBER: P331274-940

CATALOG NUMBER: S122DIP-S290D925U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	421.2	421.2	421.2	421.2	421.2	421.2	421.2	421.2
2.5°	419.5	420.2	420.9	421.2	421.1	420.9	420.8	420.6
5°	416.7	417.4	418.1	418.4	418.2	418.0	417.9	417.7
7.5°	412.0	412.7	413.4	413.7	413.5	413.2	413.0	412.9
10°	407.8	408.5	409.2	409.4	409.1	408.8	408.6	408.3
12.5°	402.8	403.2	403.8	403.9	403.8	403.5	403.3	403.1
15°	394.0	394.4	394.8	394.8	394.3	393.9	393.4	393.0
17.5°	383.7	384.1	384.5	384.5	384.1	383.7	383.3	382.8
20°	375.7	375.9	376.2	376.1	375.8	375.4	375.1	374.7
22.5°	367.1	367.2	367.2	367.1	366.9	366.7	366.5	366.3
25°	353.2	353.4	353.6	353.6	353.4	353.2	353.0	352.8
27.5°	339.5	339.2	338.9	338.6	338.1	337.7	337.3	336.9
30°	328.8	328.5	328.2	328.0	327.6	327.3	326.9	326.5
32.5°	318.3	317.8	317.4	316.9	316.6	316.2	315.8	315.5
35°	301.5	301.0	300.4	300.0	299.5	299.1	298.6	298.1
37.5°	284.6	284.0	283.3	282.8	282.3	281.9	281.5	281.1
40°	273.0	272.2	271.4	270.8	270.5	270.1	269.7	269.4
42.5°	261.5	260.6	259.8	259.0	258.6	258.1	257.6	257.1
45°	243.9	242.9	241.9	241.2	240.9	240.5	240.1	239.8
47.5°	225.6	224.5	223.5	222.7	222.2	221.7	221.1	220.6
50°	213.8	212.5	211.2	210.4	210.0	209.6	209.1	208.7
52.5°	201.6	200.5	199.5	198.7	198.0	197.5	196.9	196.3
55°	183.3	182.3	181.2	180.5	180.0	179.5	179.1	178.6
57.5°	164.4	163.4	162.3	161.6	161.3	161.0	160.6	160.2
60°	151.9	151.0	150.0	149.4	149.1	148.8	148.6	148.3
62.5°	140.1	139.2	138.3	137.7	137.3	137.0	136.6	136.3
65°	121.9	121.1	120.3	119.7	119.2	118.8	118.3	117.9
67.5°	104.0	103.3	102.7	102.2	101.8	101.5	101.1	100.8
70°	92.3	91.7	91.0	90.6	90.2	89.8	89.4	89.1
72.5°	81.3	80.7	80.1	79.5	79.3	79.0	78.7	78.4
75°	64.1	63.6	63.0	62.9	63.0	63.2	63.4	63.6
77.5°	48.8	48.5	48.2	48.0	47.7	47.5	47.3	47.0
80°	38.8	38.5	38.3	38.0	37.8	37.6	37.5	37.3
82.5°	28.9	28.5	28.2	28.0	28.0	27.9	27.9	27.9
85°	15.2	15.0	14.7	14.5	14.4	14.4	14.3	14.2
87.5°	10.2	9.9	9.5	9.5	9.4	9.4	9.4	9.3
90°	30.3	30.0	29.6	29.4	29.7	29.9	30.1	30.2
92.5°	28.4	28.5	28.6	28.7	28.7	28.7	28.8	28.8
95°	57.0	57.0	57.0	56.7	56.4	56.0	55.6	55.2
97.5°	95.8	95.8	95.8	95.8	95.7	95.7	95.6	95.6
100°	122.8	122.8	122.8	122.7	122.5	122.3	122.1	121.9
102.5°	152.3	152.5	152.7	152.6	152.4	152.2	152.0	151.9
105°	196.5	197.0	197.3	197.5	197.5	197.5	197.5	197.5
107.5°	244.3	244.5	244.6	244.2	243.3	242.5	241.6	240.6
110°	276.8	276.8	276.8	276.4	275.9	275.3	274.6	274.1



TEST NUMBER: P331274-940

CATALOG NUMBER: S122DIP-S290D925U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	309.2	308.8	308.4	307.8	307.5	307.0	306.6	306.1
115°	359.1	358.9	358.7	358.3	357.8	357.1	356.5	356.0
117.5°	407.3	406.9	406.4	405.8	405.3	404.7	404.0	403.5
120°	439.6	439.6	439.6	439.3	438.7	438.1	437.6	436.9
122.5°	472.8	472.3	471.9	471.4	471.0	470.6	470.1	469.7
125°	522.1	521.5	520.8	520.5	520.3	520.0	519.9	519.7
127.5°	569.9	569.2	568.5	567.8	567.1	566.5	565.9	565.3
130°	602.5	602.2	601.7	601.2	600.4	599.6	598.8	598.0
132.5°	634.4	633.5	632.6	631.9	631.2	630.6	630.0	629.4
135°	681.3	681.1	680.8	680.5	679.8	679.3	678.7	678.1
137.5°	726.2	726.0	725.9	725.4	724.6	723.8	723.0	722.2
140°	756.4	756.4	756.4	756.0	755.2	754.4	753.7	752.9
142.5°	783.8	783.9	784.1	783.8	783.0	782.2	781.4	780.6
145°	825.3	825.5	825.7	825.5	824.7	823.9	823.0	822.2
147.5°	861.7	862.2	862.6	862.5	861.7	860.9	860.2	859.4
150°	884.8	885.5	886.0	886.0	885.5	884.8	884.2	883.7
152.5°	907.9	908.7	909.5	909.5	908.7	907.9	907.2	906.4
155°	937.3	938.3	939.2	939.4	938.8	938.3	937.6	937.0
157.5°	964.3	965.6	967.0	967.1	966.3	965.3	964.3	963.4
160°	980.3	981.5	982.8	982.9	982.1	981.3	980.5	979.7
162.5°	994.9	996.2	997.6	997.8	996.8	995.9	995.0	994.0
165°	1013.7	1015.0	1016.5	1016.6	1015.7	1014.7	1013.7	1012.7
167.5°	1029.1	1030.6	1031.9	1032.1	1031.1	1030.0	1029.0	1028.0
170°	1037.7	1039.1	1040.4	1040.5	1039.4	1038.2	1037.0	1035.8
172.5°	1044.1	1045.5	1046.9	1047.0	1045.8	1044.6	1043.4	1042.2
175°	1051.1	1052.4	1053.8	1053.9	1052.8	1051.5	1050.3	1049.2
177.5°	1054.3	1055.3	1056.1	1056.1	1055.3	1054.3	1053.3	1052.4
180°	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5	1054.5

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