

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: P331270-930

Luminaire Tested: **SA2XXDIP-C290D925U930-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331270-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C290D925U930-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

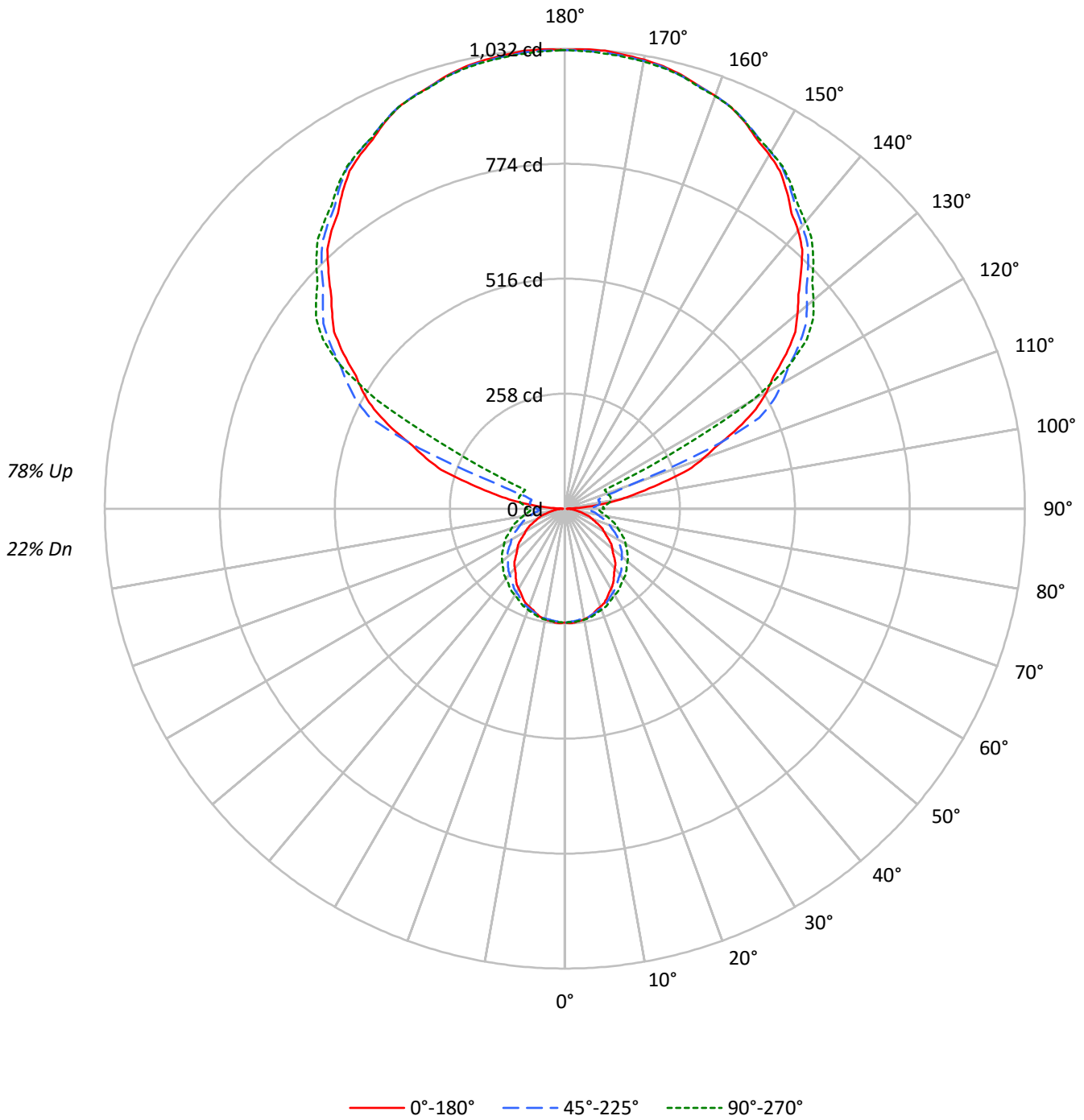
Lumens per Lamp: N/A  
Luminaire Lumens: 3993.2 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

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



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### Luminous Intensity Polar Plot





TEST NUMBER: P331270-930

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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	50	30	10	0	
RCR																						
0	100	100	100	100	89	89	89	89	68	68	68	48	48	48	30	30	30	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	66	61	57	50	47	44	36	34	32	22	21	20	14				
3	75	66	58	53	66	58	52	47	44	40	37	31	29	26	19	18	17	11				
4	68	58	50	44	60	51	45	40	39	34	31	28	25	22	17	15	14	9				
5	62	51	43	37	55	45	39	34	35	30	26	25	22	19	15	14	12	8				
6	57	46	38	32	50	41	34	29	31	26	23	22	19	17	14	12	10	7				
7	53	41	33	28	47	37	30	25	28	23	20	20	17	14	13	11	9	6				
8	49	37	29	24	43	33	26	22	25	21	17	18	15	13	11	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	4				

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.2	0.6
10°-20°	69.4	1.7
20°-30°	105.2	2.6
30°-40°	128.2	3.2
40°-50°	137.9	3.5
50°-60°	133.9	3.4
60°-70°	116.9	2.9
70°-80°	90.0	2.3
80°-90°	62.9	1.6
90°-100°	75.9	1.9
100°-110°	156.3	3.9
110°-120°	356.6	8.9
120°-130°	566.6	14.2
130°-140°	595.4	14.9
140°-150°	549.9	13.8
150°-160°	441.4	11.1
160°-170°	284.5	7.1
170°-180°	97.9	2.5
0°-30°	198.9	5.0
0°-40°	327.1	8.2
0°-60°	598.8	15.0
0°-90°	868.7	21.8
90°-120°	588.8	14.7
90°-150°	2300.7	57.6
90°-180°	3124.0	78.2
0°-180°	3993.2	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	34	64	82	88	5
95°	51	46	72	89	93	62
105°	228	249	77	98	106	244
115°	430	447	482	164	98	423
125°	606	617	642	656	663	540
135°	749	761	772	786	788	579
145°	869	869	881	888	886	543
155°	957	951	959	963	958	441
165°	1008	1004	1006	1011	1006	285
175°	1031	1026	1028	1032	1025	98
180°	1029	1029	1029	1029	1029	



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**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	12.6	17.9	23.2	28.5	33.9	39.4	44.9	50.5	56.0	59.5
90°	4.5	11.0	17.6	24.2	30.8	37.4	44.0	50.6	57.2	63.8	67.9
92.5°	18.4	22.7	27.0	31.3	35.5	40.6	46.3	52.0	57.8	63.5	67.2
95°	51.4	49.7	48.2	46.6	45.0	47.2	53.3	59.4	65.6	71.7	75.6
97.5°	98.7	86.7	74.8	62.8	50.9	48.6	56.0	63.4	70.8	78.3	82.0
100°	134.4	114.8	95.1	75.5	55.9	49.8	57.2	64.7	72.1	79.5	83.8
102.5°	173.4	171.4	169.3	167.4	165.3	154.8	135.7	116.7	97.7	78.6	83.3
105°	228.2	235.5	242.9	250.3	257.6	240.8	200.0	159.1	118.1	77.3	81.9
107.5°	291.1	297.0	303.0	308.8	314.8	292.7	242.6	192.6	142.5	92.4	93.4
110°	331.3	336.5	341.6	346.7	351.8	332.5	288.7	244.9	201.1	157.4	143.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	369.5	373.9	378.4	382.9	387.3	385.6	377.6	369.6	361.6	353.6	295.9
115°	429.7	433.3	437.1	440.8	444.5	450.3	458.1	465.9	473.8	481.7	407.5
117.5°	483.0	486.7	490.5	494.2	498.0	503.0	509.2	515.5	521.8	528.1	511.9
120°	522.4	525.1	528.0	530.8	533.6	538.1	544.4	550.7	556.9	563.2	567.5
122.5°	555.7	558.5	561.2	563.9	566.7	571.2	577.6	583.9	590.2	596.6	600.0
125°	606.1	608.3	610.4	612.5	614.7	618.6	624.4	630.2	636.0	641.8	645.1
127.5°	652.2	654.4	656.7	659.0	661.3	664.7	669.2	673.7	678.2	682.6	686.3
130°	681.3	683.9	686.5	689.0	691.5	694.6	698.1	701.7	705.3	708.8	712.7
132.5°	711.1	713.3	715.4	717.6	719.7	722.4	725.6	728.7	731.9	735.1	738.5
135°	749.4	752.1	754.7	757.4	760.0	762.5	764.8	767.1	769.5	771.8	775.2
137.5°	788.6	790.4	792.3	794.1	796.0	797.9	800.0	802.0	804.0	806.1	809.3
140°	814.2	815.5	816.7	818.0	819.2	820.8	822.8	824.8	826.8	828.8	831.5
142.5°	835.7	836.7	837.9	839.0	840.1	841.7	843.8	846.0	848.1	850.2	852.6
145°	868.9	868.8	868.6	868.5	868.3	869.6	872.5	875.2	878.1	880.8	882.6
147.5°	898.3	897.6	897.1	896.4	895.8	896.8	899.6	902.5	905.2	908.0	908.9
150°	917.4	916.2	915.0	913.9	912.7	913.5	916.2	918.8	921.5	924.1	925.0
152.5°	933.4	932.1	930.8	929.6	928.3	928.9	931.4	933.9	936.5	939.0	940.0
155°	956.8	955.4	953.8	952.4	950.9	951.1	953.1	955.1	957.1	959.0	960.0
157.5°	975.1	973.9	972.7	971.3	970.1	970.2	971.6	973.0	974.4	975.8	976.9
160°	985.9	984.9	983.9	982.8	981.9	981.9	982.8	983.9	984.9	985.9	986.8
162.5°	995.4	994.4	993.4	992.4	991.4	991.3	992.2	993.0	993.9	994.8	995.9
165°	1008.2	1007.2	1006.2	1005.2	1004.2	1004.0	1004.4	1004.9	1005.5	1006.0	1007.1
167.5°	1017.7	1016.8	1015.8	1014.7	1013.7	1013.5	1014.0	1014.4	1014.9	1015.4	1016.5
170°	1023.1	1022.1	1021.1	1020.1	1019.1	1018.8	1019.1	1019.5	1019.8	1020.1	1021.2
172.5°	1026.6	1025.6	1024.7	1023.7	1022.7	1022.4	1022.7	1023.0	1023.4	1023.7	1024.8
175°	1031.3	1030.1	1029.0	1027.8	1026.6	1026.2	1026.5	1026.9	1027.2	1027.5	1028.7
177.5°	1032.0	1031.1	1030.2	1029.2	1028.3	1027.9	1028.1	1028.2	1028.3	1028.4	1029.4
180°	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1



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**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°	63.0	66.6	70.1	72.4	73.5	74.7	75.8	76.9
90°	72.0	76.1	80.2	83.0	84.3	85.6	86.9	88.2
92.5°	70.8	74.4	78.1	80.6	81.7	82.9	84.1	85.3
95°	79.6	83.5	87.5	89.8	90.7	91.5	92.3	93.1
97.5°	85.7	89.4	93.1	95.6	96.7	97.9	99.1	100.2
100°	88.2	92.6	96.9	99.8	101.0	102.2	103.5	104.7
102.5°	88.0	92.7	97.4	100.4	101.8	103.1	104.5	105.9
105°	86.7	91.4	96.0	99.2	100.8	102.3	104.0	105.5
107.5°	94.2	95.1	96.0	97.3	98.9	100.4	102.0	103.5
110°	129.6	115.6	101.7	95.6	97.1	98.7	100.2	101.7





TEST NUMBER: P331270-930

CATALOG NUMBER: SA2XXDIP-C290D925U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	238.1	180.4	122.7	94.6	96.0	97.4	98.9	100.3
115°	333.4	259.2	185.1	142.5	131.5	120.5	109.5	98.5
117.5°	495.9	479.7	463.7	436.4	398.2	359.9	321.6	283.2
120°	571.8	576.1	580.3	571.8	550.3	529.0	507.5	486.1
122.5°	603.4	606.8	610.3	610.3	606.7	603.1	599.6	596.0
125°	648.6	651.9	655.3	657.6	658.8	660.1	661.3	662.6
127.5°	690.1	693.8	697.5	699.8	700.6	701.5	702.3	703.1
130°	716.4	720.2	724.0	726.2	726.7	727.2	727.7	728.1
132.5°	742.0	745.4	748.9	750.9	751.4	751.9	752.4	752.8
135°	778.5	782.0	785.3	787.2	787.5	787.8	788.1	788.5
137.5°	812.4	815.5	818.6	820.2	820.2	820.2	820.2	820.2
140°	834.4	837.1	840.0	841.2	840.9	840.6	840.2	839.8
142.5°	855.0	857.5	859.8	860.9	860.5	860.1	859.7	859.2
145°	884.2	885.8	887.5	888.1	887.7	887.3	886.9	886.5
147.5°	909.8	910.8	911.7	911.9	911.4	910.9	910.4	909.9
150°	926.0	927.1	928.1	928.1	927.3	926.4	925.6	924.8
152.5°	940.9	941.9	942.9	942.9	941.8	940.7	939.6	938.5
155°	961.1	962.1	963.0	962.9	961.6	960.2	958.9	957.6
157.5°	978.0	979.1	980.2	980.2	978.8	977.5	976.2	975.0
160°	987.8	988.9	989.9	989.8	988.6	987.4	986.3	985.1
162.5°	997.0	998.2	999.3	999.1	997.8	996.3	994.9	993.4
165°	1008.3	1009.4	1010.6	1010.6	1009.4	1008.3	1007.1	1006.0
167.5°	1017.7	1018.8	1020.0	1019.8	1018.3	1016.8	1015.4	1013.8
170°	1022.5	1023.6	1024.7	1024.6	1023.1	1021.6	1020.1	1018.6
172.5°	1026.0	1027.2	1028.3	1028.2	1026.6	1025.2	1023.7	1022.2
175°	1029.9	1031.0	1032.2	1031.9	1030.3	1028.7	1027.0	1025.3
177.5°	1030.3	1031.3	1032.2	1032.0	1030.9	1029.6	1028.4	1027.3
180°	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1	1029.1

(END OF REPORT)