

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: P242821

Luminaire Tested: **S125DR-S610D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242821  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-22)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DR-S610D930-X4F0-XX-UDD-A-W  
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1946.0 lumens  
Efficiency: N/A  
Efficacy: 103.5 lumens/watt  
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53  
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')  
CIE Type: Direct

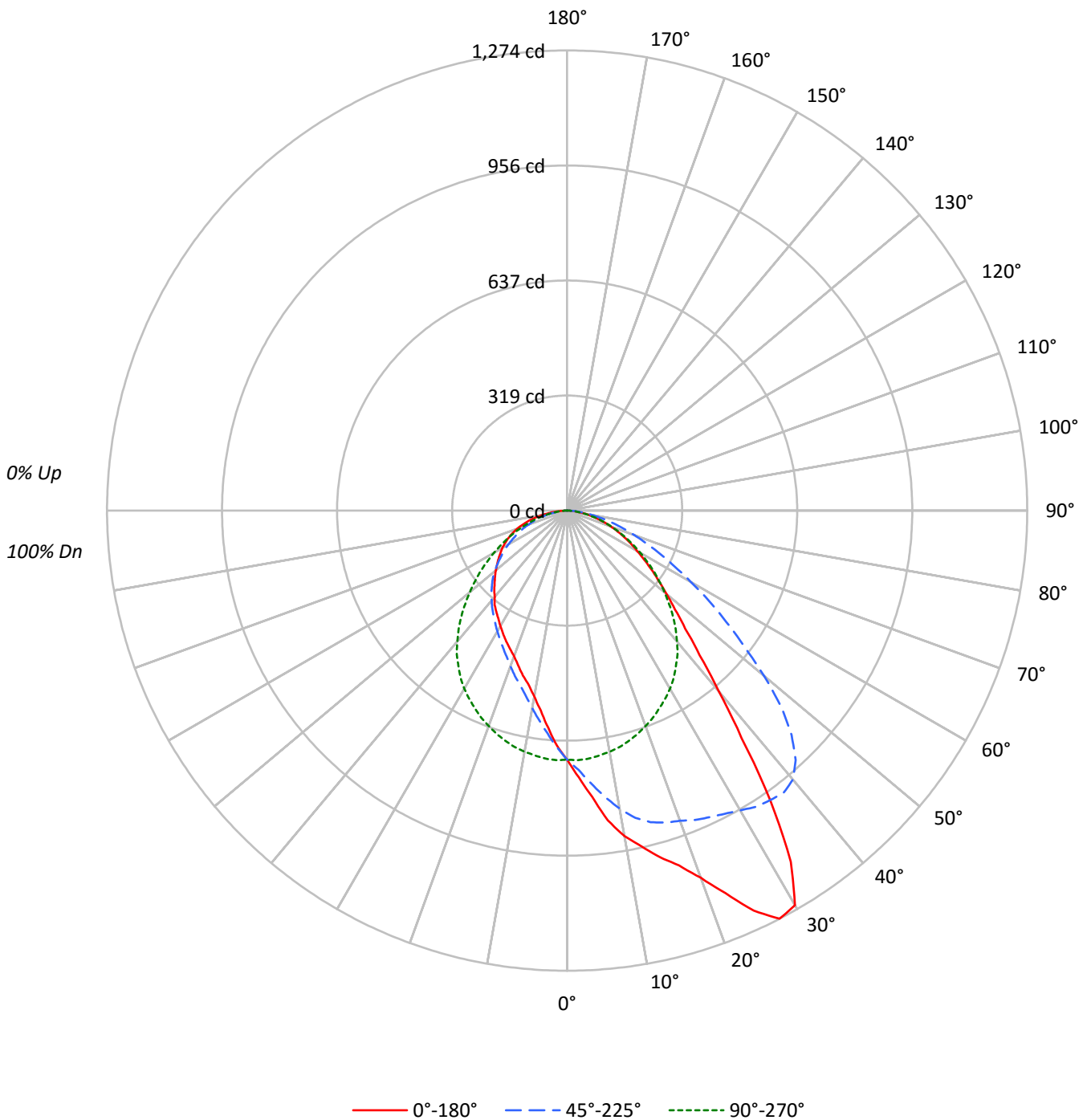
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	98	90	84	79	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53
5	78	65	56	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	4901	4901	4901
5°	5675	4918	4306
10°	6603	4892	3772
15°	7310	4856	3480
20°	8182	4800	3245
25°	9585	4735	3131
30°	10353	4672	3032
35°	8512	4553	2966
40°	6050	4388	2895
45°	4648	4165	2854
50°	3967	3890	2848
55°	3533	3619	2872
60°	3187	3325	2945
65°	2943	3027	3022
70°	2677	2718	3065
75°	2364	2395	3037
80°	1989	1952	2779
85°	1574	1411	2243



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.4	3.4
10°-20°	197.7	10.2
20°-30°	321.1	16.5
30°-40°	392.4	20.2
40°-50°	356.0	18.3
50°-60°	283.6	14.6
60°-70°	197.5	10.1
70°-80°	105.2	5.4
80°-90°	26.1	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	585.2	30.1
0°-40°	977.6	50.2
0°-60°	1617.2	83.1
0°-90°	1946.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1946.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	690	690	690	690	690	
5°	796	758	689	620	604	80
15°	993	893	660	500	473	284
25°	1222	936	604	419	399	560
35°	981	979	525	356	342	602
45°	462	878	414	294	284	368
55°	285	538	292	224	232	256
65°	175	285	180	151	180	174
75°	86	127	87	80	111	93
85°	19	26	17	19	28	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6
2.5°	739.3	738.2	737.0	734.7	736.4	731.4	729.1	725.0	720.0	718.3	716.2
5°	795.5	797.0	798.5	792.3	792.9	788.8	779.4	771.8	765.7	757.8	752.2
7.5°	865.2	860.8	861.1	857.3	850.6	845.0	835.9	823.3	811.9	799.0	787.9
10°	914.9	915.2	912.6	907.9	900.6	895.3	882.5	870.2	855.2	837.7	825.1
12.5°	952.4	953.9	950.4	943.6	941.0	927.5	918.2	902.9	884.5	871.3	850.6
15°	993.4	990.2	987.8	979.9	973.8	961.5	945.4	930.2	910.8	893.0	875.1
17.5°	1029.7	1032.3	1028.5	1022.7	1004.5	990.2	970.3	950.9	927.8	905.6	884.8
20°	1081.8	1084.1	1077.4	1064.8	1042.0	1027.6	999.2	972.3	944.5	913.8	890.4
22.5°	1146.8	1143.8	1134.2	1113.4	1094.4	1064.8	1033.5	999.2	962.7	926.9	893.9
25°	1222.3	1210.0	1204.4	1180.7	1154.7	1115.7	1073.6	1025.6	982.3	936.3	896.5
27.5°	1273.8	1268.8	1260.9	1241.6	1211.7	1167.5	1117.8	1060.4	1002.2	946.0	895.9
30°	1261.5	1262.1	1262.7	1257.4	1239.8	1208.5	1159.0	1096.1	1023.5	958.3	898.0
32.5°	1152.6	1165.8	1178.4	1194.8	1205.3	1205.6	1179.2	1123.9	1048.7	972.3	896.8
35°	981.1	984.3	1017.4	1050.2	1094.7	1129.2	1152.3	1127.1	1064.2	979.0	895.9
37.5°	793.2	809.3	834.2	871.0	937.8	992.2	1063.6	1088.2	1058.7	984.6	895.6
40°	652.1	666.7	681.7	719.4	773.6	843.2	927.2	998.9	1015.6	972.3	886.8
42.5°	543.2	554.1	571.0	597.1	640.1	699.8	779.1	878.4	946.3	936.6	868.4
45°	462.4	469.8	482.6	505.2	538.0	586.3	657.1	759.5	848.8	878.4	837.1
47.5°	405.1	405.4	415.9	432.0	456.9	501.4	554.4	638.6	734.9	803.1	793.5
50°	358.8	357.4	365.3	378.7	397.5	424.7	474.7	538.8	630.5	710.4	732.6
52.5°	319.0	319.6	323.7	332.8	347.7	370.0	404.2	460.4	535.3	617.9	664.7
55°	285.1	283.9	289.5	296.2	307.6	322.8	349.8	394.0	457.5	538.3	592.7
57.5°	252.3	255.5	257.9	262.5	272.5	283.0	307.0	341.0	393.4	465.1	522.7
60°	224.2	227.4	229.2	233.9	241.5	250.2	267.8	294.2	336.6	396.3	453.4
62.5°	199.0	201.4	201.7	205.8	211.6	220.1	233.0	254.1	285.4	335.7	391.3
65°	175.0	175.0	176.2	180.6	183.5	191.1	201.7	217.8	244.7	285.4	333.1
67.5°	151.6	153.1	152.8	154.8	157.5	163.9	171.8	185.3	206.6	237.4	276.9
70°	128.8	130.0	129.7	131.1	134.1	137.9	144.0	156.6	170.9	196.4	229.2
72.5°	108.3	108.6	107.7	109.8	111.2	114.4	121.5	126.7	139.9	160.4	185.9
75°	86.1	86.6	87.2	88.4	90.1	91.9	95.4	102.1	110.9	127.0	144.3
77.5°	68.5	67.0	68.8	68.5	69.4	70.8	74.1	77.9	85.5	96.3	110.6
80°	48.6	48.9	48.9	49.2	50.6	51.5	54.1	56.8	62.3	70.0	79.3
82.5°	32.2	33.1	32.5	33.1	34.2	34.8	36.0	38.0	40.7	46.2	52.4
85°	19.3	17.9	18.4	19.0	19.0	19.3	20.5	21.4	23.1	25.5	28.1
87.5°	7.0	7.6	7.9	7.9	8.2	8.2	9.4	9.4	10.2	11.1	12.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6
2.5°	714.5	712.4	710.1	706.0	701.0	698.4	694.3	691.6	686.4	682.0	677.3
5°	745.5	737.9	730.8	721.8	711.8	705.4	697.8	689.3	680.5	671.4	661.5
7.5°	776.5	763.9	750.2	735.8	721.8	708.6	696.3	683.7	672.3	658.0	646.0
10°	807.8	790.8	772.7	751.3	730.6	712.4	694.0	677.9	661.5	643.9	628.4
12.5°	839.1	815.1	787.6	763.6	737.6	714.7	692.2	670.6	648.9	629.0	610.3
15°	850.6	830.7	806.9	773.6	745.5	715.3	686.6	660.0	635.1	613.5	590.6
17.5°	861.7	836.2	811.0	778.8	742.3	709.8	677.3	648.3	620.8	593.6	572.8
20°	864.3	838.0	811.3	780.0	742.3	703.6	671.1	634.6	604.4	576.0	549.1
22.5°	863.4	832.7	803.1	770.7	734.1	699.2	658.3	620.8	587.4	559.6	531.2
25°	857.0	825.1	788.8	756.3	720.0	682.3	642.5	603.8	570.5	538.5	510.7
27.5°	853.2	812.8	773.0	735.5	700.7	665.9	627.2	587.4	550.8	518.4	492.6
30°	844.7	799.3	753.1	713.6	677.6	643.9	607.9	569.3	530.6	499.0	470.9
32.5°	837.1	782.4	732.9	689.0	650.4	617.9	585.4	549.1	511.3	479.1	451.0
35°	826.8	765.7	709.8	661.2	620.5	586.8	559.0	524.8	490.0	458.9	432.0
37.5°	814.8	744.0	684.9	634.3	590.1	554.9	528.6	502.0	467.1	436.7	412.7
40°	800.2	720.6	657.1	605.0	558.7	521.9	497.9	473.0	445.2	417.4	391.6
42.5°	781.8	699.5	629.0	571.9	526.3	490.5	465.1	444.9	421.2	395.7	372.3
45°	758.4	673.2	598.3	538.0	491.7	456.3	430.3	414.4	396.0	371.4	351.2
47.5°	727.3	643.3	566.1	503.7	456.0	423.2	398.4	382.8	369.4	350.1	331.0
50°	683.1	609.1	530.6	468.9	421.2	388.1	365.6	351.8	340.7	326.6	311.1
52.5°	633.7	566.1	495.8	434.9	387.8	355.3	333.4	321.7	312.9	303.8	288.6
55°	580.7	522.2	455.4	397.5	353.9	322.0	302.6	292.1	284.5	276.9	267.5
57.5°	523.6	476.2	415.0	360.9	320.5	290.6	272.5	261.7	255.5	251.4	245.6
60°	462.7	423.5	372.6	324.3	285.1	259.3	241.8	233.9	228.9	225.7	221.6
62.5°	406.3	375.8	329.6	286.5	253.5	229.5	214.2	206.6	202.0	200.8	197.6
65°	350.9	326.1	287.1	250.5	221.3	200.5	187.3	180.0	177.1	175.3	175.6
67.5°	295.3	279.2	246.7	214.5	190.5	172.1	161.3	155.7	154.2	151.6	151.6
70°	245.3	233.9	207.5	180.3	159.5	146.1	136.7	130.8	129.4	128.2	127.9
72.5°	201.1	191.4	169.5	149.0	130.8	119.4	112.1	109.2	106.5	106.0	106.0
75°	157.8	152.2	134.1	116.8	103.9	95.7	90.4	87.2	85.5	85.2	85.5
77.5°	119.1	113.9	101.3	88.4	79.9	73.5	68.5	67.6	65.3	65.6	65.0
80°	84.3	81.1	73.8	64.1	57.4	52.1	49.8	47.7	47.1	46.2	47.1
82.5°	55.3	51.8	47.4	42.1	36.9	34.2	31.9	31.6	31.3	31.0	31.0
85°	30.1	30.4	27.5	22.8	20.5	18.7	17.3	17.3	17.0	16.7	17.0
87.5°	12.9	12.3	11.1	10.2	8.8	7.9	7.6	7.9	7.0	6.7	7.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6	689.6
2.5°	674.6	671.4	668.8	662.9	659.7	655.3	651.8	655.6	651.5	653.3	650.6
5°	656.5	648.3	642.5	634.0	626.6	619.9	614.9	614.1	611.7	610.5	607.0
7.5°	634.8	625.5	615.8	605.3	596.5	587.1	581.6	576.3	573.1	569.0	565.8
10°	616.1	602.4	590.6	577.2	565.5	555.2	547.0	542.9	539.1	533.6	531.5
12.5°	593.0	578.6	563.7	549.1	538.0	526.3	519.5	512.8	510.5	504.0	503.7
15°	575.4	554.1	540.0	525.4	509.9	500.5	494.6	487.9	485.0	480.6	477.4
17.5°	553.8	534.5	516.9	502.0	487.9	480.3	472.7	468.0	463.0	459.8	454.5
20°	529.8	511.6	494.1	478.0	467.7	458.6	452.8	448.4	443.1	441.7	436.4
22.5°	509.6	489.1	472.4	459.5	448.1	437.6	431.1	428.5	425.3	420.0	420.0
25°	487.3	466.5	452.2	438.7	428.8	419.4	415.0	411.2	407.7	404.5	403.3
27.5°	468.6	450.2	432.6	420.3	411.8	403.0	399.2	394.3	391.6	389.0	385.5
30°	448.7	429.7	414.7	403.0	393.7	386.1	382.0	378.7	376.4	374.1	372.3
32.5°	428.2	410.9	396.6	385.2	375.8	370.5	367.0	365.0	362.3	359.4	357.1
35°	410.6	391.3	377.3	367.3	360.0	355.6	351.5	349.5	346.5	346.5	344.2
37.5°	389.9	372.9	360.3	351.2	344.8	340.7	336.0	334.8	332.8	331.6	330.7
40°	371.7	356.2	344.5	335.4	328.4	325.2	321.7	319.3	318.2	316.7	316.1
42.5°	353.0	338.3	327.2	319.0	313.2	310.5	307.3	305.9	303.2	301.2	300.9
45°	334.0	319.6	309.4	302.6	297.4	294.2	292.1	288.6	287.4	285.1	284.8
47.5°	316.4	302.3	292.1	286.5	281.9	279.5	276.3	272.5	271.0	269.6	269.3
50°	296.2	283.6	274.2	269.0	264.6	260.8	257.6	255.2	254.3	254.3	254.9
52.5°	275.7	265.5	257.9	251.1	247.0	242.9	240.0	238.8	237.4	239.1	240.3
55°	255.8	245.0	239.1	233.0	228.9	224.2	222.7	222.2	221.3	223.6	224.8
57.5°	234.4	227.1	220.1	213.7	210.2	207.2	204.9	204.6	206.3	206.9	210.4
60°	214.2	205.5	199.3	194.6	190.2	188.5	187.9	187.3	188.5	191.7	196.7
62.5°	192.0	185.3	178.5	175.3	172.4	169.2	169.2	169.8	172.4	176.2	181.2
65°	170.3	164.2	159.8	155.7	153.1	151.3	151.9	153.1	155.7	160.7	166.2
67.5°	148.1	144.0	139.9	136.1	133.5	133.8	134.1	135.5	138.7	144.6	149.9
70°	126.7	122.1	118.8	117.4	115.3	114.1	115.9	118.8	121.5	126.7	131.1
72.5°	105.4	101.6	99.2	98.3	97.8	96.9	97.2	100.4	104.2	109.5	114.7
75°	84.3	82.8	81.1	79.9	79.0	79.6	80.2	83.1	86.1	91.6	97.5
77.5°	65.3	63.5	62.3	62.1	61.5	61.8	63.2	65.6	68.5	72.6	77.3
80°	46.5	46.0	45.4	45.1	45.1	45.4	47.7	49.2	51.8	55.6	59.1
82.5°	30.7	30.4	30.4	30.4	30.7	30.7	31.9	34.0	36.0	38.6	41.6
85°	17.9	17.3	18.1	18.4	17.9	18.7	19.3	20.5	21.4	22.8	24.3
87.5°	7.3	7.9	7.6	7.9	7.9	8.5	8.2	9.4	10.0	10.5	10.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





TEST NUMBER: P242821

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**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	689.6	689.6	689.6	689.6
2.5°	648.9	650.9	649.2	651.5
5°	605.6	602.9	604.7	603.5
7.5°	565.5	563.1	559.6	558.5
10°	528.3	525.1	524.8	522.7
12.5°	501.1	498.2	494.1	493.5
15°	475.6	473.3	471.2	473.0
17.5°	454.0	451.9	451.3	449.6
20°	433.8	432.3	432.9	429.1
22.5°	417.7	414.4	413.9	413.9
25°	400.7	399.2	397.8	399.2
27.5°	385.8	384.3	383.7	384.0
30°	372.3	369.4	369.7	369.4
32.5°	357.7	355.9	355.3	354.7
35°	343.3	343.3	341.9	341.9
37.5°	330.2	329.9	329.0	329.6
40°	314.9	314.6	313.8	312.0
42.5°	300.3	299.1	298.8	298.5
45°	284.8	284.8	284.2	283.9
47.5°	269.6	270.2	271.3	271.0
50°	256.1	256.4	257.3	257.6
52.5°	241.2	243.2	244.4	244.1
55°	227.4	229.5	231.5	231.8
57.5°	213.7	216.3	218.3	218.9
60°	199.6	203.4	206.1	207.2
62.5°	186.2	190.5	193.2	193.2
65°	171.2	175.6	178.0	179.7
67.5°	155.7	160.1	162.4	163.9
70°	138.4	142.8	146.3	147.5
72.5°	121.5	125.3	127.9	129.4
75°	101.3	106.5	109.2	110.6
77.5°	82.0	87.2	88.7	89.6
80°	62.6	65.6	67.6	67.9
82.5°	44.5	46.8	47.1	48.0
85°	26.3	27.5	27.8	27.5
87.5°	10.8	10.5	10.5	11.1
90°	0.0	0.0	0.0	0.0

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