

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: FAIL-SAFE

Report Number: 29679

Luminaire Tested: **FMV7LCY/UNV1 76**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 29679
Test Lab: LUMINAIRE TESTING LABORATORY, INC.
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMV7LCY/UNV1 76
Description: CAST GRAY ENAMEL ALUMINUM HEATSINK HOUSING, MOLDED SPECULAR PLASTIC REFLECTORS, CLEAR GLASS ENCLOSURE.
Light Source: SIX WHITE LEDS

Ballast/Driver: LED POWER SUPPLIES: TWO THOMAS RESEARCH PRODUCTS TRC-050S110SC

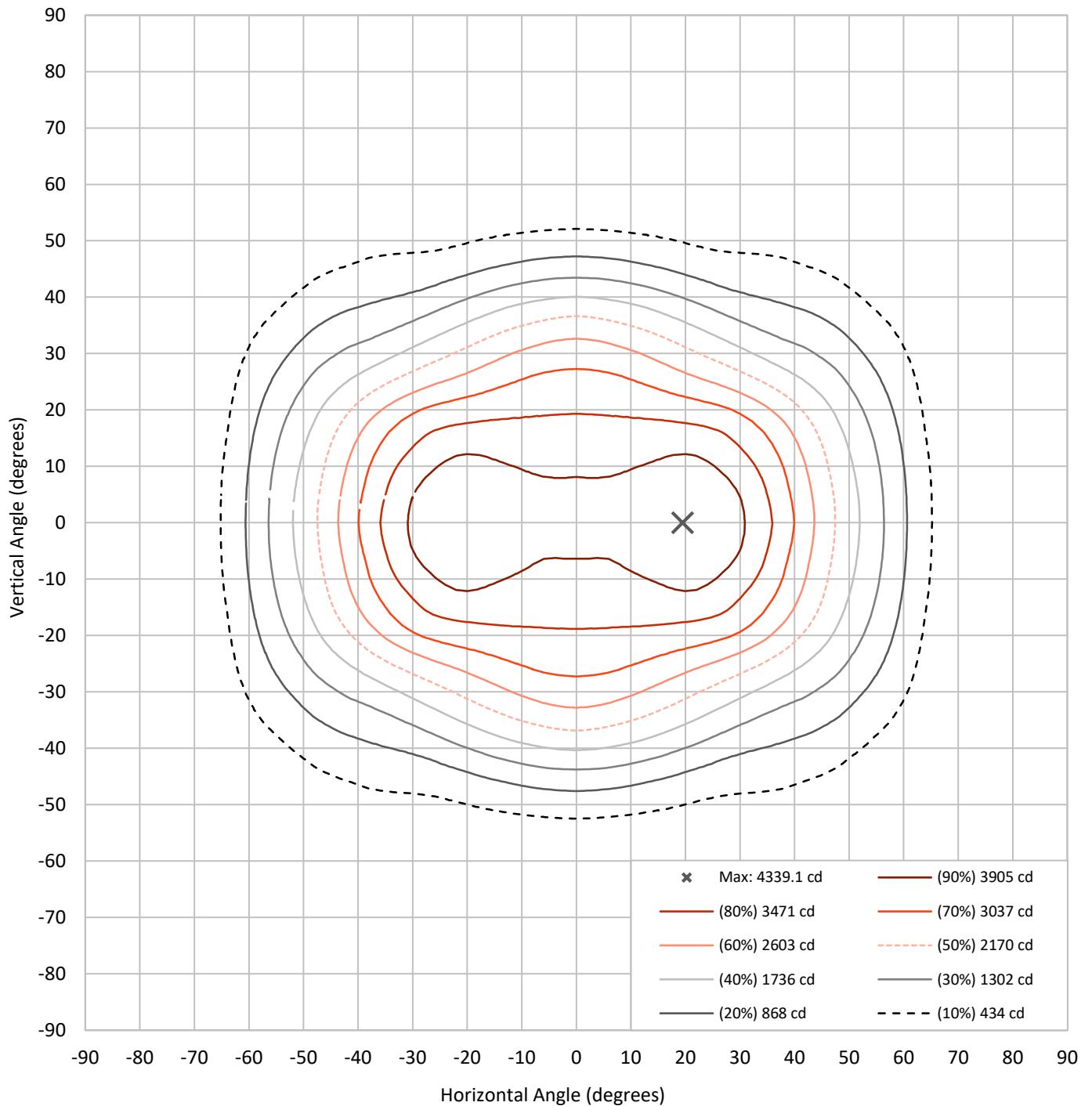
Summary

Lumens per Lamp:	N/A	NEMA Type:	6H x 5V
Luminaire Lumens:	6882.4 lumens	Max Intensity:	4339.1 candela
Efficiency:	N/A	Max Intensity Angle:	19.5°H x 0°V
Efficacy:	76.7 lumens/watt		
Luminous Opening:	Rectangular (W 1.29' x L: 0.83' x H: 0')		
Beam Angle (50%):	94.8°H x 62.8°V	Field Angle (10%):	129.7°H x 99.8°V
Beam Lumens:	4963.1 lumens	Field Lumens:	6673.1 lumens
Beam Efficiency:	72.1%	Field Efficiency:	97.0%
Input Watts (W):	89.7		
Input Voltage (V):	NR		
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		

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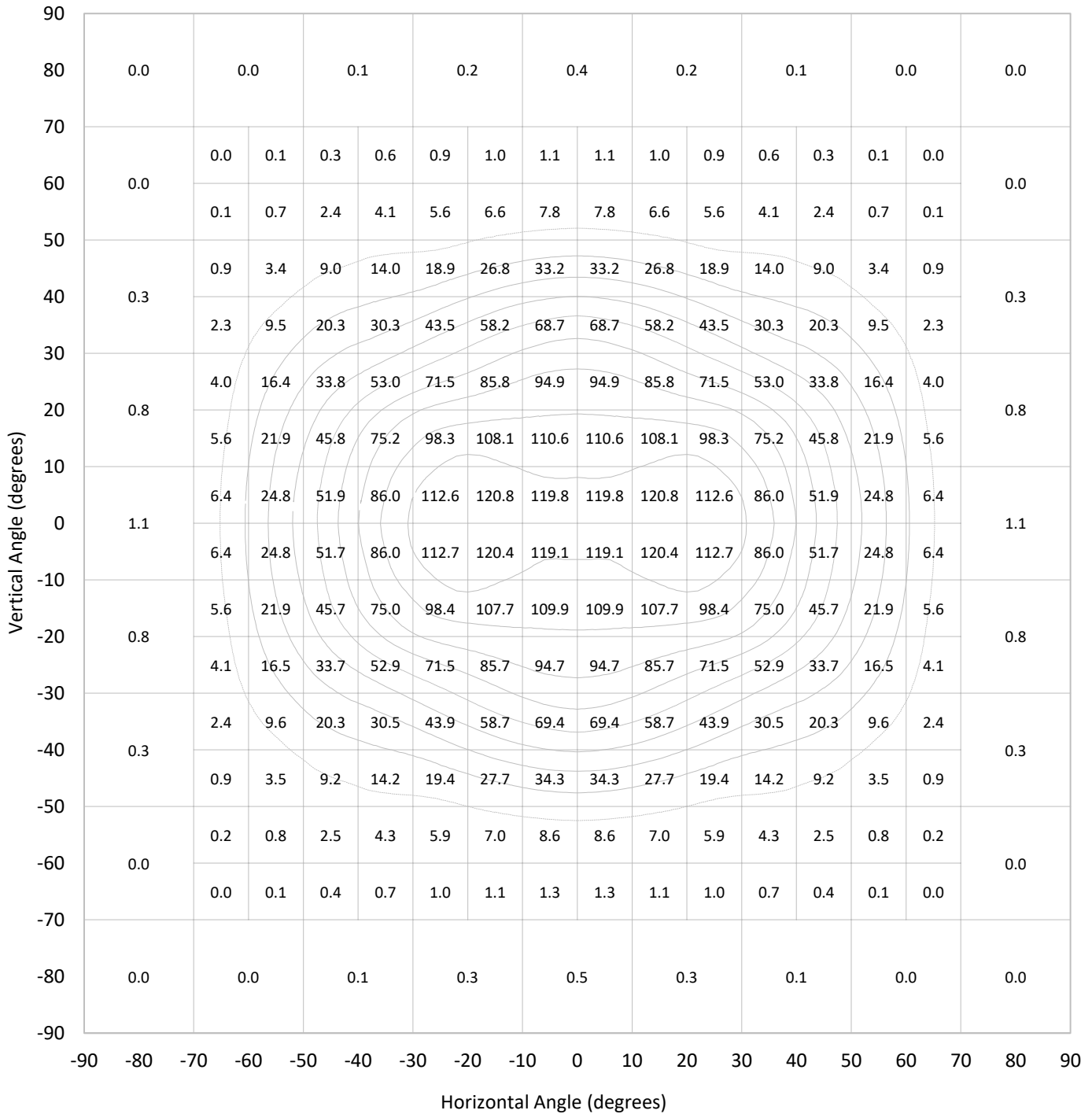
Iso-Candela Plot





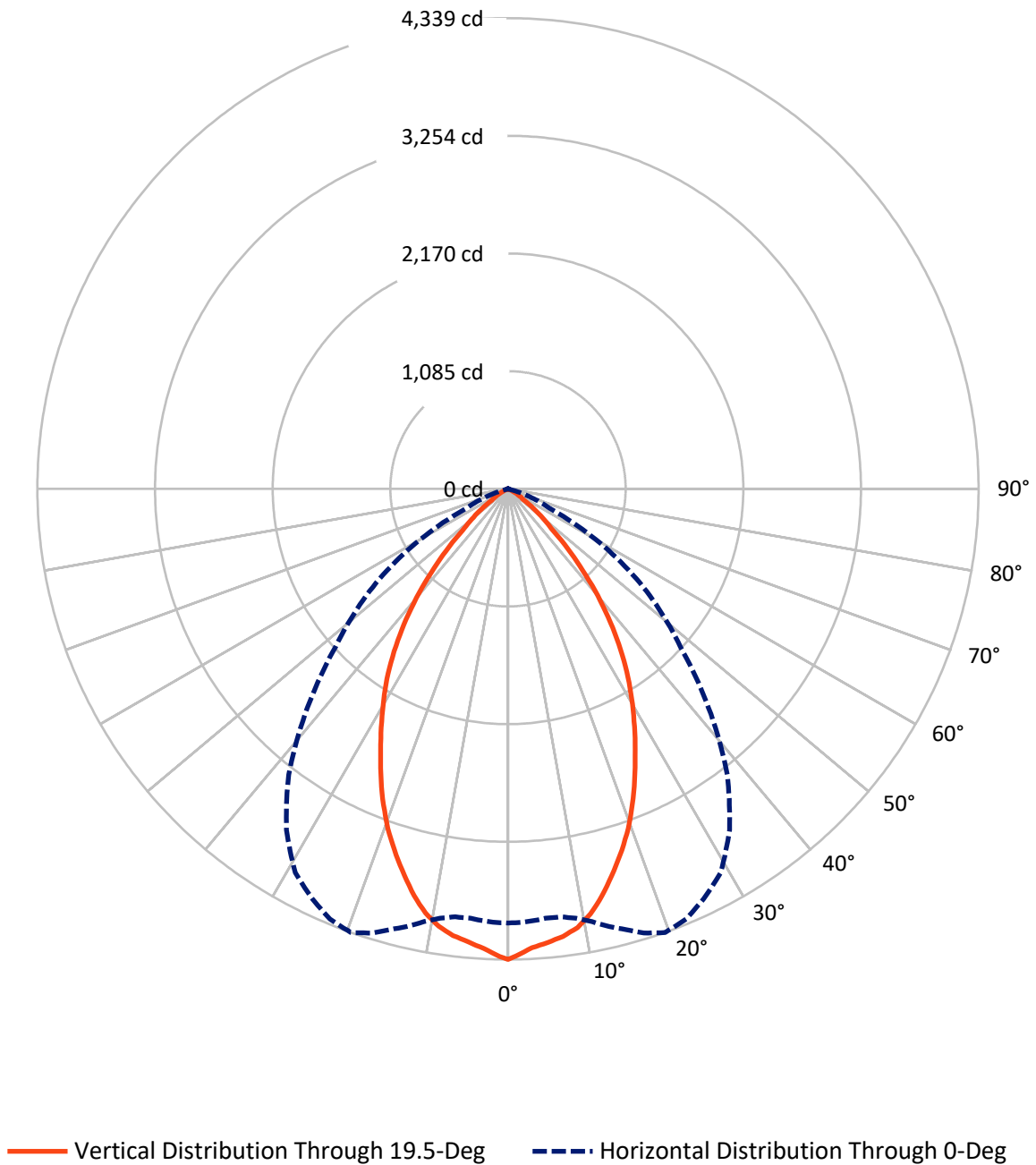
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Lumen Table



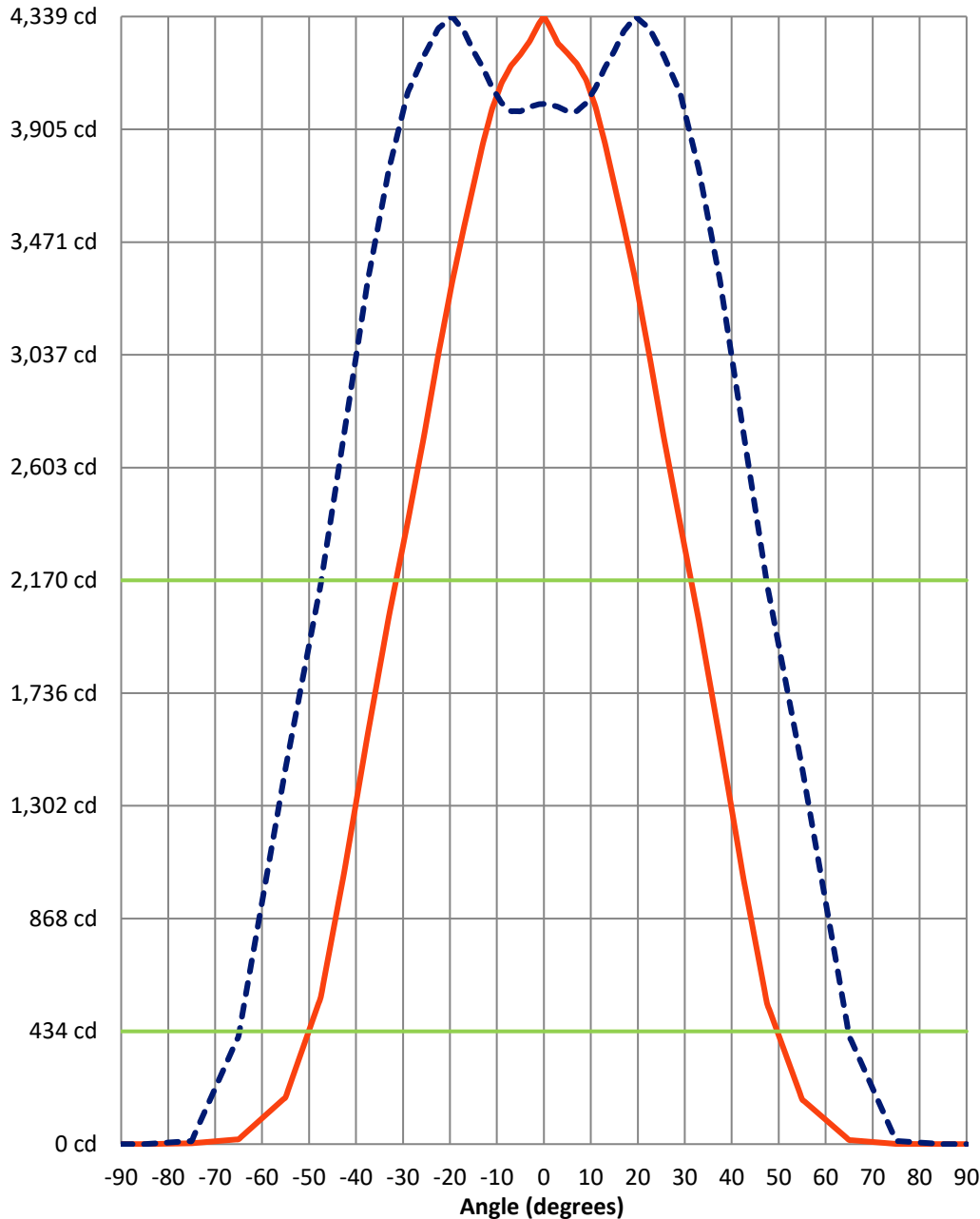
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Luminous Intensity Polar Plot



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Luminous Intensity Plot



Beam:
 H Angle: 94.8°
 V Angle: 62.8°
 Lumens: 4963.1
 Efficiency: 72.1%

Field:
 H Angle: 129.7°
 V Angle: 99.8°
 Lumens: 6673.1
 Efficiency: 97.0%

Spill:
 Lumens: 209.3
 Efficiency: 3.0%

— Vertical Distribution through 19.5-Deg
 - - - Horizontal Distribution through 0-Deg



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FIELD
 BEAM

CANDELA DISTRIBUTION:

	0°	1°	3°	5°	7°	9°	11°	13°	15°	17°	19.5°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	4.0	4.5	4.8	5.0	5.3	4.7	3.9	3.4	2.5	2.0	0.8
65°	16.7	16.6	16.7	17.2	17.5	17.8	18.0	17.8	17.4	16.6	15.7
55°	187.7	186.2	181.4	174.0	168.2	163.7	161.1	161.1	163.3	166.8	171.9
47.5°	826.6	821.7	814.2	799.0	778.6	750.5	712.1	671.9	633.6	593.8	542.3
42.5°	1412.2	1408.7	1403.0	1384.1	1353.4	1313.9	1271.6	1223.6	1168.2	1105.8	1021.6
37.5°	2077.1	2071.6	2046.6	2009.2	1967.9	1924.8	1869.4	1801.8	1727.3	1651.7	1554.4
33°	2580.3	2576.1	2557.5	2517.8	2464.1	2404.6	2341.5	2276.4	2203.1	2122.0	2013.6
29°	2918.7	2917.2	2905.5	2883.2	2844.4	2792.2	2728.3	2654.4	2573.7	2491.4	2388.9
25.5°	3159.8	3156.2	3147.0	3129.1	3101.2	3060.6	3010.4	2951.5	2885.7	2813.2	2722.7
22.5°	3324.5	3321.6	3314.8	3303.2	3283.8	3256.7	3221.6	3183.3	3142.8	3095.9	3031.4
19.5°	3465.5	3462.9	3458.9	3454.2	3444.0	3432.6	3418.8	3400.6	3381.3	3356.7	3323.5
17°	3571.3	3568.3	3567.4	3565.6	3564.9	3563.7	3564.8	3565.5	3563.4	3553.6	3533.0
15°	3653.7	3650.3	3653.6	3654.7	3656.5	3662.2	3672.1	3686.2	3698.0	3705.2	3693.0
13°	3728.2	3726.3	3727.2	3735.3	3742.3	3753.8	3769.9	3792.1	3819.1	3841.5	3851.9
11°	3803.9	3802.0	3804.6	3808.9	3820.6	3835.9	3859.1	3883.6	3914.5	3953.9	3991.4
9°	3881.5	3876.1	3877.7	3880.5	3889.1	3910.1	3937.2	3965.5	4001.2	4047.0	4095.0
7°	3936.1	3931.3	3929.2	3928.1	3942.0	3967.4	4004.7	4038.1	4074.3	4115.1	4157.5
5°	3969.6	3966.1	3959.3	3951.9	3967.0	4001.2	4047.1	4094.8	4137.1	4175.4	4198.4
3°	3999.1	3992.1	3982.2	3971.0	3974.3	4007.3	4065.2	4133.3	4182.4	4221.7	4236.2
1°	4007.5	4004.0	3993.0	3979.7	3977.7	4005.6	4069.2	4143.5	4205.3	4263.5	4308.0
0°	4002.7	4001.8	3991.6	3974.5	3975.1	4006.6	4065.2	4142.4	4206.5	4281.8	4339.1
-1°	3998.3	3994.5	3987.3	3969.9	3971.4	4002.3	4062.6	4137.4	4200.3	4273.4	4313.3
-3°	3980.6	3976.0	3969.9	3955.4	3957.9	3991.7	4048.8	4114.6	4171.0	4224.2	4244.6
-5°	3941.0	3944.3	3936.0	3928.8	3939.8	3970.1	4018.4	4068.3	4118.5	4162.1	4192.9
-7°	3890.8	3890.3	3890.5	3890.2	3902.6	3933.6	3971.1	4009.1	4051.0	4100.9	4149.5
-9°	3834.4	3832.0	3832.2	3835.5	3851.4	3878.7	3910.1	3943.4	3976.2	4024.3	4083.3
-11°	3769.1	3769.0	3771.0	3774.4	3783.9	3807.8	3837.4	3862.1	3893.3	3934.6	3985.1
-13°	3700.0	3699.2	3703.2	3704.3	3713.0	3729.4	3753.6	3775.4	3800.7	3827.2	3849.3
-15°	3625.5	3623.2	3627.6	3629.2	3633.2	3641.9	3660.4	3674.0	3686.3	3692.7	3689.4
-17°	3549.3	3546.5	3548.6	3548.2	3546.1	3547.3	3551.8	3553.1	3552.2	3545.1	3528.9
-19.5°	3444.4	3442.3	3441.1	3437.4	3427.0	3418.4	3406.5	3392.6	3372.6	3349.3	3319.3
-22.5°	3306.5	3303.6	3299.9	3288.2	3269.6	3245.5	3215.0	3178.6	3139.3	3093.8	3035.7
-25.5°	3151.4	3149.1	3139.4	3123.9	3094.6	3052.8	3003.1	2946.3	2886.3	2817.2	2727.1
-29°	2925.3	2924.2	2912.5	2888.7	2849.5	2794.5	2727.0	2653.7	2574.7	2493.7	2393.1
-33°	2599.3	2594.1	2575.6	2538.8	2484.5	2422.4	2358.8	2290.7	2216.8	2136.5	2030.7
-37.5°	2108.0	2104.8	2079.4	2041.1	1998.6	1950.4	1893.4	1825.6	1751.7	1673.8	1577.7
-42.5°	1451.4	1448.3	1442.3	1425.3	1391.8	1348.9	1301.0	1253.3	1197.1	1133.8	1047.7
-47.5°	865.0	862.9	852.7	836.1	814.1	785.4	746.4	703.0	662.7	621.1	566.0
-55°	215.0	214.1	211.2	202.3	193.1	183.3	178.1	175.6	175.1	176.9	180.4
-65°	20.7	20.8	21.0	21.2	21.4	21.6	21.9	21.7	20.6	19.6	18.6
-75°	5.7	6.1	6.6	6.8	7.1	6.7	6.1	5.4	4.8	4.0	3.2
-85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-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):

	22.5°	25.5°	29°	33°	37.5°	42.5°	47.5°	55°	65°	75°	85°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.0	1.1	0.0	0.3	0.7	0.3	0.0	0.0	0.1	0.0	0.0
65°	14.3	12.9	11.4	9.5	8.3	5.8	5.0	2.7	0.5	0.7	0.0
55°	177.1	176.4	169.9	150.9	107.9	95.6	75.4	26.6	1.8	2.1	0.0
47.5°	493.1	463.4	447.1	437.6	413.5	329.0	273.9	86.2	42.5	3.4	0.0
42.5°	928.2	836.1	746.2	695.2	662.1	578.1	470.6	244.1	77.1	4.2	0.0
37.5°	1434.4	1311.1	1172.6	1048.2	952.9	865.3	720.7	429.7	119.4	5.2	0.0
33°	1879.1	1748.3	1591.9	1425.3	1266.6	1155.5	974.2	610.8	162.9	6.0	0.0
29°	2267.1	2140.5	1985.4	1799.0	1597.6	1417.8	1205.2	775.8	205.0	7.0	0.0
25.5°	2617.8	2509.9	2360.3	2167.3	1928.7	1672.0	1405.9	916.3	243.2	7.8	0.0
22.5°	2952.5	2861.5	2718.7	2511.7	2231.7	1897.2	1568.7	1026.8	275.1	8.5	0.0
19.5°	3283.4	3221.6	3087.6	2852.1	2522.2	2109.5	1713.5	1126.2	306.4	9.1	0.0
17°	3502.5	3450.3	3320.7	3079.8	2726.5	2262.9	1816.7	1200.6	331.8	9.6	0.0
15°	3660.3	3589.3	3445.3	3212.2	2857.3	2368.4	1888.4	1252.3	350.8	10.1	0.0
13°	3816.2	3716.2	3550.7	3319.0	2960.9	2458.3	1950.3	1299.7	368.1	10.5	0.0
11°	3966.6	3844.2	3664.0	3419.9	3042.8	2531.9	2003.4	1339.0	383.2	10.9	0.0
9°	4076.0	3962.8	3783.0	3516.9	3114.7	2591.1	2049.0	1373.1	395.5	11.3	0.0
7°	4135.9	4055.9	3895.1	3600.6	3172.4	2639.1	2090.4	1400.9	405.2	11.6	0.0
5°	4177.5	4123.4	3976.5	3668.9	3225.6	2682.2	2127.0	1423.6	411.4	11.7	0.0
3°	4218.6	4163.9	4024.0	3715.1	3279.2	2717.5	2150.9	1437.4	415.3	12.0	0.0
1°	4270.3	4186.5	4043.0	3745.6	3316.6	2736.9	2157.6	1445.3	416.7	12.1	0.0
0°	4292.6	4189.1	4045.9	3750.4	3322.3	2737.0	2156.4	1446.6	416.8	12.1	0.0
-1°	4286.5	4187.0	4044.8	3752.6	3315.3	2731.4	2151.8	1445.6	416.3	12.1	0.0
-3°	4229.0	4163.1	4030.1	3728.8	3273.8	2709.0	2136.4	1439.1	413.7	12.1	0.0
-5°	4176.8	4120.9	3984.9	3677.7	3213.0	2670.8	2111.9	1424.7	409.6	12.2	0.0
-7°	4130.8	4055.8	3903.1	3608.3	3152.1	2623.1	2081.9	1403.9	402.8	12.1	0.0
-9°	4068.6	3968.0	3793.7	3524.6	3098.6	2576.8	2044.6	1375.3	394.0	11.6	0.0
-11°	3969.9	3856.6	3670.9	3422.9	3033.5	2523.0	2000.4	1341.6	382.6	11.4	0.0
-13°	3826.7	3729.7	3554.8	3308.9	2945.7	2455.8	1948.7	1302.5	368.9	11.1	0.0
-15°	3662.6	3596.2	3448.8	3200.5	2837.5	2368.9	1887.0	1257.7	353.0	10.8	0.0
-17°	3500.3	3450.6	3324.3	3072.6	2709.5	2262.0	1816.6	1206.9	334.7	10.3	0.0
-19.5°	3284.1	3219.9	3093.4	2857.7	2509.8	2102.3	1711.5	1134.3	309.8	9.5	0.0
-22.5°	2961.0	2863.7	2721.5	2513.2	2223.7	1886.5	1563.8	1037.5	277.8	8.9	0.0
-25.5°	2621.1	2504.2	2356.3	2165.4	1924.6	1660.3	1400.1	927.8	246.5	8.2	0.0
-29°	2268.6	2136.4	1982.8	1798.7	1598.9	1408.5	1200.8	785.8	210.4	7.3	0.0
-33°	1895.8	1760.9	1604.1	1430.9	1268.8	1145.4	974.3	617.6	168.4	6.2	0.0
-37.5°	1455.1	1328.0	1187.6	1059.6	960.1	864.6	725.7	435.7	124.2	5.2	0.0
-42.5°	950.5	855.8	760.2	703.3	665.4	585.5	476.9	250.1	80.8	4.2	0.0
-47.5°	511.9	476.9	455.8	445.2	421.0	342.4	282.3	91.8	44.7	3.4	0.0
-55°	185.1	185.4	180.0	162.2	117.7	106.4	80.8	29.6	2.4	2.1	0.0
-65°	16.9	15.3	13.8	11.7	10.5	7.6	6.3	3.1	0.9	0.7	0.0
-75°	2.6	2.3	1.0	1.6	1.4	0.5	0.0	0.0	0.2	0.0	0.0
-85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-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):

	90°
90°	0.0
85°	0.0
75°	0.0
65°	0.0
55°	0.0
47.5°	0.0
42.5°	0.0
37.5°	0.0
33°	0.0
29°	0.0
25.5°	0.0
22.5°	0.0
19.5°	0.0
17°	0.0
15°	0.0
13°	0.0
11°	0.0
9°	0.0
7°	0.0
5°	0.0
3°	0.0
1°	0.0
0°	0.0
-1°	0.0
-3°	0.0
-5°	0.0
-7°	0.0
-9°	0.0
-11°	0.0
-13°	0.0
-15°	0.0
-17°	0.0
-19.5°	0.0
-22.5°	0.0
-25.5°	0.0
-29°	0.0
-33°	0.0
-37.5°	0.0
-42.5°	0.0
-47.5°	0.0
-55°	0.0
-65°	0.0
-75°	0.0
-85°	0.0
-90°	0.0

(END OF REPORT)