

Scaled data based on original data using
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge
or Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: STREETWORKS

Report Number: ITL53963_400MP

Luminaire Tested: **GMX40PXX2SFHS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-46-04
Report Number: ITL53963_400MP
Test Lab: INDEPENDENT TESTING LABORATORIES, INC.
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: GMX40PXX2SFHS
Description: 400W MH TYPE II AREA
WITH HOUSE SIDE SHIELD
Light Source: 400 WATT PULSE-START CLEAR ED-28 HORIZONTAL BURN
Ballast/Driver: -

Summary

Lumens per Lamp: 40000 (1 lamp)
Luminaire Lumens: 23410.2 lumens
Efficiency: 58.5%
Efficacy: 51.8 lumens/watt
Luminous Opening: Circular (Dia: 1.74' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

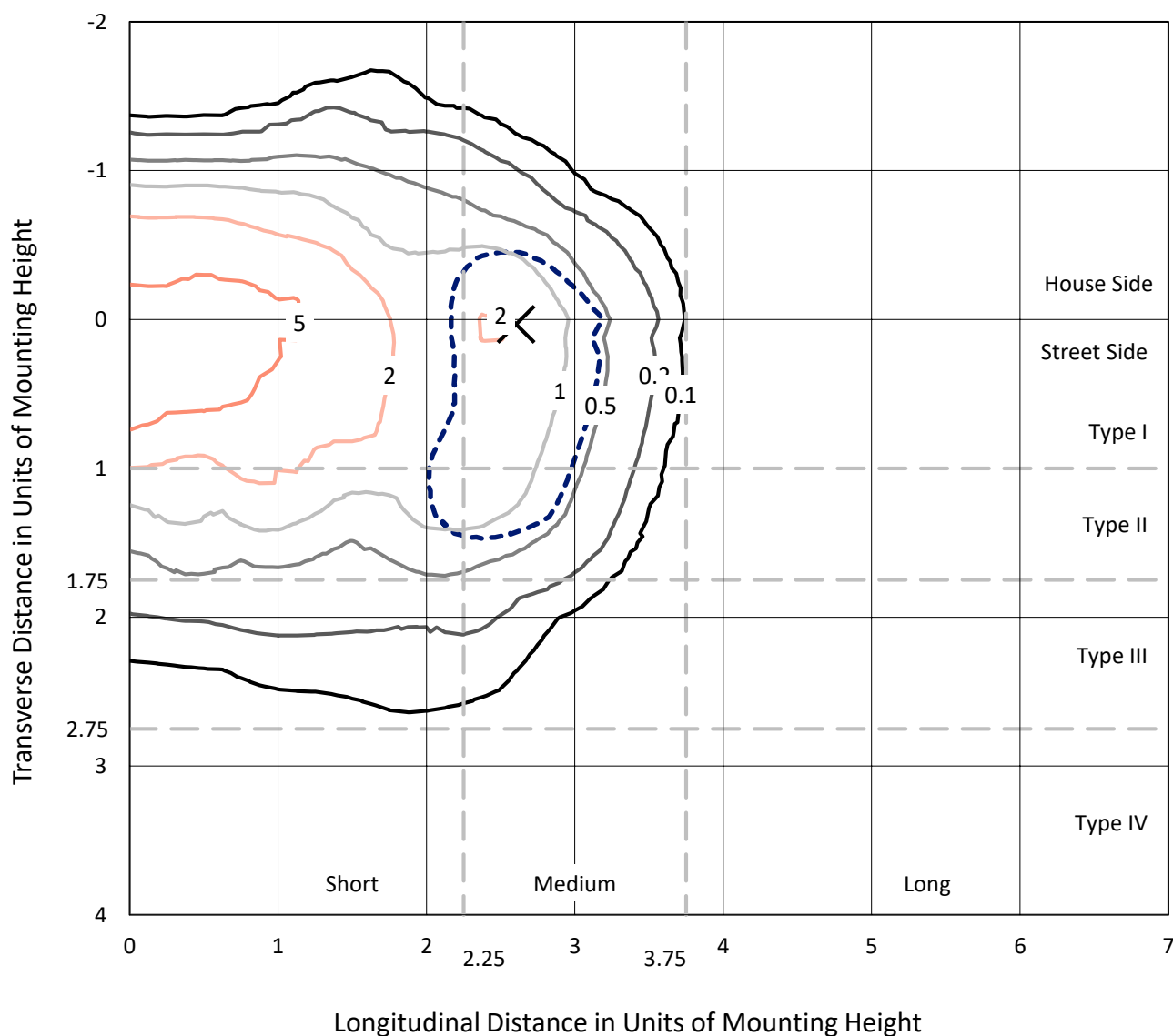
Input Watts (W): 452
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

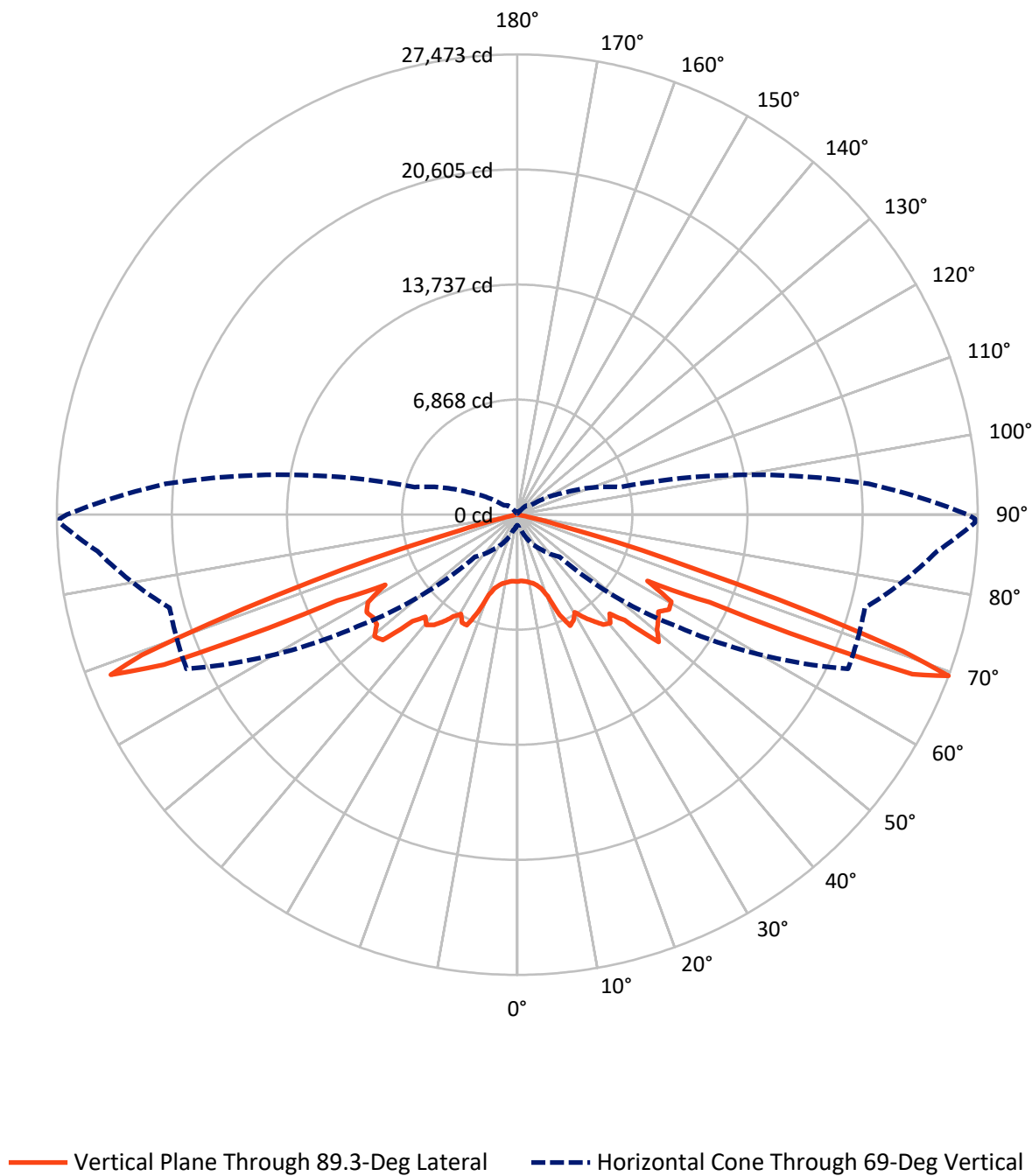
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.3 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



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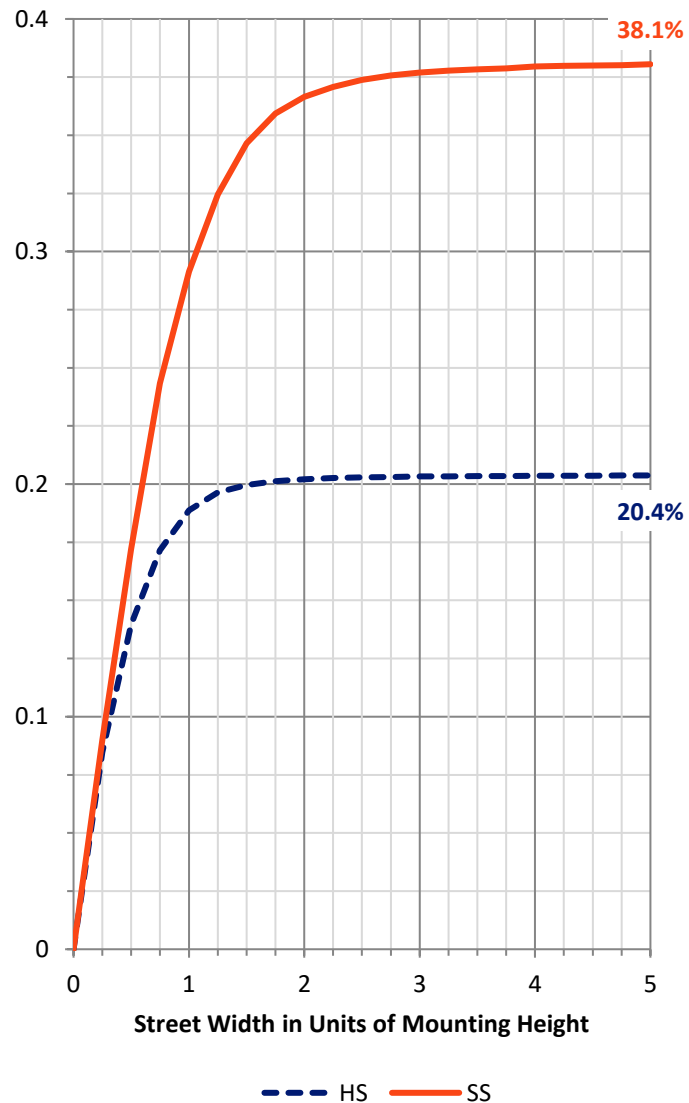
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8210.0	0.0	8210.0
	% Lamp	20.5	0.0	20.5
Street Side	Lumens	15200.2	0.0	15200.2
	% Lamp	38.0	0.0	38.0
Total	Lumens	23410.2	0.0	23410.2
	% Lamp	58.5	0.0	58.5

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	376.3	1.6	0.9
10°-20°	1123.3	4.8	2.8
20°-30°	2271.3	9.7	5.7
30°-40°	3396.6	14.5	8.5
40°-50°	4073.6	17.4	10.2
50°-60°	4635.2	19.8	11.6
60°-70°	5161.2	22.0	12.9
70°-80°	2302.6	9.8	5.8
80°-90°	70.2	0.3	0.2
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	23410.2	100.0	58.5
0°-180°	23410.2	100.0	58.5

Coefficient of Utilization



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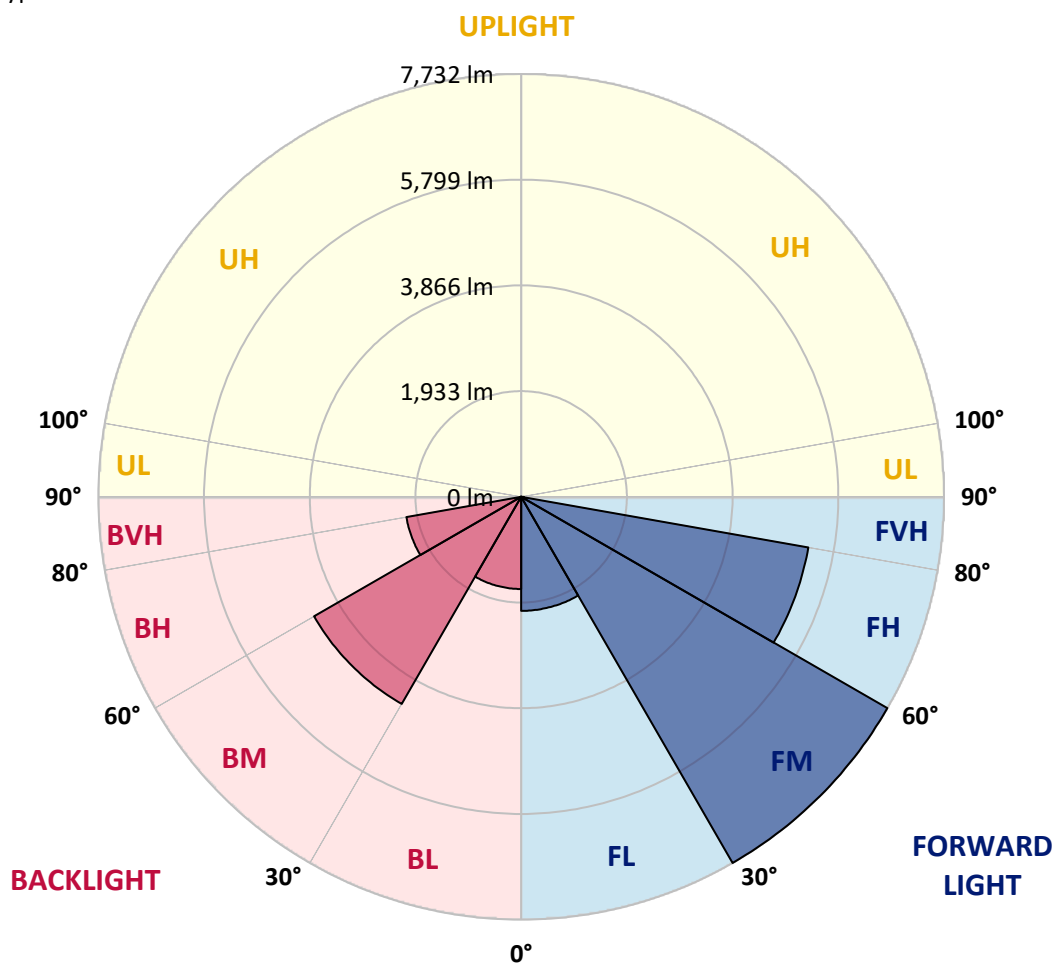
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2085.1	5.2			
FM	(30°-60°)	7732.1	19.3			
FH	(60°-80°)	5332.5	13.3			G3/7500
FVH	(80°-90°)	50.5	0.1			G1/100
BL	(0°-30°)	1685.8	4.2	B3/2500		
BM	(30°-60°)	4373.2	10.9	B3/5000		
BH	(60°-80°)	2131.3	5.3	B3/2500		G3/2500
BVH	(80°-90°)	19.8	0.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	
Trapped Light		16589.8	41.5			

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	89.3°
0°	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4
2.5°	4010.0	3997.8	4010.0	3985.6	3973.3	3997.8	3997.8	3985.6	3973.3	3973.3	3961.1
5°	4034.4	4046.7	3985.6	3985.6	3985.6	4022.2	4022.2	4010.0	4010.0	3997.8	3985.6
7.5°	4058.9	4022.2	3973.3	4010.0	4034.4	4046.7	4034.4	4022.2	4010.0	4034.4	4034.4
10°	4010.0	4010.0	3985.6	4022.2	4046.7	4058.9	4058.9	4071.1	4082.2	4106.7	4118.9
12.5°	3936.7	3948.9	3961.1	4034.4	4034.4	4058.9	4143.3	4167.8	4180.0	4192.2	4204.4
15°	3864.4	3876.7	3936.7	3997.8	4022.2	4106.7	4216.7	4337.8	4362.2	4374.4	4374.4
17.5°	3840.0	3840.0	3900.0	3973.3	4046.7	4192.2	4386.7	4520.0	4593.3	4617.8	4630.0
20°	3840.0	3815.6	3864.4	3985.6	4131.1	4337.8	4556.7	4738.9	4945.6	5091.1	5188.9
22.5°	4228.9	4046.7	3973.3	4046.7	4228.9	4520.0	4884.4	5358.9	5856.7	6257.8	6513.3
25°	5784.4	5395.6	4751.1	4350.0	4386.7	4872.2	5613.3	6452.2	7035.6	7266.7	7338.9
27.5°	6658.9	6476.7	6038.9	5480.0	4812.2	5406.7	6548.9	7266.7	7424.4	7314.4	7144.4
30°	6902.2	6841.1	6427.8	5844.4	5480.0	6087.8	7181.1	7338.9	7108.9	6914.4	6755.6
32.5°	6732.2	6792.2	6415.6	5297.8	6014.4	6902.2	7205.6	7096.7	7144.4	7242.2	7314.4
35°	6366.7	6427.8	5590.0	5310.0	6294.4	7412.2	6986.7	7156.7	7618.9	7837.8	7801.1
37.5°	5784.4	5723.3	4617.8	5224.4	6294.4	7291.1	7072.2	7521.1	8153.3	8323.3	8323.3
40°	5006.7	4933.3	4094.4	4702.2	5711.1	7108.9	7740.0	8032.2	8554.4	8638.9	8530.0
42.5°	4228.9	4204.4	3705.6	3864.4	5018.9	6998.9	8396.7	8165.6	8335.6	8286.7	8092.2
45°	3500.0	3475.6	3341.1	3390.0	4411.1	6937.8	8517.8	8298.9	8797.8	8833.3	8992.2
47.5°	2988.9	3013.3	2988.9	3232.2	4568.9	7363.3	8372.2	9246.7	10316.7	10705.6	11348.9
50°	2697.8	2818.9	3985.6	3158.9	5078.9	8190.0	8712.2	10267.8	10450.0	11203.3	10814.4
52.5°	2405.6	2540.0	4398.9	3050.0	5310.0	8468.9	9770.0	10790.0	10923.3	10413.3	10523.3
55°	2163.3	2321.1	3268.9	2964.4	6208.9	6306.7	8906.7	10146.7	10996.7	9551.1	10218.9
57.5°	1944.4	2114.4	3694.4	2831.1	6161.1	8128.9	6841.1	10376.7	11336.7	10036.7	10681.1
60°	1676.7	1846.7	2940.0	2697.8	4860.0	6501.1	6476.7	11750.0	11336.7	11287.8	10558.9
62.5°	1410.0	1518.9	1907.8	2552.2	3742.2	4288.9	6804.4	10814.4	9781.1	9696.7	8712.2
65°	1166.7	1215.6	1470.0	2333.3	3098.9	3852.2	7727.8	10838.9	10157.8	11227.8	12624.4
67.5°	826.7	886.7	1142.2	1981.1	2685.6	3645.6	11385.6	18238.9	16744.4	21131.1	25432.2
69°	632.2	716.7	996.7	1774.4	2575.6	3547.8	11628.9	21774.4	21471.1	25140.0	27473.3
70°	534.4	644.4	935.6	1580.0	2552.2	3463.3	10364.4	22005.6	22491.1	24630.0	24411.1
72.5°	267.8	364.4	886.7	716.7	2491.1	3961.1	5213.3	12503.3	12746.7	13548.9	11033.3
75°	96.7	170.0	656.7	280.0	1640.0	2587.8	1774.4	3365.6	3402.2	3500.0	2867.8
77.5°	48.9	85.6	206.7	133.3	1021.1	935.6	607.8	741.1	790.0	814.4	716.7
80°	24.4	24.4	327.8	96.7	826.7	1287.8	231.1	243.3	255.6	267.8	243.3
82.5°	0.0	0.0	231.1	61.1	170.0	291.1	376.7	96.7	85.6	121.1	96.7
85°	0.0	0.0	0.0	0.0	0.0	12.2	12.2	24.4	36.7	36.7	12.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	12.2	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°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4	3994.4
2.5°	3985.6	3961.1	3961.1	3948.9	3948.9	3948.9	3912.2	3924.4	3864.4	3900.0	3936.7
5°	3985.6	3985.6	3973.3	3948.9	3924.4	3900.0	3864.4	3827.8	3803.3	3803.3	3840.0
7.5°	4034.4	4034.4	3997.8	3961.1	3900.0	3840.0	3791.1	3730.0	3657.8	3682.2	3742.2
10°	4118.9	4118.9	4094.4	3997.8	3888.9	3778.9	3657.8	3596.7	3547.8	3572.2	3596.7
12.5°	4192.2	4192.2	4131.1	4010.0	3864.4	3717.8	3572.2	3463.3	3414.4	3402.2	3426.7
15°	4362.2	4337.8	4216.7	4046.7	3840.0	3657.8	3487.8	3365.6	3281.1	3244.4	3281.1
17.5°	4593.3	4520.0	4362.2	4118.9	3876.7	3621.1	3402.2	3244.4	3134.4	3098.9	3158.9
20°	5078.9	5030.0	4738.9	4337.8	3924.4	3572.2	3317.8	3123.3	3001.1	2964.4	2988.9
22.5°	6282.2	6184.4	5637.8	4836.7	4034.4	3547.8	3232.2	3025.6	2904.4	2855.6	2892.2
25°	7266.7	7156.7	6755.6	5577.8	4228.9	3511.1	3171.1	2964.4	2818.9	2757.8	2794.4
27.5°	7254.4	7168.9	7011.1	5881.1	4313.3	3511.1	3158.9	2892.2	2734.4	2648.9	2673.3
30°	6828.9	6755.6	6573.3	5613.3	4131.1	3523.3	3134.4	2818.9	2600.0	2503.3	2552.2
32.5°	7181.1	7023.3	6537.8	5261.1	3961.1	3523.3	3086.7	2722.2	2454.4	2345.6	2381.1
35°	7752.2	7557.8	6890.0	5213.3	3948.9	3511.1	3037.8	2600.0	2272.2	2151.1	2211.1
37.5°	8251.1	8116.7	7266.7	5213.3	3961.1	3500.0	2940.0	2417.8	2102.2	1956.7	2016.7
40°	8554.4	8421.1	7473.3	5054.4	3936.7	3414.4	2734.4	2211.1	1834.4	1676.7	1750.0
42.5°	8190.0	8214.4	7485.6	4908.9	3973.3	3293.3	2540.0	1968.9	1580.0	1422.2	1457.8
45°	8882.2	9162.2	7788.9	4812.2	3961.1	3074.4	2284.4	1688.9	1324.4	1154.4	1191.1
47.5°	10935.6	11178.9	9064.4	4945.6	3827.8	2843.3	1992.2	1397.8	1021.1	874.4	898.9
50°	11166.7	11397.8	8700.0	5213.3	3621.1	2552.2	1676.7	1068.9	753.3	607.8	656.7
52.5°	10620.0	10705.6	8578.9	5152.2	3451.1	2284.4	1300.0	741.1	485.6	376.7	413.3
55°	10511.1	10875.6	8128.9	4860.0	3511.1	2126.7	972.2	450.0	291.1	218.9	218.9
57.5°	10777.8	10328.9	6513.3	4471.1	3341.1	1992.2	716.7	315.6	231.1	182.2	170.0
60°	10511.1	9381.1	5310.0	4204.4	3171.1	1470.0	485.6	280.0	182.2	157.8	170.0
62.5°	8955.6	8638.9	5868.9	4458.9	2600.0	1592.2	437.8	243.3	157.8	121.1	121.1
65°	11871.1	12053.3	6792.2	4094.4	1762.2	1056.7	364.4	206.7	133.3	96.7	96.7
67.5°	23305.6	20425.6	6914.4	3645.6	1457.8	1093.3	291.1	170.0	108.9	85.6	96.7
69°	26877.8	21057.8	6343.3	3086.7	972.2	741.1	243.3	157.8	96.7	73.3	73.3
70°	24885.6	18128.9	5480.0	2247.8	790.0	546.7	243.3	157.8	121.1	96.7	96.7
72.5°	13451.1	8943.3	2673.3	1117.8	462.2	291.1	145.6	108.9	73.3	61.1	48.9
75°	3596.7	2952.2	1178.9	716.7	291.1	182.2	96.7	61.1	48.9	36.7	48.9
77.5°	874.4	765.6	425.6	413.3	182.2	121.1	48.9	36.7	24.4	12.2	24.4
80°	303.3	340.0	182.2	243.3	96.7	108.9	48.9	24.4	24.4	24.4	24.4
82.5°	133.3	133.3	85.6	108.9	48.9	73.3	24.4	24.4	24.4	12.2	24.4
85°	48.9	36.7	24.4	48.9	24.4	24.4	12.2	0.0	0.0	0.0	0.0
87.5°	0.0	24.4	12.2	12.2	12.2	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

(END OF REPORT)