

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: ITL52665\_400MP

Luminaire Tested: **GMX40PXX3SF**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-46-04  
Report Number: ITL52665\_400MP  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GMX40PXX3SF  
Description: 400W MH TYPE III AREA  
Light Source: 400 WATT PULSE-START CLEAR ED-28 HORIZONTAL BURN  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 40000 (1 lamp)  
Luminaire Lumens: 27871.4 lumens  
Efficiency: 69.7%  
Efficacy: 61.7 lumens/watt  
Luminous Opening: Rectangular (W 1.03' x L: 1.01' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B4 - U0 - G4

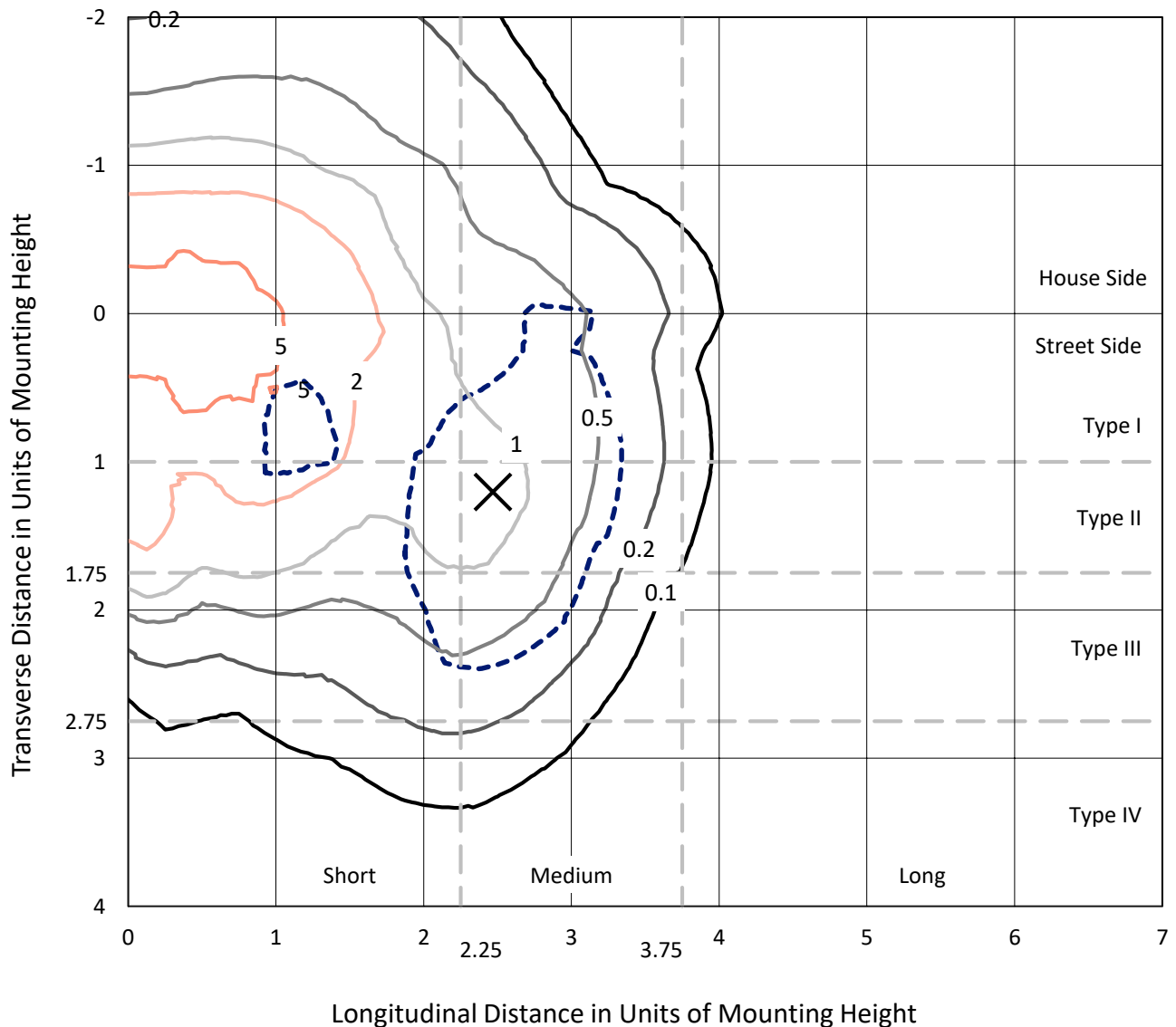
Input Watts (W): 452  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

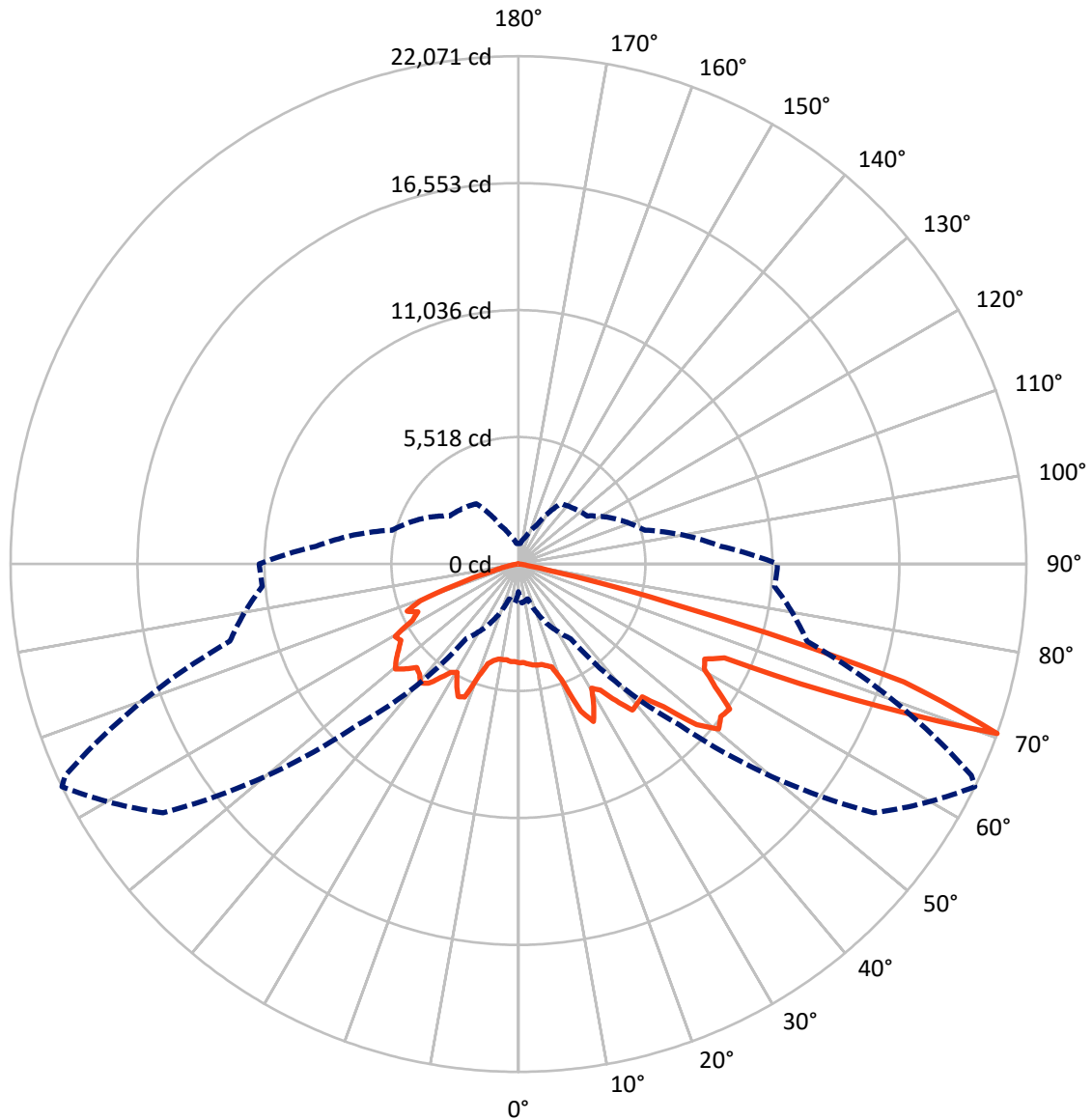
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.8 fc  
 Type III - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical



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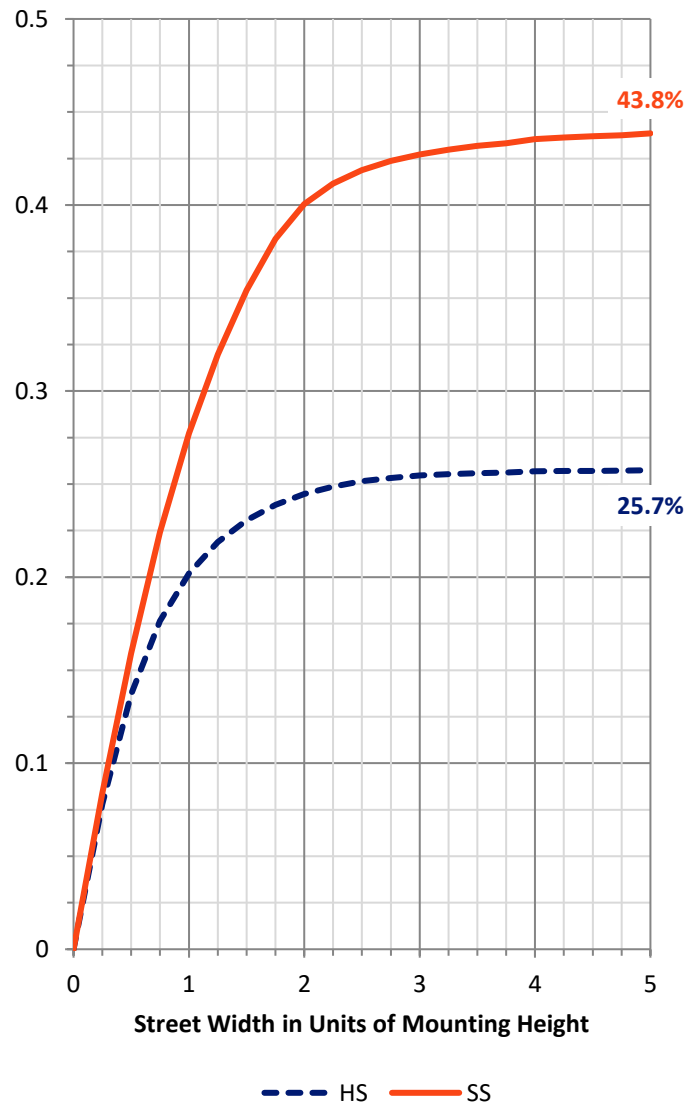
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10338.4	0.0	10338.4
	% Lamp	25.8	0.0	25.8
<b>Street Side</b>	Lumens	17533.1	0.0	17533.1
	% Lamp	43.8	0.0	43.8
<b>Total</b>	Lumens	27871.4	0.0	27871.4
	% Lamp	69.7	0.0	69.7

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	405.8	1.5	1.0
10°-20°	1226.6	4.4	3.1
20°-30°	2405.6	8.6	6.0
30°-40°	3468.3	12.4	8.7
40°-50°	4680.4	16.8	11.7
50°-60°	6049.0	21.7	15.1
60°-70°	5715.6	20.5	14.3
70°-80°	3774.6	13.5	9.4
80°-90°	145.7	0.5	0.4
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°	27871.4	100.0	69.7
0°-180°	27871.4	100.0	69.7

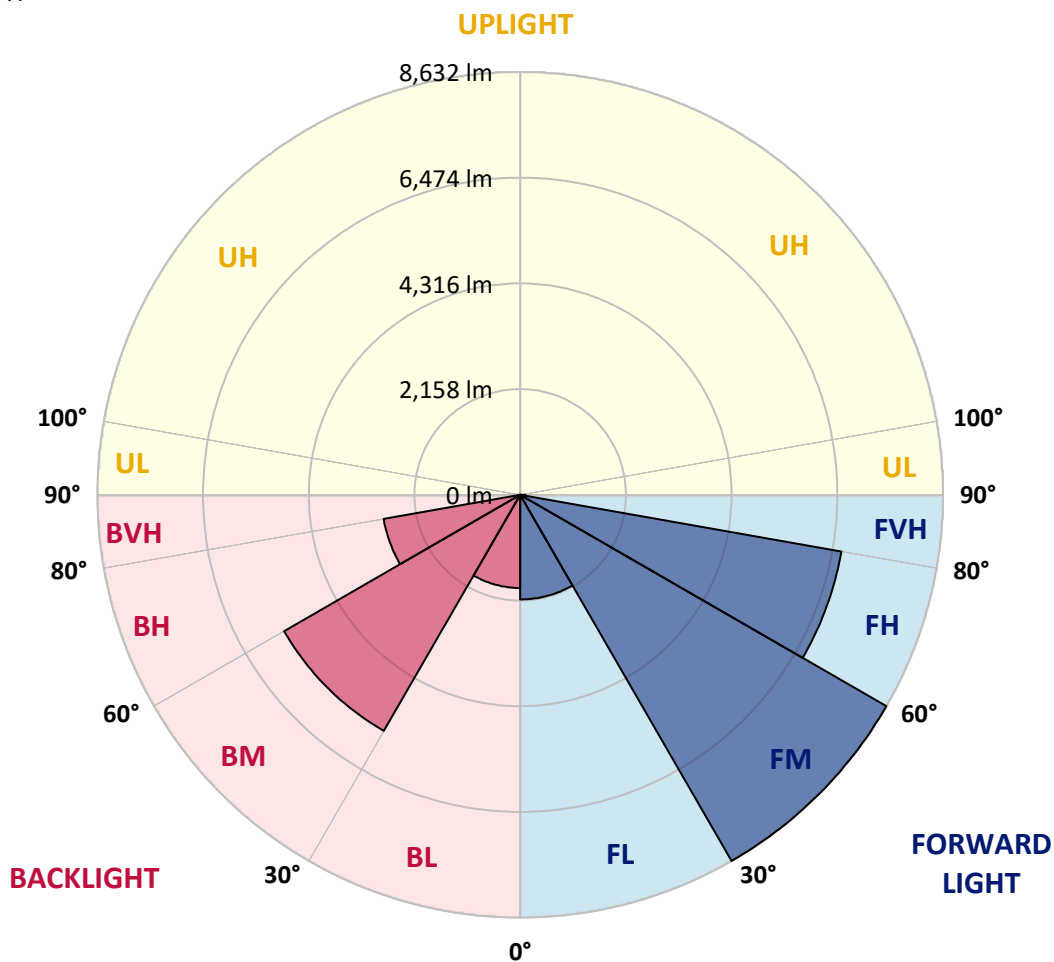


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2135.4	5.3			
FM	(30°-60°)	8632.2	21.6			
FH	(60°-80°)	6659.4	16.6			G3/7500
FVH	(80°-90°)	106.1	0.3			G2/225
BL	(0°-30°)	1902.5	4.8	B3/2500		
BM	(30°-60°)	5565.5	13.9	B4/8500		
BH	(60°-80°)	2830.8	7.1	B4/5000		G4/5000
BVH	(80°-90°)	39.6	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	
Trapped Light		12128.6	30.3			

**BUG Rating: B4-U0-G4**  
 Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
0°	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0
2.5°	4368.9	4357.8	4368.9	4345.6	4323.3	4323.3	4323.3	4288.9	4312.2	4312.2	4288.9
5°	4345.6	4357.8	4357.8	4312.2	4312.2	4357.8	4380.0	4357.8	4391.1	4380.0	4334.4
7.5°	4255.6	4334.4	4255.6	4255.6	4300.0	4380.0	4391.1	4425.6	4425.6	4425.6	4368.9
10°	4232.2	4197.8	4210.0	4232.2	4255.6	4312.2	4403.3	4471.1	4505.6	4516.7	4482.2
12.5°	4095.6	4095.6	4118.9	4164.4	4186.7	4255.6	4391.1	4482.2	4505.6	4551.1	4551.1
15°	4027.8	4038.9	4118.9	4175.6	4175.6	4277.8	4425.6	4584.4	4584.4	4790.0	4766.7
17.5°	4073.3	4073.3	4141.1	4130.0	4197.8	4323.3	4482.2	4698.9	4744.4	4972.2	5074.4
20°	4118.9	4175.6	4186.7	4164.4	4243.3	4391.1	4710.0	5370.0	5324.4	6052.2	6427.8
22.5°	4095.6	4130.0	4197.8	4186.7	4323.3	4710.0	5688.9	6940.0	6905.6	7543.3	7588.9
25°	3867.8	3971.1	4084.4	4197.8	4562.2	5722.2	7122.2	7576.7	7588.9	7497.8	7111.1
27.5°	3776.7	3845.6	3947.8	4186.7	5233.3	7133.3	7622.2	6985.6	7076.7	6621.1	6382.2
30°	3708.9	3800.0	3880.0	4152.2	5950.0	7782.2	7190.0	6257.8	6314.4	6416.7	6394.4
32.5°	3732.2	3765.6	3867.8	4288.9	6655.6	7804.4	6451.1	6530.0	6496.7	7202.2	7600.0
35°	3617.8	3674.4	3822.2	4664.4	7213.3	6985.6	6655.6	7292.2	7281.1	7952.2	8260.0
37.5°	3413.3	3537.8	3788.9	5187.8	7508.9	6257.8	7326.7	8054.4	8066.7	8373.3	8418.9
40°	3435.6	3492.2	3686.7	5700.0	6985.6	6496.7	8021.1	7964.4	8043.3	7986.7	8054.4
42.5°	3526.7	3470.0	3628.9	5780.0	6154.4	7111.1	8191.1	7895.6	7884.4	8054.4	8305.6
45°	3641.1	3617.8	3641.1	5313.3	5904.4	8123.3	8396.7	8851.1	8681.1	9261.1	9408.9
47.5°	4755.6	4368.9	4118.9	4790.0	6132.2	9204.4	9954.4	10421.1	10238.9	10034.4	10012.2
50°	6097.8	5506.7	4664.4	4505.6	6451.1	9215.6	11491.1	11274.4	11024.4	9636.7	9830.0
52.5°	7213.3	6894.4	5222.2	4482.2	7554.4	10490.0	12981.1	11013.3	10807.8	10387.8	10318.9
55°	7713.3	8260.0	5871.1	5517.8	8533.3	12355.6	13515.6	11137.8	11217.8	9250.0	8783.3
57.5°	7622.2	8373.3	6154.4	5676.7	7793.3	9921.1	11877.8	10091.1	9818.9	8100.0	10284.4
60°	7350.0	8623.3	5665.6	6826.7	8590.0	8533.3	10796.7	9283.3	9033.3	7725.6	10364.4
62.5°	5028.9	6792.2	4073.3	7156.7	8464.4	7395.6	8794.4	9090.0	8885.6	6723.3	8931.1
65°	2206.7	3298.9	2627.8	5404.4	6860.0	7702.2	8566.7	9841.1	9226.7	9328.9	8816.7
67.5°	1570.0	2104.4	2013.3	3732.2	4721.1	8681.1	11684.4	15643.3	14346.7	11422.2	8157.8
70°	1205.6	1695.6	1570.0	2787.8	3958.9	9864.4	18852.2	22071.1	21718.9	12981.1	11172.2
72.5°	955.6	1547.8	1558.9	2718.9	5358.9	12811.1	19158.9	17521.1	17975.6	14392.2	10375.6
75°	705.6	1411.1	1285.6	2332.2	5517.8	7680.0	8646.7	7053.3	8203.3	7656.7	4482.2
77.5°	477.8	1092.2	1001.1	1650.0	3572.2	3311.1	2025.6	1411.1	1922.2	1604.4	1217.8
80°	295.6	512.2	545.6	785.6	1854.4	1593.3	796.7	375.6	466.7	386.7	397.8
82.5°	158.9	193.3	216.7	364.4	898.9	397.8	375.6	171.1	216.7	182.2	204.4
85°	0.0	0.0	11.1	34.4	56.7	56.7	56.7	34.4	56.7	56.7	56.7
87.5°	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°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0
2.5°	4288.9	4277.8	4266.7	4243.3	4232.2	4221.1	4255.6	4197.8	4186.7	4197.8	4210.0
5°	4323.3	4312.2	4277.8	4255.6	4221.1	4186.7	4152.2	4106.7	4095.6	4095.6	4118.9
7.5°	4345.6	4288.9	4243.3	4197.8	4141.1	4095.6	4061.1	4038.9	4015.6	4073.3	4232.2
10°	4448.9	4403.3	4334.4	4221.1	4095.6	4015.6	3993.3	3971.1	3936.7	3958.9	3913.3
12.5°	4540.0	4494.4	4391.1	4232.2	4106.7	3982.2	3925.6	3925.6	3902.2	3834.4	3822.2
15°	4733.3	4698.9	4516.7	4357.8	4141.1	4015.6	3913.3	3811.1	3776.7	3754.4	3754.4
17.5°	5085.6	5040.0	4868.9	4562.2	4288.9	4038.9	3913.3	3732.2	3674.4	3617.8	3641.1
20°	6507.8	6394.4	5984.4	5222.2	4584.4	4095.6	3800.0	3652.2	3550.0	3492.2	3526.7
22.5°	7531.1	7383.3	6951.1	6336.7	5313.3	4334.4	3800.0	3583.3	3435.6	3390.0	3390.0
25°	6985.6	6894.4	6701.1	6382.2	5847.8	4846.7	3856.7	3492.2	3333.3	3253.3	3253.3
27.5°	6245.6	6064.4	5904.4	5915.6	5700.0	5131.1	4015.6	3424.4	3207.8	3105.6	3117.8
30°	6303.3	6143.3	5836.7	5437.8	5211.1	5051.1	4050.0	3344.4	3105.6	2992.2	3003.3
32.5°	7383.3	7133.3	6473.3	5620.0	4960.0	4778.9	3891.1	3287.8	3014.4	2890.0	2890.0
35°	8145.6	7930.0	7202.2	6097.8	5096.7	4334.4	3674.4	3231.1	2935.6	2775.6	2798.9
37.5°	8373.3	8180.0	7680.0	6633.3	5233.3	4288.9	3617.8	3174.4	2855.6	2684.4	2684.4
40°	8010.0	7827.8	7520.0	6814.4	5586.7	4312.2	3572.2	3105.6	2764.4	2582.2	2594.4
42.5°	8145.6	7861.1	7202.2	6518.9	5552.2	4334.4	3481.1	3014.4	2651.1	2468.9	2480.0
45°	9272.2	8931.1	7736.7	6405.6	5450.0	4448.9	3424.4	2935.6	2548.9	2332.2	2343.3
47.5°	9966.7	9682.2	8862.2	6826.7	5324.4	4414.4	3367.8	2878.9	2457.8	2206.7	2206.7
50°	9715.6	9408.9	8760.0	7202.2	5517.8	4300.0	3298.9	2821.1	2377.8	2104.4	2071.1
52.5°	10182.2	9750.0	8032.2	6883.3	5450.0	4141.1	3276.7	2787.8	2264.4	1980.0	1956.7
55°	8907.8	8760.0	7884.4	6564.4	4755.6	4038.9	3265.6	2764.4	2173.3	1865.6	1820.0
57.5°	10000.0	9283.3	8168.9	6268.9	4516.7	3880.0	3265.6	2753.3	2071.1	1741.1	1706.7
60°	9124.4	8737.8	6462.2	6416.7	4414.4	3902.2	3298.9	2627.8	1956.7	1650.0	1593.3
62.5°	7770.0	6530.0	5392.2	5324.4	4210.0	3788.9	3207.8	2445.6	1808.9	1490.0	1433.3
65°	7964.4	6348.9	5381.1	4926.7	4027.8	3776.7	3515.6	2286.7	1650.0	1308.9	1274.4
67.5°	8088.9	6553.3	5461.1	5381.1	4038.9	3902.2	3311.1	2116.7	1456.7	1103.3	1092.2
70°	11263.3	8828.9	5676.7	4642.2	3641.1	3413.3	3196.7	1843.3	1228.9	898.9	887.8
72.5°	10751.1	8851.1	3140.0	2605.6	2412.2	2775.6	2377.8	1411.1	933.3	705.6	705.6
75°	6303.3	5267.8	1911.1	1217.8	1046.7	1251.1	966.7	625.6	512.2	477.8	501.1
77.5°	1786.7	2002.2	933.3	751.1	523.3	534.4	375.6	250.0	227.8	238.9	295.6
80°	716.7	614.4	375.6	352.2	295.6	250.0	204.4	125.6	113.3	102.2	113.3
82.5°	204.4	227.8	182.2	216.7	147.8	102.2	91.1	56.7	56.7	56.7	67.8
85°	56.7	67.8	56.7	45.6	56.7	22.2	11.1	0.0	0.0	0.0	0.0
87.5°	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

(END OF REPORT)