

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: McGRAW-EDISON

Report Number: P591316

Luminaire Tested: **CTN-CA10-630-730-U-T2-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591316  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA10-630-730-U-T2-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (10) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 65831 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B5 - U0 - G5

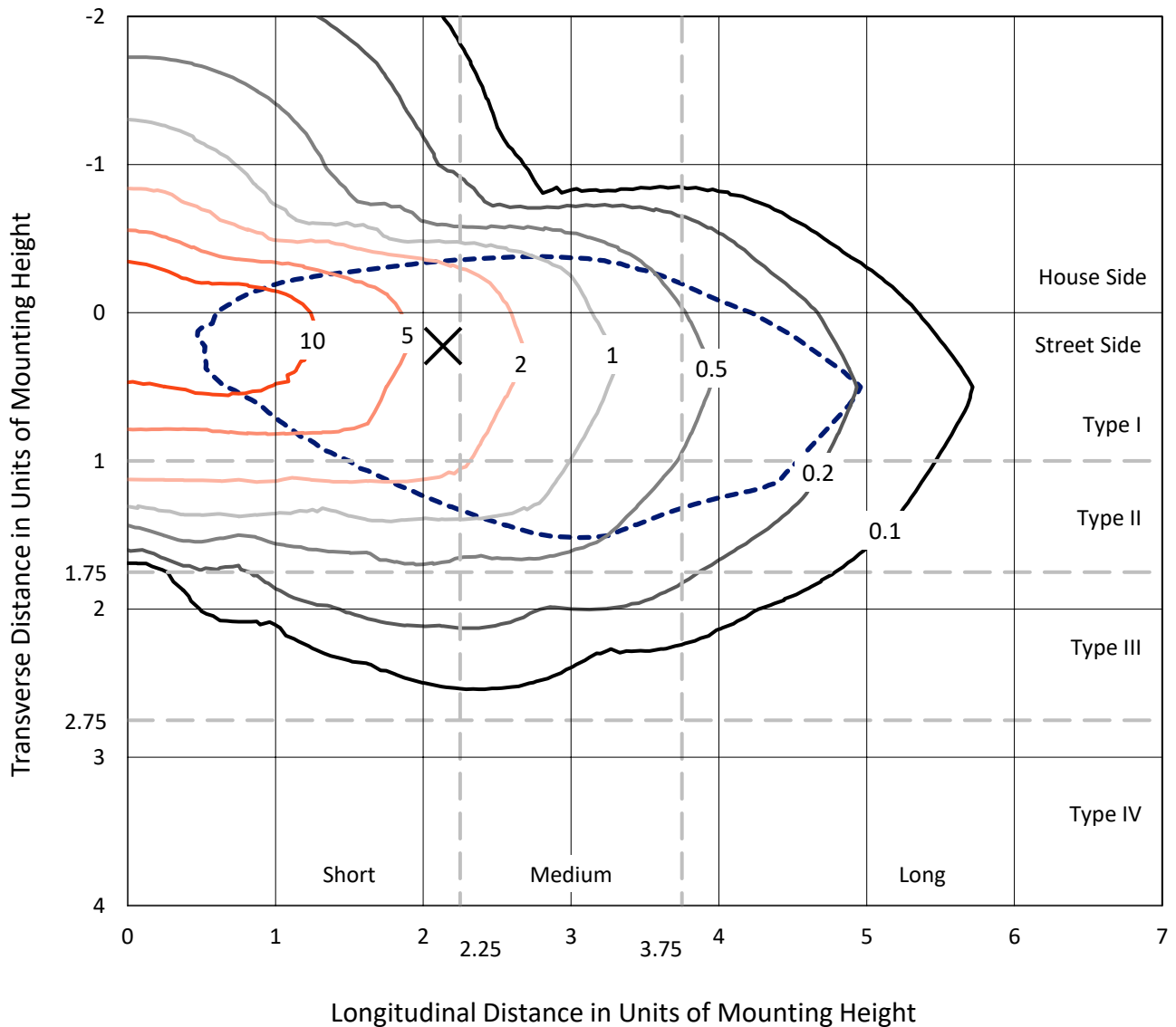
Input Watts (W): 631.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

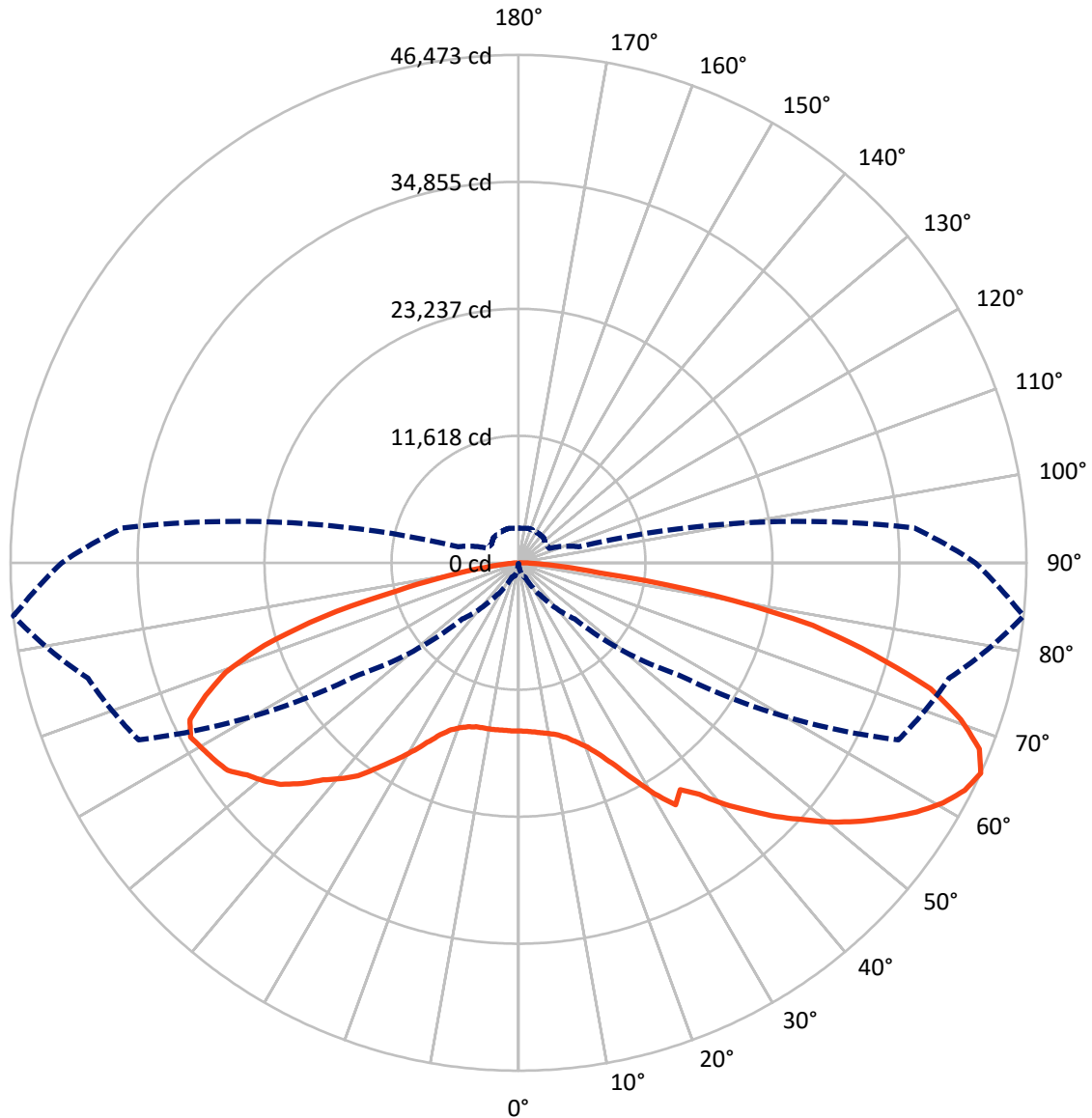
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 19.8 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 84-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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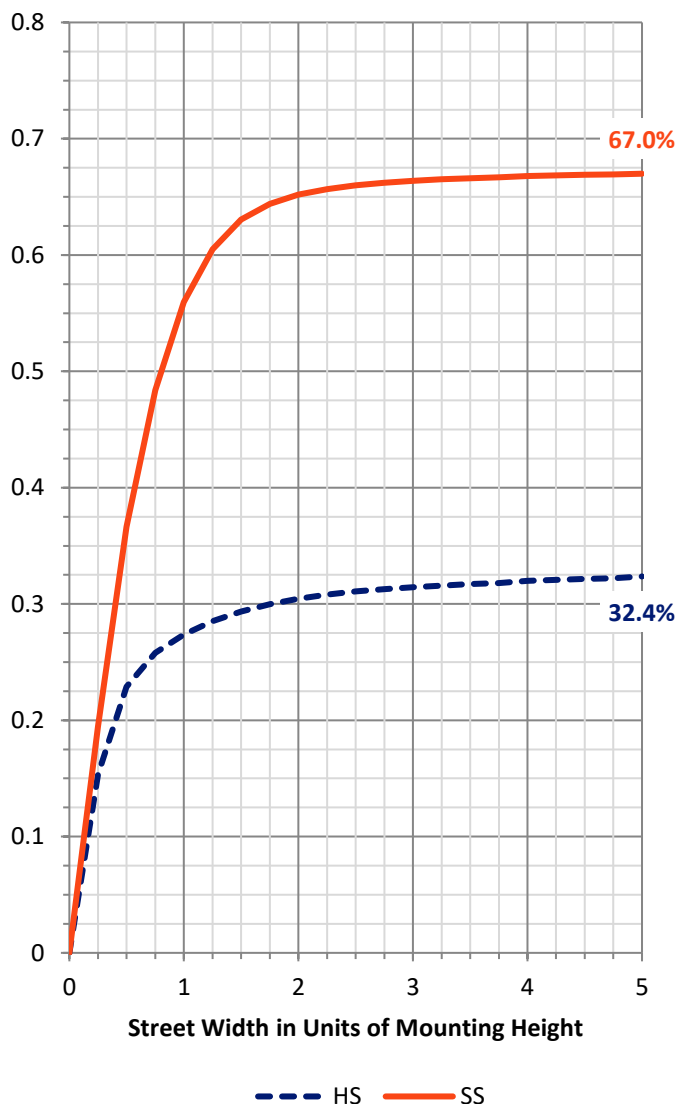
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	21793.3	0.0	21793.3
	% Fixture	33.1	0.0	33.1
<b>Street Side</b>	Lumens	44037.6	0.0	44037.6
	% Fixture	66.9	0.0	66.9
<b>Total</b>	Lumens	65831.0	0.0	65831.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1485.6	2.3
10°-20°	4422.2	6.7
20°-30°	6644.2	10.1
30°-40°	8835.5	13.4
40°-50°	10909.1	16.6
50°-60°	12258.8	18.6
60°-70°	12023.1	18.3
70°-80°	7817.8	11.9
80°-90°	1434.7	2.2
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°-90°	65831.0	100.0
0°-180°	65831.0	100.0

**Coefficient of Utilization**

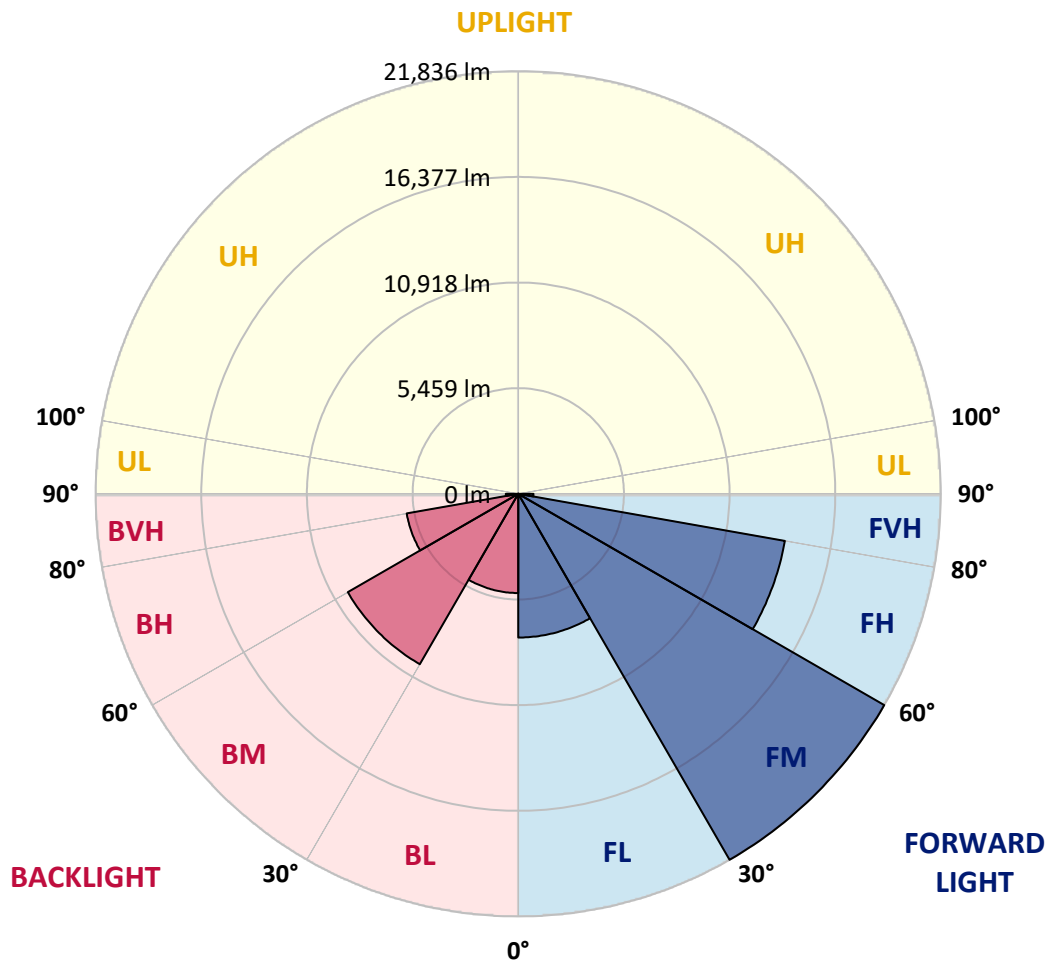


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	7425.4	11.3			
FM (30°-60°)	21835.9	33.2			
FH (60°-80°)	13988.2	21.2			G5
FVH (80°-90°)	788.2	1.2			G5
BL (0°-30°)	5126.6	7.8	B5		
BM (30°-60°)	10167.4	15.4	B5		
BH (60°-80°)	5852.8	8.9	B5		G5
BVH (80°-90°)	646.5	1.0			G4/750
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G5**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	84°	85°
0°	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3
2.5°	16050.1	15898.9	15915.7	15988.5	15708.5	15800.9	15644.1	15672.1	15484.5	15450.9	15470.5
5°	17178.6	17016.2	17016.2	17061.0	16590.6	16464.6	16027.7	15954.9	15677.7	15554.5	15560.1
7.5°	17761.0	17601.4	17570.6	17612.6	17273.8	17301.8	16853.8	16425.4	15932.5	15714.1	15702.9
10°	18617.8	18438.6	18332.2	18335.0	17878.6	17705.0	17374.6	17075.0	16321.8	15896.1	15842.9
12.5°	19309.5	19172.3	19116.3	19074.3	18570.2	18455.4	17833.8	17590.2	16786.6	16173.4	16103.4
15°	19709.9	19581.1	19499.9	19404.7	19124.7	18937.0	18668.2	18113.8	17338.2	16618.6	16531.8
17.5°	18665.4	18444.2	18060.6	17892.6	17828.2	18099.8	19256.3	18973.4	18049.4	17251.4	17159.0
20°	15910.1	16111.8	16403.0	15742.1	15946.5	17965.4	20135.5	20110.3	19043.5	18010.2	17889.8
22.5°	13535.7	13003.6	13922.1	14930.1	15574.1	17478.2	20477.1	21423.5	20390.3	19077.1	18937.0
25°	11096.8	11399.2	12636.8	14666.9	15568.5	17108.6	20289.5	22431.6	22112.4	20530.3	20365.1
27.5°	10766.4	10772.0	11962.0	13516.1	15876.5	17965.4	20493.9	22470.8	24058.4	22409.2	22090.0
30°	10696.4	10662.8	10984.8	12872.0	15333.3	18766.2	21809.9	22820.8	24531.6	24509.2	24083.6
32.5°	10368.8	10349.2	10685.2	11542.0	14171.3	19614.7	23056.0	24453.2	24360.8	26402.1	26287.3
35°	9901.1	9971.1	10388.4	11278.8	13625.3	18909.0	24335.6	26323.7	26480.5	25483.7	25940.1
37.5°	9413.9	9453.1	9856.3	10931.6	12712.4	17674.2	25310.1	28157.8	28695.4	26894.9	26530.9
40°	8750.3	8831.5	9304.7	10514.4	12527.6	16529.0	24621.2	30246.6	31083.9	29048.2	28488.2
42.5°	8047.5	8086.7	8663.5	9836.7	12219.6	16545.8	23207.2	32049.9	33284.7	31013.9	30445.4
45°	7431.5	7442.7	7983.1	9033.1	11612.0	16442.2	22314.0	32122.7	35919.6	33119.5	32405.5
47.5°	6678.2	6784.6	7319.5	8366.7	10836.4	16095.0	22731.2	29863.0	38562.9	35127.2	34474.8
50°	5121.4	5205.4	6241.4	7714.3	9987.9	15515.3	23016.8	31683.1	35617.2	37305.7	36838.1
52.5°	4404.6	4261.7	5006.6	6980.6	9212.3	14549.3	23137.2	34236.8	35611.6	39276.9	38809.3
55°	1884.5	2889.7	4511.0	5731.8	8503.9	13261.3	23050.4	36734.5	37347.7	41136.2	40973.8
57.5°	1489.7	1559.7	3315.3	4637.0	7663.9	11738.0	22658.4	38386.5	38870.9	42998.3	42536.3
60°	274.4	310.8	1629.7	1960.1	5549.8	9464.3	21230.3	38621.7	39982.6	44619.5	44028.7
62.5°	126.0	148.4	1310.4	1632.5	4438.2	7784.3	20006.7	38546.1	41010.2	45823.6	45302.8
65°	58.8	75.6	1173.2	1481.3	3841.7	7263.4	17887.0	38341.7	40783.4	46473.2	45627.6
67.5°	44.8	64.4	1078.0	1330.0	3194.9	6745.4	15873.7	36196.8	39691.4	45468.0	44294.7
70°	44.8	64.4	985.6	1209.6	2710.5	6087.4	12886.0	33511.5	37199.3	42928.3	41951.0
72.5°	47.6	64.4	876.4	1094.8	2349.3	5255.8	10066.3	29224.6	34211.6	39422.6	38394.9
75°	47.6	64.4	756.0	968.8	1979.7	4401.8	6739.8	20888.7	29468.2	33553.5	32411.1
77.5°	47.6	64.4	627.2	809.2	1612.9	3516.9	4359.7	11262.0	23184.8	27516.5	26052.1
80°	47.6	64.4	467.6	613.2	1212.4	2480.9	2604.1	5678.6	12474.4	18077.4	18332.2
82.5°	47.6	61.6	324.8	448.0	792.4	1360.8	1439.2	2741.3	4603.4	7414.7	7518.3
85°	44.8	53.2	232.4	296.8	434.0	512.4	700.0	1363.6	2206.5	3164.1	3138.9
87.5°	28.0	28.0	75.6	117.6	176.4	201.6	313.6	504.0	761.6	1044.4	985.6
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°	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3	15389.3
2.5°	15467.7	15403.3	15322.1	15299.7	15109.3	15019.7	14837.7	14918.9	14826.5	14750.9	14837.7
5°	15490.1	15394.9	15224.1	15022.5	14616.5	14431.7	14174.1	14202.1	14067.7	13964.1	14022.9
7.5°	15546.1	15428.5	15159.7	14706.1	14221.7	13930.5	13661.7	13871.7	13779.3	13700.9	13759.7
10°	15574.1	15481.7	15005.7	14526.9	13829.7	13670.1	13334.1	13308.9	13317.3	13308.9	13401.3
12.5°	15649.7	15518.1	14826.5	14216.1	13622.5	13199.7	12992.4	12989.6	12723.6	12608.8	12659.2
15°	15873.7	15588.1	14706.1	13846.5	13191.3	12911.2	12256.0	12258.8	12146.8	12015.2	12012.4
17.5°	16321.8	15798.1	14706.1	13597.3	12793.6	12228.0	11656.8	11346.0	11270.4	11287.2	11276.0
20°	16912.6	16151.0	14700.5	13230.5	12233.6	11648.4	10825.2	10562.0	10324.0	10340.8	10340.8
22.5°	17761.0	16671.8	14711.7	12894.4	11698.8	10903.6	9976.7	9643.5	9388.7	9397.1	9397.1
25°	18979.1	17565.0	14843.3	12690.0	10982.0	10027.1	9091.9	8573.9	8313.5	8316.3	8321.9
27.5°	20530.3	18811.0	15299.7	12256.0	10385.6	8991.1	7966.3	7585.5	7325.1	7257.8	7257.8
30°	22286.0	20306.3	15890.5	11973.2	9461.5	7823.5	6972.2	6689.4	6375.8	6283.4	6283.4
32.5°	24232.0	21807.1	16501.0	11626.0	8590.7	6821.0	6112.6	5852.2	5460.2	5345.4	5306.2
35°	26256.5	23358.4	17243.0	11138.8	7495.9	5995.0	5367.8	5051.4	4768.6	4617.4	4581.0
37.5°	27348.5	25125.3	17912.2	10646.0	6650.2	5342.6	4642.6	4396.2	4208.5	4102.1	4082.5
40°	28849.4	26410.5	18259.4	9831.1	5740.2	4679.0	3973.3	3962.1	3987.3	3892.1	3886.5
42.5°	30378.2	27678.9	18164.2	8739.1	5031.8	4001.3	3637.3	3830.5	3970.5	3886.5	3892.1
45°	32290.7	29387.0	18511.4	7591.1	4331.7	3626.1	3567.3	3794.1	3987.3	3967.7	3967.7
47.5°	34225.6	31039.1	17870.2	6185.4	3861.3	3516.9	3575.7	3735.3	3976.1	4040.5	4026.5
50°	35802.0	32170.3	17475.4	4992.6	3595.3	3519.7	3603.7	3662.5	3925.7	4029.3	4026.5
52.5°	37076.1	33248.3	16002.5	4214.1	3444.1	3530.9	3693.3	3651.3	3836.1	3945.3	4009.7
55°	38879.3	34740.8	14325.3	3914.5	3365.7	3519.7	3724.1	3690.5	3766.1	3816.5	3864.1
57.5°	40273.8	35482.8	12079.6	3721.3	3295.7	3502.9	3698.9	3701.7	3738.1	3718.5	3698.9
60°	41444.2	36160.4	9881.5	3533.7	3206.1	3466.5	3592.5	3631.7	3620.5	3595.3	3544.9
62.5°	42015.4	36894.1	7675.1	3334.9	3110.9	3360.1	3418.9	3463.7	3438.5	3354.5	3348.9
65°	41799.8	36367.6	5689.8	3119.3	2996.1	3242.5	3239.7	3259.3	3270.5	3164.1	3175.3
67.5°	40590.2	34054.8	4334.5	2844.9	2864.5	3074.5	3060.5	3071.7	3040.9	2968.1	2979.3
70°	37073.3	31428.3	3074.5	2382.9	2595.7	2811.3	2830.9	2878.5	2808.5	2679.7	2688.1
72.5°	31873.5	26914.5	2156.1	1898.5	2279.3	2553.7	2542.5	2539.7	2444.5	2494.9	2556.5
75°	27186.1	20611.5	1638.1	1528.9	1800.5	2198.1	2324.1	2332.5	2346.5	2850.5	2886.9
77.5°	20927.9	12468.8	1394.4	1206.8	1397.2	1822.9	2058.1	2153.3	2956.9	3063.3	3007.3
80°	12471.6	7201.8	1078.0	940.8	1128.4	1391.6	1758.5	2273.7	2970.9	2654.5	2539.7
82.5°	6070.6	3340.5	784.0	716.8	831.6	1010.8	1380.4	2648.9	2514.5	2052.5	2024.5
85°	2265.3	1128.4	470.4	490.0	554.4	663.6	1050.0	2528.5	1929.3	1671.7	1579.3
87.5°	565.6	207.2	190.4	196.0	249.2	333.2	537.6	1218.0	935.2	775.6	758.8
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)