

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: P591406

Luminaire Tested: **CTN-CA10-310-740-U-T4-SSS-HM-EX90**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591406
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-10)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA10-310-740-U-T4-SSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (10) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30734 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type IV - Short
BUG Rating: B4 - U0 - G5

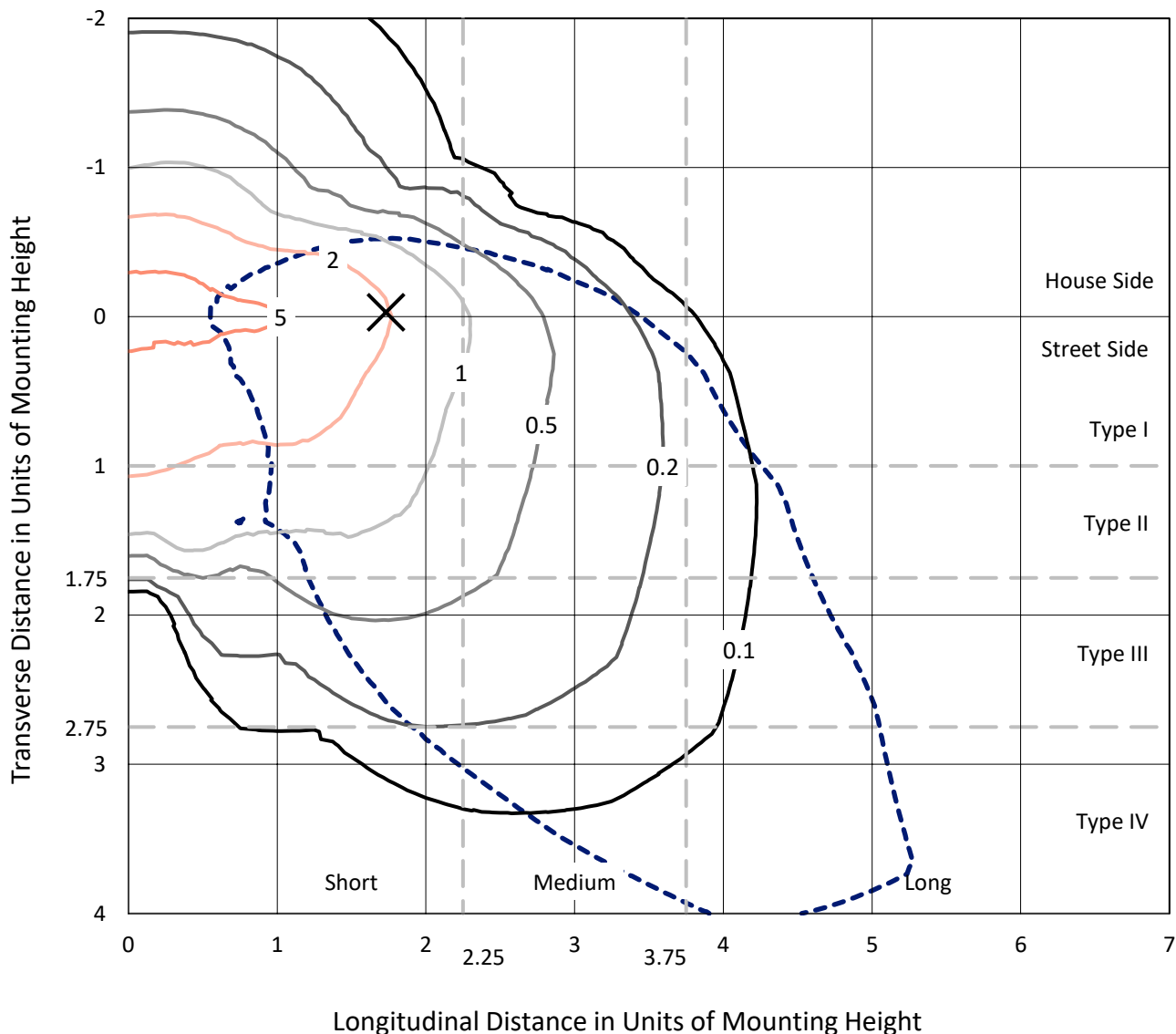
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

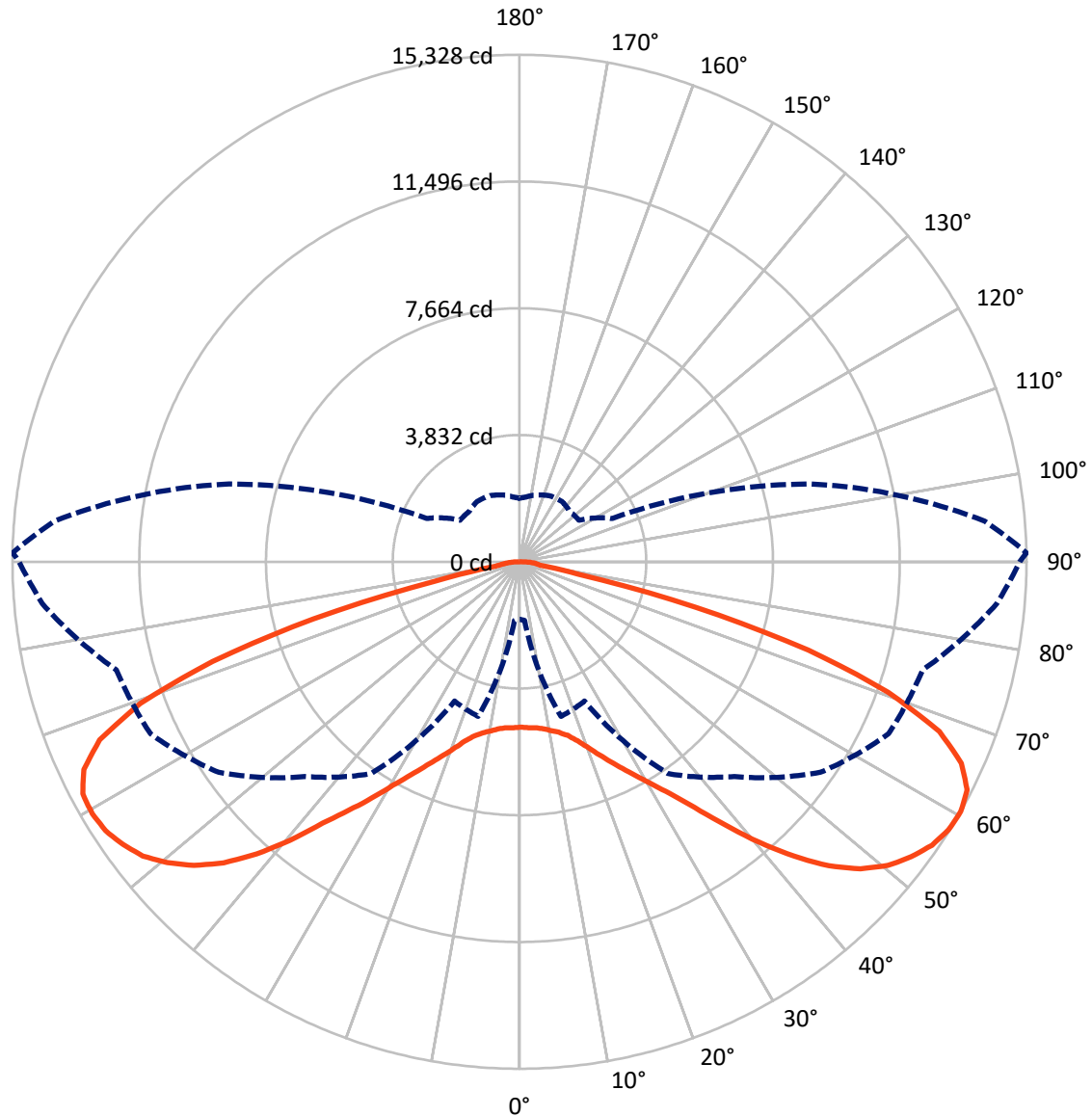
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 91-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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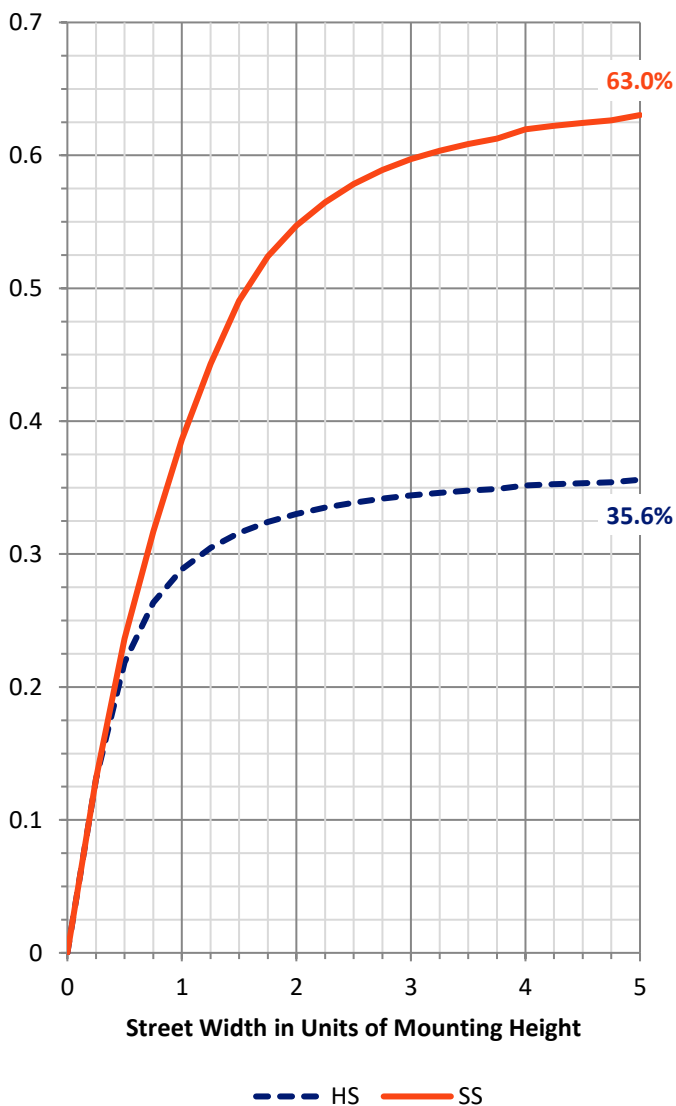
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11161.5	0.0	11161.5
	% Fixture	36.3	0.0	36.3
Street Side	Lumens	19572.5	0.0	19572.5
	% Fixture	63.7	0.0	63.7
Total	Lumens	30734.0	0.0	30734.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	487.4	1.6
10°-20°	1494.7	4.9
20°-30°	2450.1	8.0
30°-40°	3460.3	11.3
40°-50°	4871.1	15.8
50°-60°	6129.2	19.9
60°-70°	6169.5	20.1
70°-80°	4538.8	14.8
80°-90°	1133.0	3.7
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°	30734.0	100.0
0°-180°	30734.0	100.0

Coefficient of Utilization

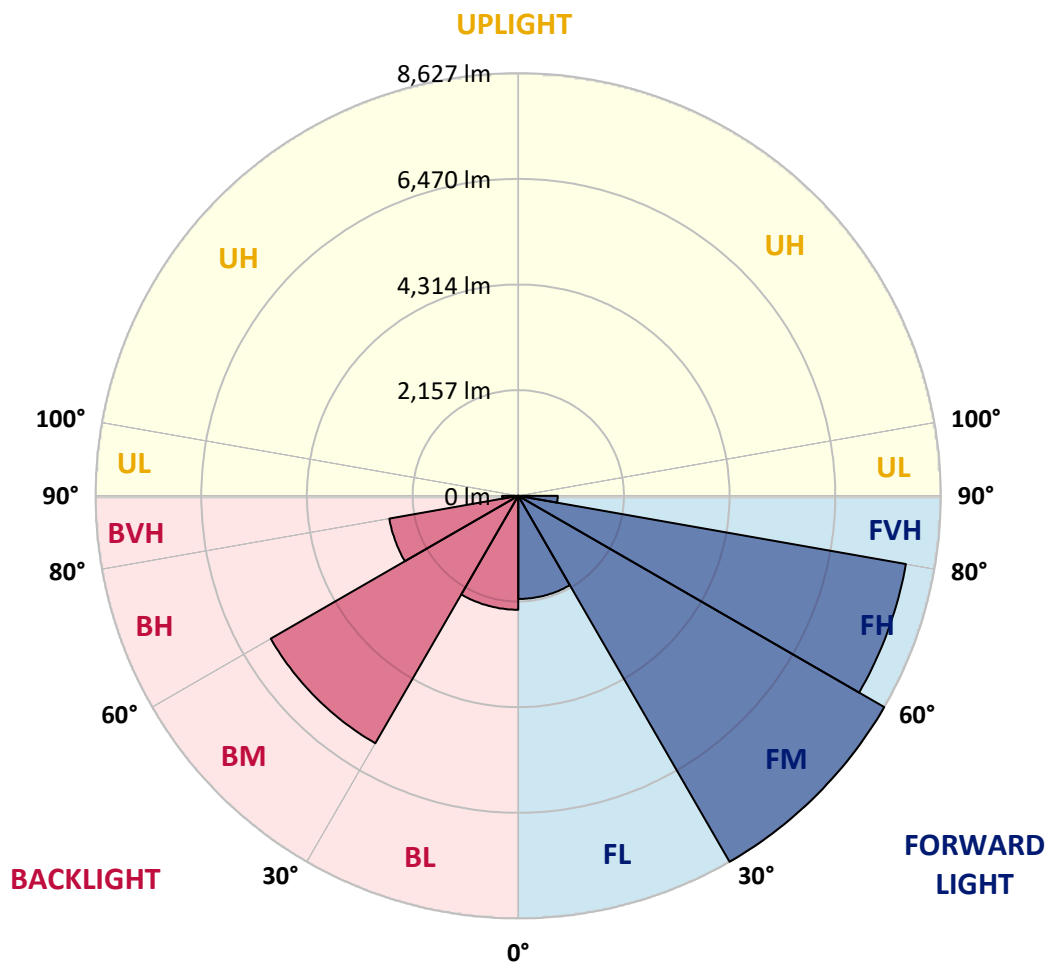


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2105.6	6.9			
FM	(30°-60°)	8627.0	28.1			
FH	(60°-80°)	8035.1	26.1			G4/12000
FVH	(80°-90°)	804.8	2.6			G5
BL	(0°-30°)	2326.4	7.6	B3/2500		
BM	(30°-60°)	5833.6	19.0	B4/8500		
BH	(60°-80°)	2673.2	8.7	B4/5000		G4/5000
BVH	(80°-90°)	328.3	1.1			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5
2.5°	4949.1	4917.6	4919.1	4965.6	4895.2	4940.1	4929.6	5001.5	4988.0	5013.5	5019.5
5°	4914.6	4889.2	4889.2	4944.6	4896.7	4935.6	4902.7	4965.6	4988.0	5025.5	5032.9
7.5°	4928.1	4901.2	4911.6	4959.6	4905.7	4946.1	4943.1	4998.5	5012.0	5074.9	5083.9
10°	4952.1	4928.1	4931.1	4971.5	4935.6	5010.5	4997.0	5076.4	5074.9	5173.7	5181.2
12.5°	4910.1	4892.2	4892.2	4946.1	4967.1	5046.4	5073.4	5155.7	5164.7	5275.5	5284.5
15°	4844.3	4814.3	4859.2	4940.1	4983.5	5107.8	5154.2	5284.5	5308.5	5413.3	5435.8
17.5°	4706.5	4720.0	4845.8	4788.9	4591.2	4775.4	5286.0	5452.2	5504.6	5628.9	5682.8
20°	4279.7	4113.5	3784.1	3873.9	4281.2	4806.8	5470.2	5664.9	5780.2	5926.9	6018.3
22.5°	3233.0	3337.8	3953.3	4017.7	4035.6	4386.0	5727.8	5925.4	6078.2	6263.8	6385.1
25°	3352.8	3342.3	3553.5	4213.8	4231.8	4432.5	5392.3	6265.3	6403.1	6660.7	6782.0
27.5°	3463.6	3463.6	3451.6	3978.7	4435.5	4633.1	5567.5	6015.3	6829.9	7109.9	7252.2
30°	3647.8	3653.8	3586.4	3584.9	4603.2	4817.3	5906.0	6127.6	7207.2	7737.3	7770.3
32.5°	4013.2	3992.2	3908.4	3779.6	3981.7	5031.4	6236.9	6533.4	6843.4	8442.6	8412.7
35°	4276.7	4260.3	4200.4	4110.5	4017.7	5128.8	6546.9	6958.7	7466.3	8650.8	9225.8
37.5°	4595.7	4568.7	4501.3	4395.0	4335.1	4428.0	6865.8	7439.3	8245.0	8897.9	10143.7
40°	4944.6	4937.1	4833.8	4696.0	4613.7	4682.5	7109.9	8038.3	9210.8	9947.6	11156.0
42.5°	5212.6	5206.6	5121.3	5041.9	5003.0	5142.3	6503.4	8832.0	10316.0	10901.5	12130.9
45°	5453.7	5444.7	5441.7	5414.8	5446.2	5784.7	7168.3	9321.6	11401.6	11722.1	13017.4
47.5°	5636.4	5609.5	5533.1	5540.6	5628.9	6199.5	7860.1	8583.4	12282.1	12445.3	13709.2
50°	6070.7	6043.7	5780.2	5789.2	5959.9	6714.6	8456.1	9438.4	11463.0	13071.3	14239.3
52.5°	6458.5	6235.4	6091.6	6097.6	6331.2	7262.6	9133.0	10323.4	11268.3	13566.9	14667.6
55°	5578.0	5434.3	6832.9	6638.2	6767.0	7860.1	9790.3	11090.1	11802.9	13945.8	14913.1
57.5°	3273.4	3255.5	7520.2	7689.4	7539.7	8505.5	10455.2	11728.1	12271.6	14299.2	15077.9
60°	1737.0	1779.0	4836.8	4648.1	7815.2	9179.4	11099.1	12307.6	12619.0	14481.9	15122.8
62.5°	160.2	142.3	3179.1	3611.9	7005.1	10059.9	11862.8	12897.6	12854.1	14579.2	15043.4
65°	31.4	41.9	3119.2	3568.4	7783.8	11519.9	13110.2	13351.3	12981.4	14462.4	14627.1
67.5°	24.0	35.9	2947.0	3529.5	8261.4	12081.4	14546.3	13511.5	12988.9	14089.5	13710.7
70°	24.0	37.4	2601.1	3298.9	8487.6	12105.4	14886.2	13448.6	12821.2	13245.0	11984.1
72.5°	24.0	37.4	2184.8	2858.6	8102.7	11585.8	14290.2	13099.7	12196.8	11404.6	9347.1
75°	24.0	34.4	1714.6	2322.5	7003.6	10784.7	13267.4	11581.3	10266.5	8345.3	5997.3
77.5°	24.0	32.9	1263.9	1817.9	5844.6	9511.8	11537.9	9519.3	7738.8	4369.6	2207.2
80°	22.5	32.9	769.7	1281.8	4502.8	7672.9	9067.1	7033.5	4067.1	1099.1	637.9
82.5°	22.5	31.4	366.9	820.6	3164.1	5482.2	5916.4	3012.9	865.5	507.6	507.6
85°	19.5	28.5	196.2	446.2	2068.0	3593.9	2854.1	510.6	338.4	342.9	390.8
87.5°	12.0	15.0	92.8	200.7	1192.0	1921.2	1099.1	187.2	140.8	148.2	221.6
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5	4998.5
2.5°	5024.0	5016.5	5032.9	5085.4	5076.4	5113.8	5083.9	5136.3	5146.7	5131.8	5155.7
5°	5040.4	5050.9	5106.3	5155.7	5128.8	5188.7	5205.1	5278.5	5277.0	5263.5	5293.5
7.5°	5094.3	5122.8	5178.2	5239.6	5253.1	5301.0	5295.0	5387.8	5377.4	5371.4	5401.3
10°	5187.2	5230.6	5283.0	5384.8	5351.9	5432.8	5377.4	5440.2	5434.3	5419.3	5446.2
12.5°	5290.5	5350.4	5413.3	5506.1	5492.7	5491.2	5441.7	5461.2	5444.7	5408.8	5431.3
15°	5446.2	5519.6	5606.5	5666.4	5587.0	5557.0	5479.2	5437.3	5380.3	5296.5	5310.0
17.5°	5688.8	5775.7	5868.5	5879.0	5756.2	5678.3	5489.7	5339.9	5191.7	5079.4	5089.8
20°	6015.3	6094.6	6163.5	6114.1	5947.9	5774.2	5489.7	5253.1	4976.0	4769.4	4754.4
22.5°	6397.1	6421.1	6487.0	6365.7	6079.7	5837.1	5474.7	5122.8	4672.1	4396.5	4363.6
25°	6808.9	6805.9	6777.5	6525.9	6162.0	5802.6	5360.9	4899.7	4324.6	4037.1	4013.2
27.5°	7256.7	7219.2	7024.6	6660.7	6127.6	5678.3	5145.2	4523.8	4008.7	3761.6	3754.1
30°	7761.3	7662.5	7268.6	6674.1	5998.8	5432.8	4794.8	4144.9	3727.2	3507.0	3486.1
32.5°	8349.8	8156.6	7463.3	6630.7	5766.7	5058.4	4368.1	3847.0	3496.6	3255.5	3209.0
35°	9118.0	8779.6	7643.0	6488.5	5422.3	4613.7	3974.2	3581.9	3282.4	3035.3	2985.9
37.5°	10083.8	9586.7	7914.0	6280.3	5028.4	4216.8	3701.7	3406.7	3134.2	2842.2	2782.3
40°	11156.0	10536.1	8231.5	6078.2	4654.1	3921.8	3523.5	3324.3	3038.3	2717.9	2661.0
42.5°	12171.3	11491.5	8707.7	5816.1	4297.7	3685.2	3459.1	3300.4	2993.4	2664.0	2602.6
45°	13108.7	12331.5	9198.9	5552.6	3935.3	3492.1	3405.2	3230.0	2924.5	2601.1	2530.7
47.5°	13873.9	12993.4	9633.1	5280.0	3616.3	3340.8	3301.9	3095.2	2803.2	2499.2	2433.4
50°	14429.5	13501.0	9887.7	5026.9	3309.4	3189.6	3120.7	2903.6	2632.5	2379.5	2331.5
52.5°	14823.3	13939.8	10015.0	4998.5	3030.8	2985.9	2909.6	2705.9	2488.8	2292.6	2235.7
55°	15127.3	14179.4	9905.7	4832.3	2767.3	2729.9	2650.5	2524.7	2394.4	2211.7	2174.3
57.5°	15292.0	14288.7	9655.6	4076.1	2487.3	2422.9	2412.4	2385.4	2271.6	2090.4	2062.0
60°	15327.9	14115.0	9089.5	3099.7	2193.8	2151.8	2231.2	2196.8	2094.9	1960.2	1919.7
62.5°	15187.2	13743.6	8015.9	2318.1	1949.7	2018.6	2099.4	2047.0	1928.7	1796.9	1771.5
65°	14679.5	12891.6	6460.0	1804.4	1837.4	1955.7	2027.6	1964.7	1820.9	1671.2	1654.7
67.5°	13686.7	11564.8	4252.8	1623.2	1785.0	1903.3	1984.1	1883.8	1738.5	1576.8	1557.4
70°	11825.4	9141.9	2026.1	1513.9	1684.6	1801.4	1865.8	1752.0	1611.3	1452.5	1431.6
72.5°	9133.0	6212.9	1118.6	1394.1	1560.3	1668.2	1714.6	1579.8	1449.5	1383.6	1377.7
75°	5497.1	2670.0	1010.8	1275.8	1400.1	1500.4	1582.8	1481.0	1367.2	1238.4	1205.4
77.5°	1814.9	775.7	950.9	1135.1	1275.8	1397.1	1436.1	1337.2	1195.0	1085.7	1076.7
80°	636.4	649.9	886.5	944.9	1111.1	1212.9	1256.4	1142.6	1075.2	961.4	938.9
82.5°	518.1	582.5	715.8	712.8	877.5	997.3	1063.2	1034.7	946.4	855.0	846.1
85°	423.8	533.1	453.7	498.7	628.9	759.2	885.0	888.0	820.6	727.8	666.4
87.5°	251.6	272.5	226.1	254.6	332.4	426.8	494.2	471.7	386.3	326.4	319.0
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)