

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: P232803

Luminaire Tested: **CTN-10-4-D-E1-T2-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232803
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-7)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-10-4-D-E1-T2-7050
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 5000K LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 43361 lumens
Efficiency: N/A
Efficacy: 140.8 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B4 - U0 - G4

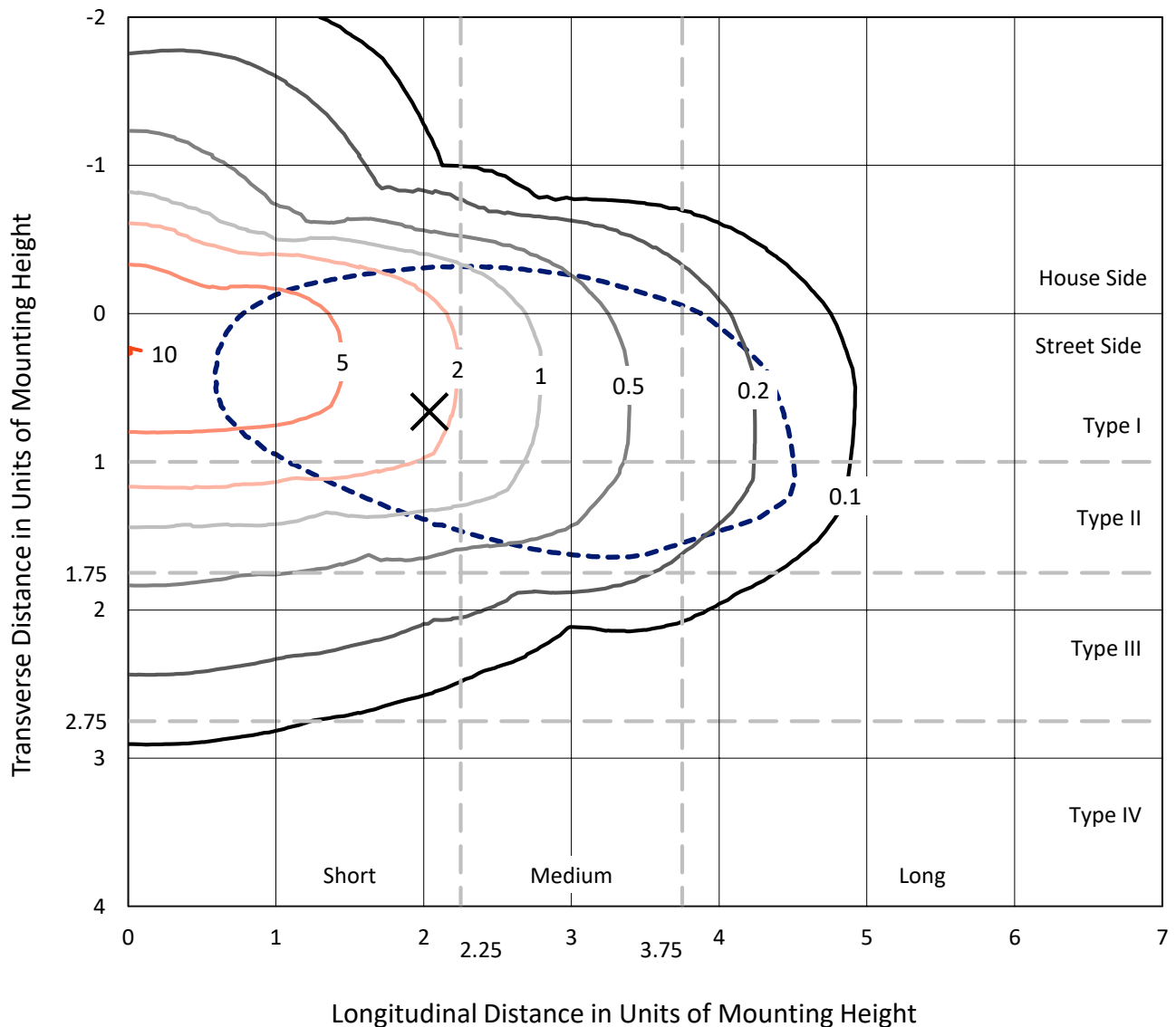
Input Watts (W): 308
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

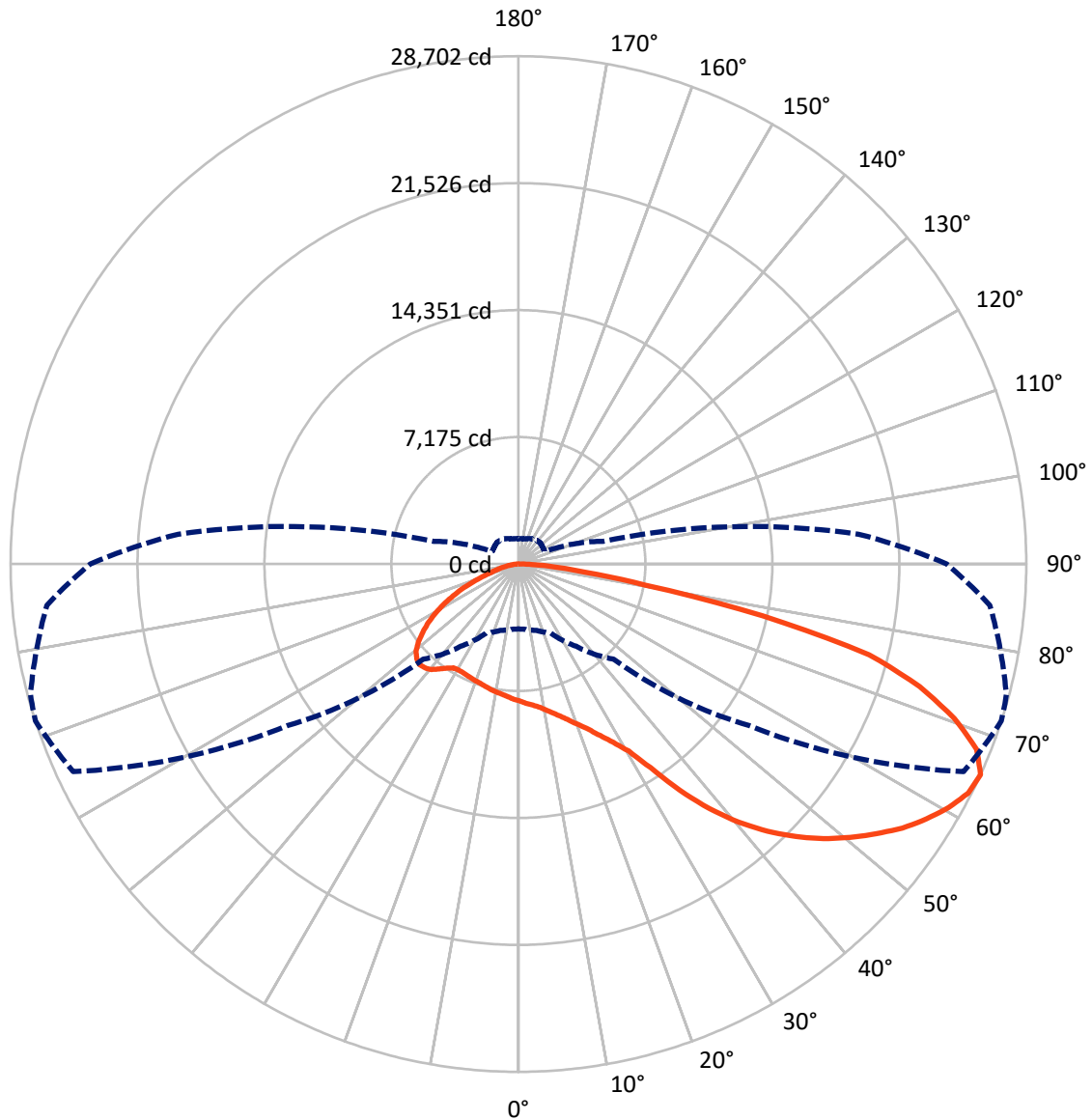
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.1 fc
 Type II - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 72-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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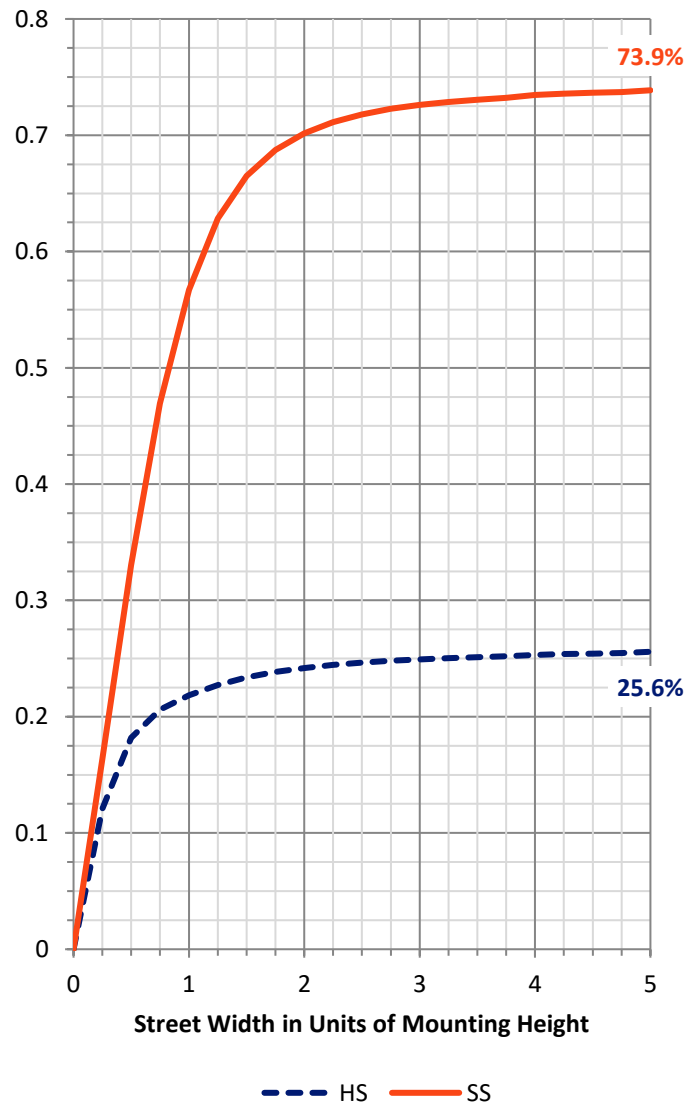
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11295.1	0.0	11295.1
	% Fixture	26.0	0.0	26.0
Street Side	Lumens	32065.9	0.0	32065.9
	% Fixture	74.0	0.0	74.0
Total	Lumens	43361.0	0.0	43361.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	744.2	1.7
10°-20°	2268.3	5.2
20°-30°	3799.5	8.8
30°-40°	5515.0	12.7
40°-50°	7457.4	17.2
50°-60°	8704.9	20.1
60°-70°	8667.2	20.0
70°-80°	5255.7	12.1
80°-90°	948.7	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°	43361.0	100.0
0°-180°	43361.0	100.0



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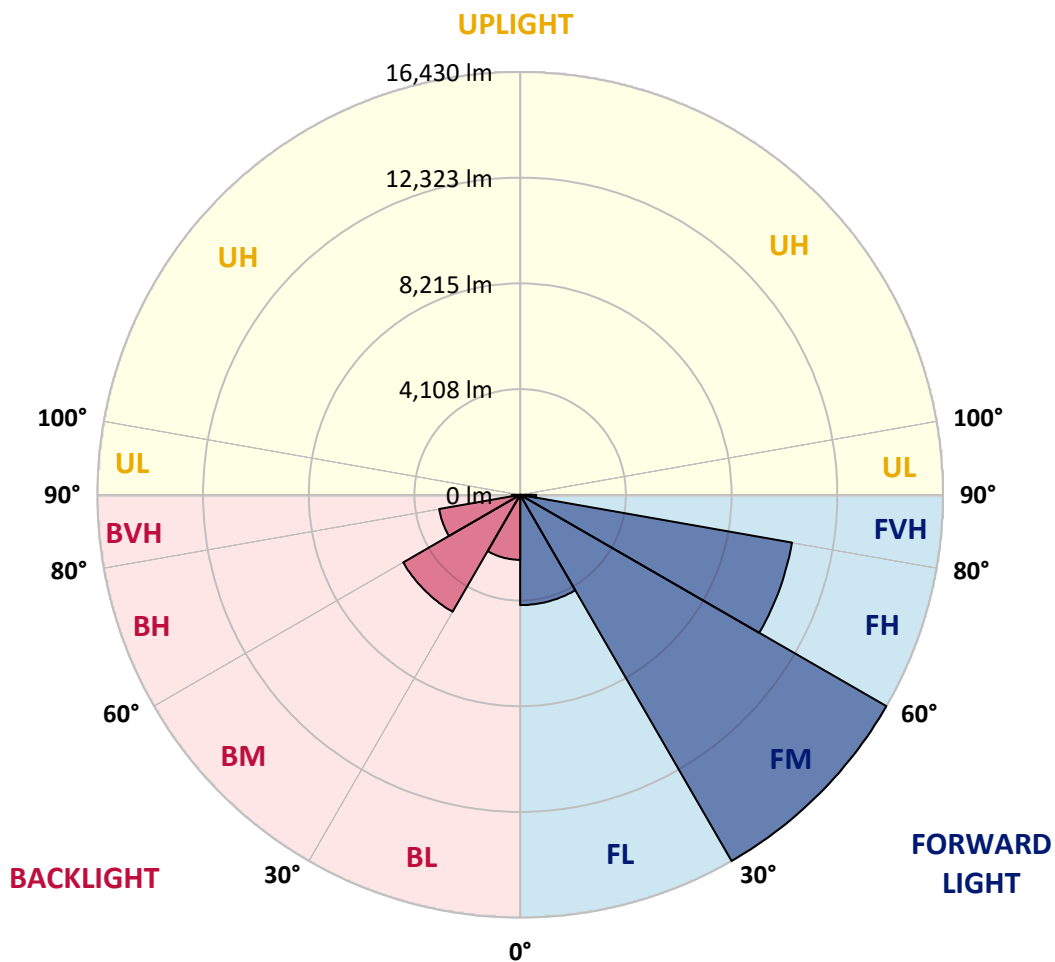
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4285.6	9.9			
FM	(30°-60°)	16430.5	37.9			
FH	(60°-80°)	10725.7	24.7			G4/12000
FVH	(80°-90°)	624.1	1.4			G4/750
BL	(0°-30°)	2526.5	5.8	B4/5000		
BM	(30°-60°)	5246.9	12.1	B4/8500		
BH	(60°-80°)	3197.2	7.4	B4/5000		G4/5000
BVH	(80°-90°)	324.6	0.7			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	72°	75°	85°
0°	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6
2.5°	8142.3	8126.8	8132.0	8139.5	8047.0	8031.5	7955.0	7916.1	7873.4	7843.3	7775.8
5°	8561.4	8560.0	8526.6	8527.1	8382.1	8326.2	8185.0	8080.8	7990.2	7943.3	7802.5
7.5°	8941.5	8902.1	8898.8	8889.4	8725.6	8636.5	8449.2	8291.1	8152.6	8080.3	7862.1
10°	9298.6	9270.9	9271.4	9260.1	9092.1	8980.9	8755.7	8556.7	8371.8	8278.4	7960.7
12.5°	9679.7	9648.3	9643.1	9603.7	9449.3	9342.3	9095.9	8851.4	8627.5	8521.9	8109.9
15°	10070.6	10040.6	10025.6	9980.0	9807.8	9693.8	9487.3	9185.1	8930.2	8798.8	8306.1
17.5°	10431.0	10412.7	10387.4	10352.2	10201.6	10076.7	9870.2	9583.0	9278.4	9110.4	8531.8
20°	10653.5	10637.5	10654.4	10654.4	10567.6	10477.0	10269.1	10022.8	9693.8	9485.9	8791.3
22.5°	10823.8	10807.4	10882.5	10920.5	10929.4	10909.3	10705.1	10490.2	10147.6	9933.1	9112.3
25°	10865.6	10867.5	10994.7	11165.5	11292.2	11351.3	11194.1	11036.0	10740.3	10471.9	9551.1
27.5°	10853.4	10865.6	11028.5	11333.5	11637.1	11780.7	11723.9	11632.0	11397.8	11169.2	10137.3
30°	10835.6	10867.5	11082.4	11457.4	11896.7	12181.0	12237.8	12377.2	12262.2	12106.4	11066.9
32.5°	10614.1	10642.7	10950.5	11503.4	12117.7	12633.9	12939.4	13530.3	13717.5	13687.0	12505.8
35°	10095.5	10151.8	10608.4	11382.8	12288.0	13095.2	13820.3	15057.4	15705.5	15653.4	14165.7
37.5°	9567.1	9636.1	10183.7	11158.0	12365.0	13586.1	14784.2	16764.7	17547.9	17471.9	15760.8
40°	9087.9	9167.2	9720.1	10821.0	12344.4	14045.1	15797.0	18369.2	19188.6	19053.4	17183.3
42.5°	8534.1	8649.1	9152.7	10371.9	12183.4	14368.4	16798.9	19902.4	20644.3	20437.8	18477.6
45°	8018.4	8110.8	8594.7	9756.7	11937.9	14606.4	17715.4	21322.9	21968.2	21727.5	19670.1
47.5°	7459.5	7576.8	8063.0	9123.6	11450.3	14659.9	18554.6	22584.9	23192.1	22941.5	20782.3
50°	5984.9	6174.1	7272.2	8504.1	10693.4	14465.6	19299.8	23768.4	24292.2	24094.1	21933.0
52.5°	5218.1	5255.2	5810.8	7793.1	9771.7	13957.3	19837.6	24929.5	25326.5	25124.7	22951.4
55°	4875.0	4885.4	5134.1	6596.0	8877.7	12989.2	20098.1	26041.2	26339.7	26060.0	23915.3
57.5°	4522.6	4580.3	4830.5	5566.3	8037.2	11592.1	19917.4	27013.6	27191.5	26876.6	24800.4
60°	4231.2	4278.1	4527.8	5027.6	7115.0	9967.8	19075.5	27788.4	27945.2	27623.7	25631.1
62.5°	3967.0	4001.2	4194.6	4662.9	6282.0	8527.6	17504.3	27995.8	28521.9	28266.2	26398.8
65°	3667.1	3698.5	3877.8	4295.5	5672.4	7605.9	15923.7	27762.6	28701.7	28546.8	26744.2
67.5°	3310.9	3353.1	3515.0	3875.0	5044.5	6812.3	14057.8	27170.8	27934.8	27696.9	25999.5
70°	2843.0	2912.0	3095.5	3407.6	4311.0	5789.7	11214.3	25225.6	26133.2	25861.5	24010.6
72.5°	2241.4	2256.4	2389.2	2648.7	3414.1	4605.7	7568.3	21345.0	23715.4	23638.4	21239.4
75°	1671.2	1722.3	1935.4	2135.3	2494.3	3304.3	4600.5	15557.2	20474.9	20474.9	17899.9
77.5°	1363.8	1390.5	1532.3	1700.3	1945.2	2318.8	2924.7	8790.4	14112.7	15544.0	13454.2
80°	1065.8	1056.4	1066.2	1141.8	1373.2	1533.2	1944.3	4517.9	7291.0	8287.8	8813.4
82.5°	583.8	584.3	648.1	611.0	757.4	861.6	1179.3	2541.2	3809.7	4230.2	4721.6
85°	295.7	288.6	321.5	299.9	350.6	393.3	535.5	1262.4	1944.3	2107.6	2224.9
87.5°	105.6	100.4	115.4	138.4	129.5	137.5	184.9	453.8	751.3	803.9	787.9
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°	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6	7739.6
2.5°	7756.5	7711.5	7657.0	7611.5	7515.3	7465.1	7425.2	7436.5	7393.3	7330.9	7329.9
5°	7751.4	7665.5	7548.6	7451.9	7297.1	7217.3	7142.2	7122.5	7058.2	6996.3	6993.0
7.5°	7769.2	7655.2	7465.6	7311.2	7109.4	6985.0	6868.6	6823.1	6747.5	6682.3	6679.0
10°	7818.5	7667.8	7408.3	7194.3	6941.8	6771.5	6620.8	6529.3	6442.0	6374.9	6374.0
12.5°	7906.7	7705.4	7358.1	7078.9	6779.0	6553.2	6360.8	6242.6	6120.6	6070.8	6068.0
15°	8031.1	7760.3	7292.9	6925.4	6578.6	6321.4	6083.5	5927.2	5792.0	5744.2	5754.5
17.5°	8190.6	7849.9	7240.3	6756.0	6357.6	6047.3	5800.0	5642.8	5443.8	5399.7	5411.9
20°	8388.7	7988.4	7229.0	6601.1	6115.4	5746.1	5442.4	5331.2	5079.2	5020.1	5012.1
22.5°	8644.9	8151.7	7224.3	6435.5	5831.5	5399.7	5039.8	4898.5	4686.9	4587.4	4564.8
25°	8962.1	8340.8	7216.4	6269.8	5515.2	5005.0	4567.2	4368.7	4236.3	4085.7	4082.4
27.5°	9379.8	8594.7	7235.1	6105.5	5170.2	4544.7	4059.9	3819.1	3743.1	3645.5	3594.8
30°	10099.7	9047.1	7286.3	5907.0	4792.9	4014.8	3504.2	3321.7	3228.3	3129.3	3112.4
32.5°	11308.2	10026.0	7444.4	5692.1	4372.9	3441.8	3049.5	2858.5	2703.6	2652.5	2638.9
35°	12821.6	11188.5	7850.9	5462.1	3918.6	2988.0	2675.0	2423.0	2275.1	2262.9	2262.0
37.5°	14181.2	12428.4	8380.7	5178.7	3417.9	2664.2	2303.3	2086.0	1974.8	1986.1	2015.6
40°	15496.1	13528.4	8942.4	4896.2	2931.7	2321.6	1942.4	1838.2	1788.5	1828.8	1848.6
42.5°	16731.3	14533.2	9347.0	4512.7	2510.7	1953.7	1693.7	1755.2	1773.0	1806.3	1819.9
45°	17885.8	15562.8	9647.8	4051.0	2132.0	1694.2	1658.0	1764.1	1814.8	1840.6	1839.2
47.5°	19002.7	16546.9	9737.9	3440.4	1839.2	1665.5	1690.9	1751.4	1830.7	1878.1	1874.8
50°	20117.3	17442.3	9662.3	2820.0	1780.0	1720.9	1722.3	1712.5	1804.9	1843.4	1828.8
52.5°	21116.4	18278.6	9235.3	2360.1	1819.5	1779.1	1759.4	1709.6	1735.9	1762.7	1749.5
55°	22014.7	18976.4	8565.6	2133.4	1853.2	1816.6	1842.9	1746.2	1694.2	1671.6	1675.9
57.5°	22850.5	19514.7	7795.9	1992.6	1846.2	1807.7	1876.2	1736.4	1660.4	1565.6	1547.3
60°	23643.1	19868.1	6929.2	1871.1	1812.9	1794.6	1804.0	1736.9	1628.9	1506.0	1475.9
62.5°	24203.5	19886.9	5934.2	1762.7	1748.6	1774.4	1747.2	1723.3	1637.4	1544.0	1525.2
65°	24192.2	19302.6	4950.1	1638.3	1668.3	1720.4	1673.5	1594.2	1464.2	1436.5	1427.1
67.5°	23142.4	17823.9	3995.6	1453.9	1538.4	1647.7	1567.9	1438.9	1326.7	1293.8	1299.9
70°	20859.7	15733.1	2950.9	1178.4	1343.1	1523.8	1474.1	1330.5	1207.5	1181.7	1209.4
72.5°	18154.2	13515.3	2097.8	934.4	1115.5	1348.3	1328.6	1204.7	1096.7	1107.5	1132.4
75°	15156.4	10758.6	1538.8	803.9	875.7	1149.3	1199.1	1119.7	1051.2	1085.5	1084.5
77.5°	11296.0	7945.2	1171.8	674.4	725.1	894.5	1056.9	1026.8	1213.6	1475.0	1483.4
80°	7422.9	5158.5	790.8	553.8	593.2	671.1	862.6	989.3	1242.7	1077.0	1063.9
82.5°	4112.9	2737.9	490.4	430.8	445.4	486.7	625.1	1032.9	912.8	847.1	850.4
85°	1823.7	1060.1	289.6	289.1	290.0	295.2	401.2	783.3	642.0	621.8	632.1
87.5°	631.7	279.2	91.0	72.3	81.7	102.3	208.8	477.7	335.1	277.8	278.8
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)