

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: P232698

Luminaire Tested: **CTN-8-4-D-E1-T3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232698
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-19)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-8-4-D-E1-T3
Description: CELESTEON HIGH MAST LUMINAIRE
(8) 70 CRI, 4000K LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 43264 lumens
Efficiency: N/A
Efficacy: 133.1 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B4 - U0 - G5

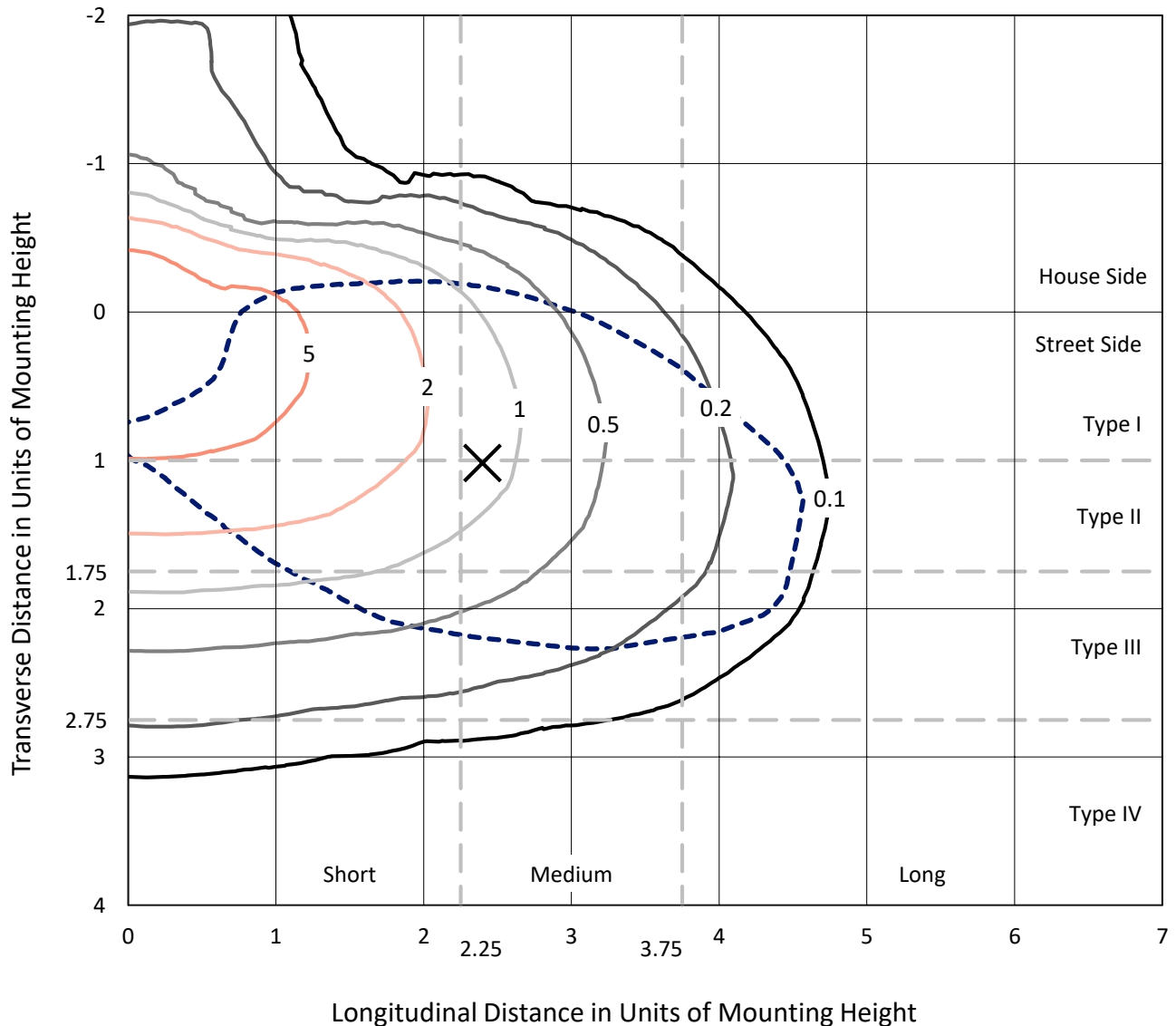
Input Watts (W): 325
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

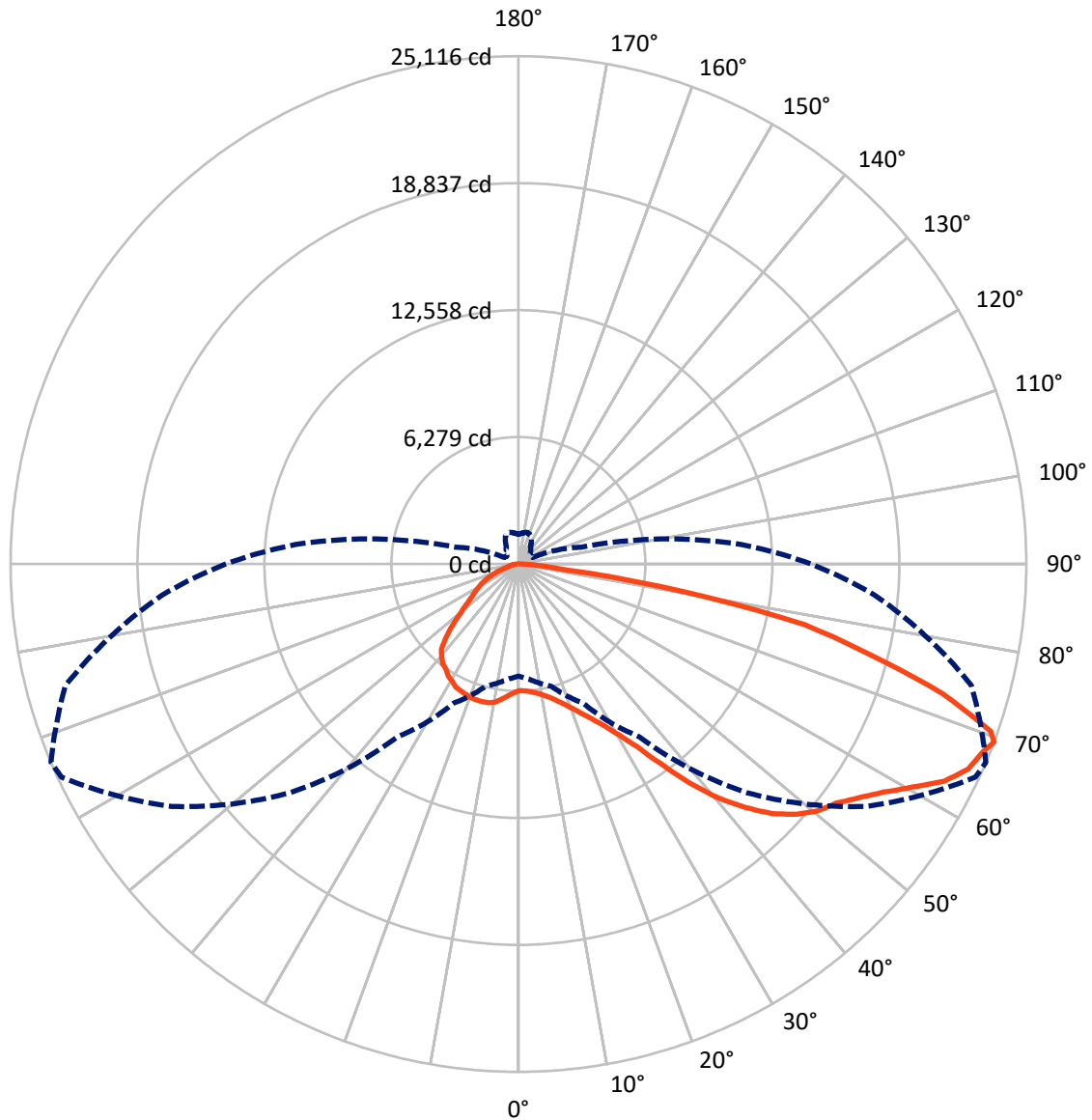
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.3 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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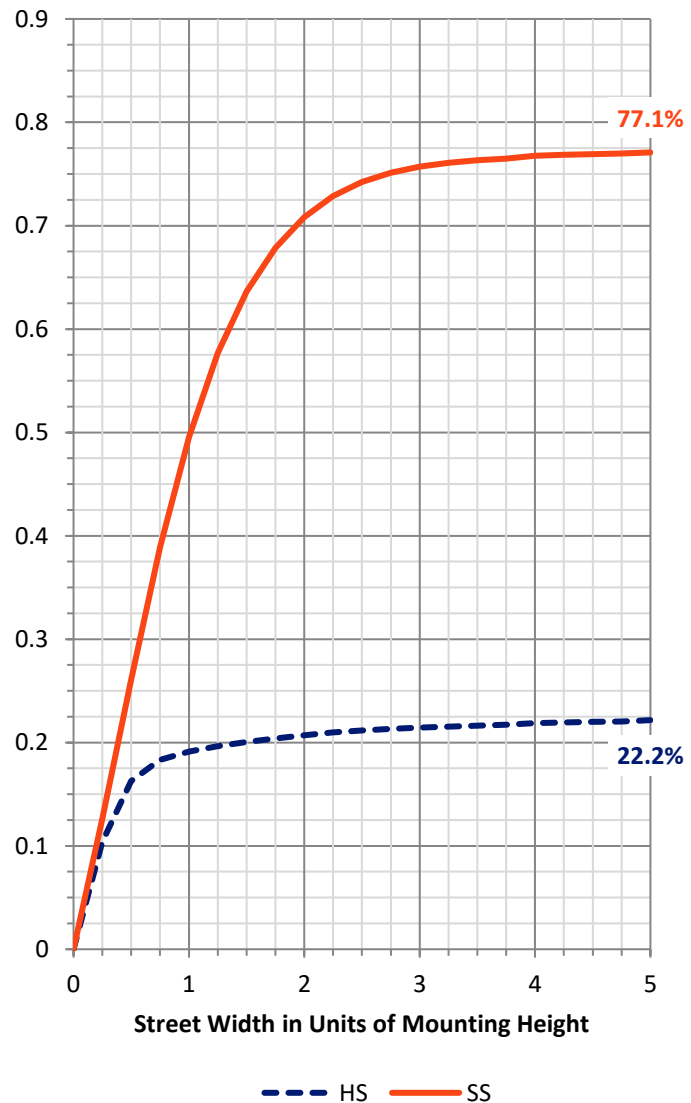
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9841.6	0.0	9841.6
	% Fixture	22.7	0.0	22.7
Street Side	Lumens	33422.4	0.0	33422.4
	% Fixture	77.3	0.0	77.3
Total	Lumens	43264.0	0.0	43264.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	635.6	1.5
10°-20°	2041.2	4.7
20°-30°	3549.7	8.2
30°-40°	5347.2	12.4
40°-50°	7385.0	17.1
50°-60°	8814.0	20.4
60°-70°	9282.8	21.5
70°-80°	5445.3	12.6
80°-90°	763.2	1.8
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°	43264.0	100.0
0°-180°	43264.0	100.0



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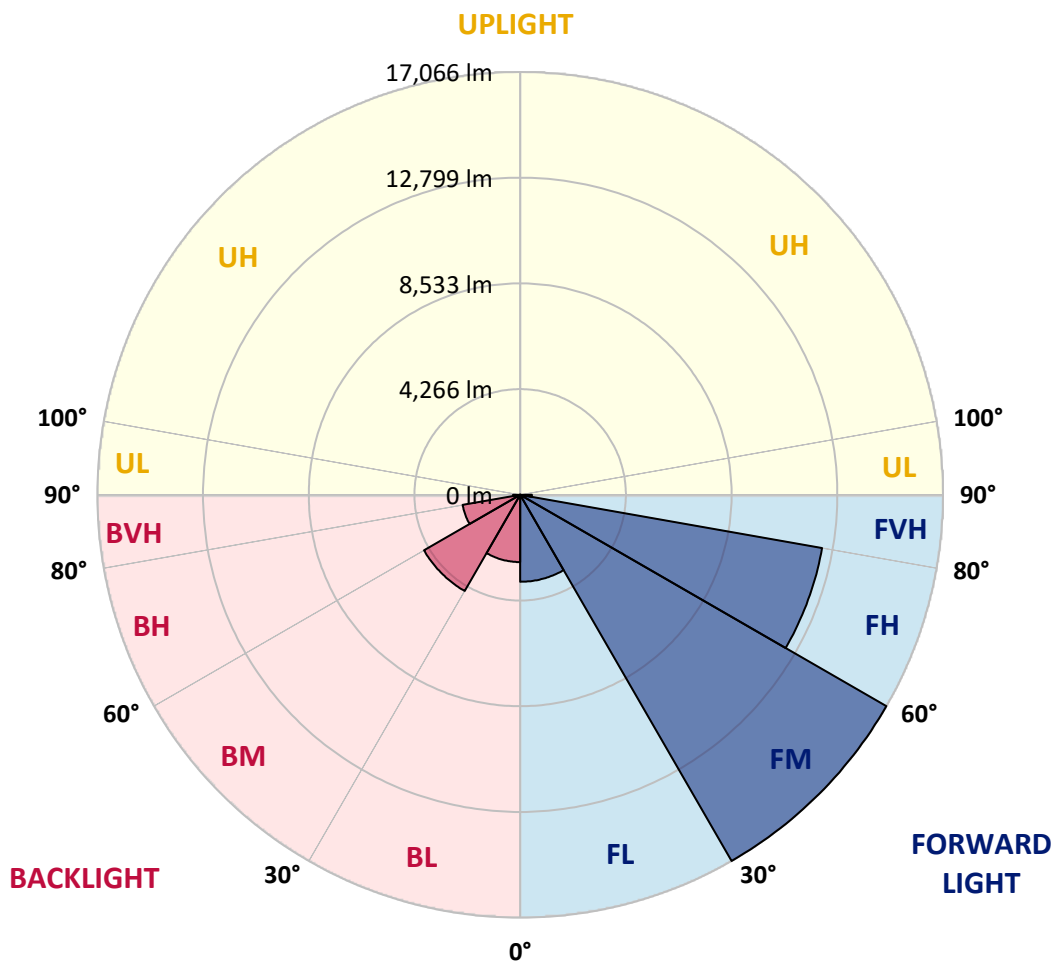
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3510.8	8.1			
FM (30°-60°)	17065.6	39.4			
FH (60°-80°)	12371.6	28.6			G5
FVH (80°-90°)	474.3	1.1			G3/500
BL (0°-30°)	2715.7	6.3	B4/5000		
BM (30°-60°)	4480.6	10.4	B3/5000		
BH (60°-80°)	2356.5	5.4	B3/2500		G3/2500
BVH (80°-90°)	288.9	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-G5

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9
2.5°	6287.2	6295.5	6287.2	6273.4	6227.7	6248.5	6230.5	6288.6	6284.5	6262.3	6302.5
5°	6434.0	6443.7	6425.7	6414.6	6344.0	6353.7	6314.9	6346.8	6335.7	6298.3	6360.6
7.5°	6673.6	6683.3	6661.1	6645.9	6546.2	6524.0	6453.4	6463.1	6442.3	6382.8	6454.8
10°	6996.3	7004.6	6967.2	6929.8	6802.4	6748.4	6630.7	6611.3	6580.8	6522.7	6596.1
12.5°	7343.9	7356.3	7310.6	7262.2	7114.0	7025.4	6857.8	6798.2	6760.9	6690.2	6770.5
15°	7716.4	7731.6	7684.6	7629.2	7465.7	7328.6	7119.5	7029.5	6993.5	6904.9	6954.7
17.5°	8205.3	8201.1	8162.3	8086.2	7890.9	7690.1	7432.5	7298.2	7273.2	7187.4	7199.9
20°	8771.7	8752.3	8716.3	8611.0	8399.1	8149.9	7813.3	7643.0	7618.1	7546.1	7469.9
22.5°	9386.5	9367.1	9332.5	9198.2	8989.1	8662.3	8259.3	8058.5	8025.2	7935.2	7807.8
25°	9991.7	9970.9	9951.6	9824.1	9620.6	9249.4	8764.7	8508.5	8493.3	8401.9	8167.9
27.5°	10620.4	10608.0	10613.5	10504.1	10300.5	9915.5	9365.8	9087.4	9061.1	8944.8	8626.3
30°	11267.2	11269.9	11322.6	11206.2	11019.3	10631.5	10085.9	9802.0	9806.1	9702.3	9237.0
32.5°	11846.0	11848.8	11966.5	11908.4	11805.9	11419.5	10918.2	10718.8	10758.9	10750.6	10274.2
35°	12264.3	12282.3	12545.4	12624.3	12585.5	12249.0	11947.1	11995.6	12123.0	12483.1	11983.1
37.5°	12657.6	12664.5	13001.0	13183.8	13327.8	13125.6	13064.7	13524.5	13725.3	14223.8	13484.3
40°	12771.1	12866.7	13291.8	13546.6	13881.8	13981.5	14290.3	14970.3	15207.1	15507.6	14495.3
42.5°	12667.3	12803.0	13336.1	13941.3	14406.6	14901.0	15467.4	16237.4	16452.1	16637.6	15463.3
45°	12449.8	12553.7	13107.6	14013.3	14856.7	15837.2	16490.8	17413.1	17607.0	17486.5	16219.4
47.5°	12160.4	12239.3	12857.0	13898.4	15216.8	16676.4	17428.4	18356.2	18497.5	18216.4	16733.2
50°	11758.8	11853.0	12542.6	13740.5	15481.3	17378.5	18181.7	19065.3	19184.4	18670.6	17237.3
52.5°	11263.0	11380.7	12182.6	13471.9	15679.3	17902.0	18708.0	19537.5	19658.0	19324.2	17636.1
55°	10700.8	10864.2	11689.5	13145.0	15693.2	18180.4	19036.2	20229.9	20401.7	20041.6	17985.1
57.5°	10130.2	10235.4	11109.3	12645.1	15432.8	18273.1	19429.5	21035.9	21286.6	20736.8	18365.9
60°	9433.6	9534.7	10400.2	11976.2	14913.5	18415.8	20216.1	22189.5	22388.9	21546.9	18690.0
62.5°	8609.6	8724.6	9509.8	11060.8	14144.9	18473.9	21017.9	23416.5	23645.0	22283.7	18876.9
65°	7562.7	7690.1	8406.1	9952.9	13046.7	18061.3	21364.1	24323.6	24441.3	22848.7	18796.6
67.5°	6418.8	6524.0	7094.6	8575.0	11527.5	16985.2	21182.7	24658.7	24777.8	23232.3	18316.1
69°	5543.6	5705.6	6254.0	7593.1	10434.9	16000.6	20905.7	24934.3	25115.7	23189.4	17684.6
70°	4842.8	5024.2	5520.0	6727.6	9507.0	14978.6	20390.6	24725.2	24776.4	22775.3	17115.4
72.5°	3060.5	3120.1	3345.8	4149.0	6688.8	11643.8	17843.8	21949.9	21936.1	20320.0	14941.2
75°	1512.3	1589.8	2017.7	2329.3	3296.0	7489.3	14045.2	18028.0	18030.8	17150.0	12283.6
77.5°	908.5	941.7	1051.1	1501.2	1883.4	3361.0	9533.3	14272.3	14491.1	13957.9	8839.5
80°	626.0	609.3	641.2	738.1	1013.7	1767.1	3919.1	8068.2	8305.0	7659.6	3765.4
82.5°	493.0	479.2	488.9	513.8	483.3	818.4	1657.7	2412.4	2341.8	2064.8	1447.2
85°	344.8	317.1	335.1	325.4	288.0	480.5	806.0	1002.6	995.7	1028.9	788.0
87.5°	109.4	96.9	99.7	96.9	80.3	170.3	289.4	390.5	360.1	365.6	277.0
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°	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9	6260.9
2.5°	6312.2	6301.1	6313.5	6378.6	6363.4	6420.2	6434.0	6526.8	6531.0	6522.7	6564.2
5°	6389.7	6400.8	6447.9	6551.7	6586.4	6708.2	6763.6	6877.2	6888.3	6892.4	6932.6
7.5°	6501.9	6521.3	6622.4	6758.1	6823.2	6982.4	7065.5	7205.4	7215.1	7230.3	7276.0
10°	6668.1	6695.8	6776.1	6961.7	6982.4	7108.5	7184.6	7305.1	7296.8	7317.6	7359.1
12.5°	6835.6	6850.9	6911.8	7039.2	7025.4	7148.6	7181.8	7260.8	7255.2	7253.9	7284.3
15°	7015.7	6989.4	6997.7	7046.1	6994.9	7071.1	7047.5	7105.7	7029.5	6999.0	7019.8
17.5°	7206.8	7143.1	7061.4	7025.4	6928.4	6916.0	6835.6	6807.9	6755.3	6738.7	6755.3
20°	7433.9	7298.2	7100.1	6996.3	6784.4	6675.0	6521.3	6431.3	6309.4	6319.1	6342.6
22.5°	7665.2	7474.1	7174.9	6896.6	6597.4	6375.9	6069.8	5988.1	5828.8	5781.8	5828.8
25°	7949.1	7692.9	7212.3	6807.9	6314.9	5920.2	5610.0	5320.6	5200.1	5082.4	5126.7
27.5°	8321.6	7975.4	7348.0	6698.5	5995.0	5468.8	4975.8	4601.9	4452.3	4326.3	4334.6
30°	8804.9	8353.4	7399.3	6468.6	5610.0	4849.8	4229.3	3813.9	3626.9	3575.7	3553.5
32.5°	9698.1	8962.8	7490.7	6301.1	5130.9	4176.7	3415.0	2969.1	2851.4	2873.6	2945.6
35°	11281.0	10238.2	7767.6	5950.7	4601.9	3442.7	2653.4	2308.6	2327.9	2368.1	2359.8
37.5°	12646.5	11389.0	8228.8	5704.2	3955.1	2607.7	2003.9	1821.1	1937.4	2016.3	2013.6
40°	13574.3	12228.3	8832.6	5243.1	3138.1	1858.5	1474.9	1373.8	1522.0	1690.9	1720.0
42.5°	14495.3	12991.3	9124.8	4834.5	2203.3	1311.5	1067.7	1094.0	1283.8	1443.0	1472.1
45°	15157.2	13545.2	9253.6	4106.1	1407.0	1004.0	932.0	1028.9	1233.9	1359.9	1373.8
47.5°	15643.3	13962.1	9113.7	3322.3	1035.9	918.2	919.5	1042.8	1249.1	1391.8	1397.3
50°	16072.6	14255.7	8550.1	2591.1	932.0	889.1	937.5	1083.0	1293.5	1437.5	1433.3
52.5°	16366.2	14341.5	7866.0	2123.0	902.9	872.5	952.8	1120.3	1307.3	1404.2	1395.9
55°	16561.5	14212.7	7339.7	1747.7	878.0	871.1	977.7	1167.4	1321.1	1359.9	1340.5
57.5°	16681.9	13952.4	6895.2	1502.6	857.2	871.1	1005.4	1185.4	1372.4	1443.0	1420.9
60°	16645.9	13836.1	6292.8	1301.8	828.1	873.8	1020.6	1211.7	1578.7	1744.9	1749.1
62.5°	16573.9	13609.0	5704.2	1142.5	793.5	890.5	1040.0	1364.1	1938.8	1940.2	1870.9
65°	16231.9	12924.8	4848.4	998.5	757.5	894.6	1044.2	1614.7	2174.2	1991.4	1901.4
67.5°	15290.2	11923.6	3847.1	864.1	717.4	869.7	1040.0	1580.1	1756.0	1571.8	1526.1
69°	14468.9	11055.3	3214.2	783.8	688.3	844.8	1044.2	1515.0	1625.8	1516.4	1474.9
70°	13870.7	10351.8	2730.9	735.4	662.0	832.3	1044.2	1491.5	1607.8	1504.0	1463.8
72.5°	11905.6	8131.9	1636.9	613.5	585.8	783.8	1034.5	1455.5	1621.7	1533.0	1480.4
75°	9120.6	5914.7	952.8	504.1	493.0	703.5	983.2	1433.3	1668.7	1534.4	1419.5
77.5°	5844.1	2729.5	710.4	409.9	400.2	609.3	918.2	1361.3	1714.4	1609.2	1463.8
80°	2030.2	1238.1	530.4	324.1	310.2	498.5	804.6	1227.0	1632.7	1643.8	1534.4
82.5°	1113.4	815.7	375.3	241.0	228.5	313.0	626.0	1058.0	1510.9	1627.2	1635.5
85°	612.1	459.8	246.5	155.1	174.5	268.7	433.5	822.6	1215.9	1413.9	1476.3
87.5°	247.9	166.2	96.9	60.9	72.0	106.6	146.8	421.0	734.0	947.2	1042.8
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)