

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: P232702

Luminaire Tested: **CTN-10-9-D-E1-T3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232702
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-10-9-D-E1-T3
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 4000K LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 92755 lumens
Efficiency: N/A
Efficacy: 122.0 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B5 - U0 - G5

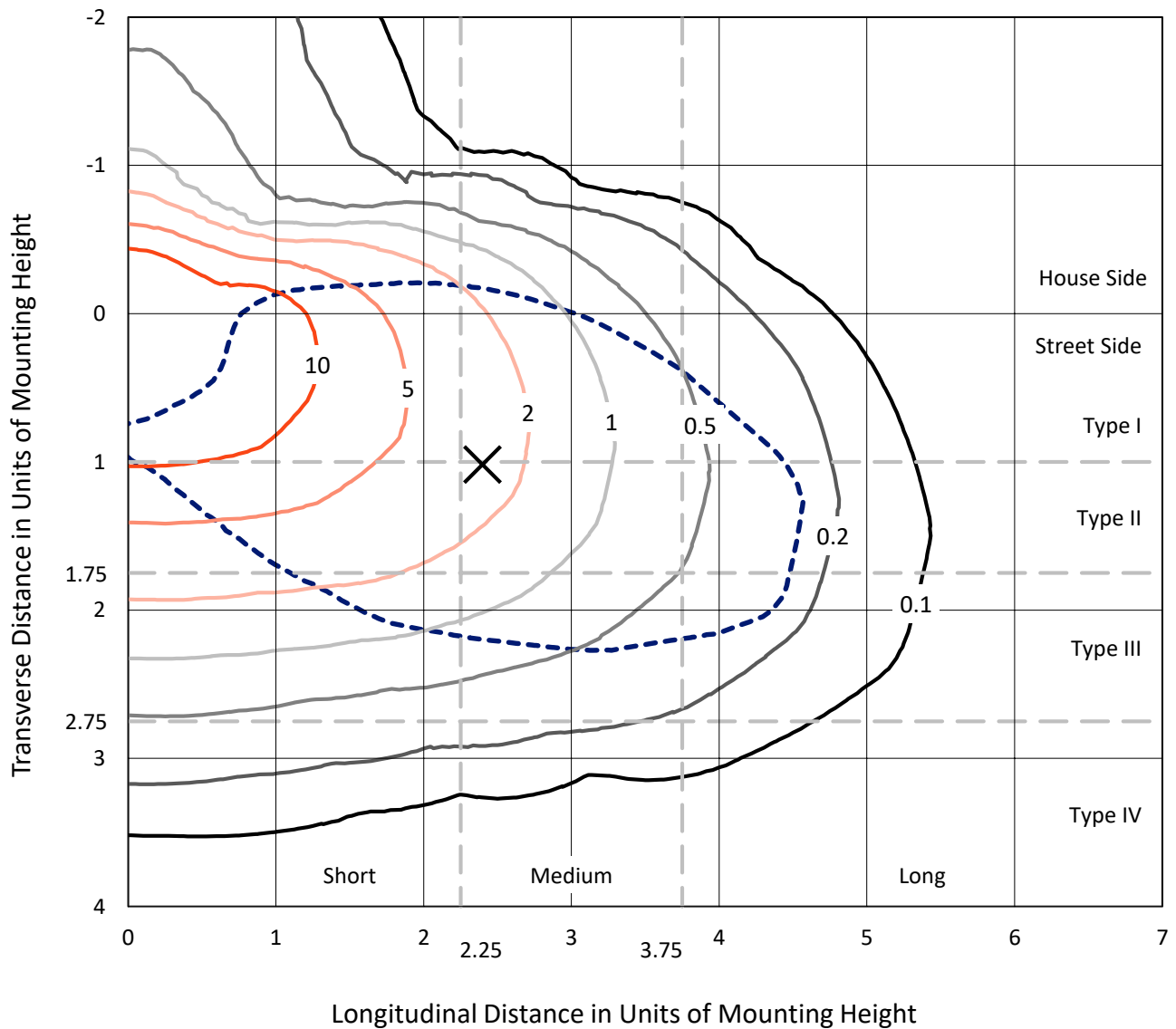
Input Watts (W): 760
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P232702
 CATALOG NUMBER: CTN-10-9-D-E1-T3

Iso-Footcandle Lines of Horizontal Illumination

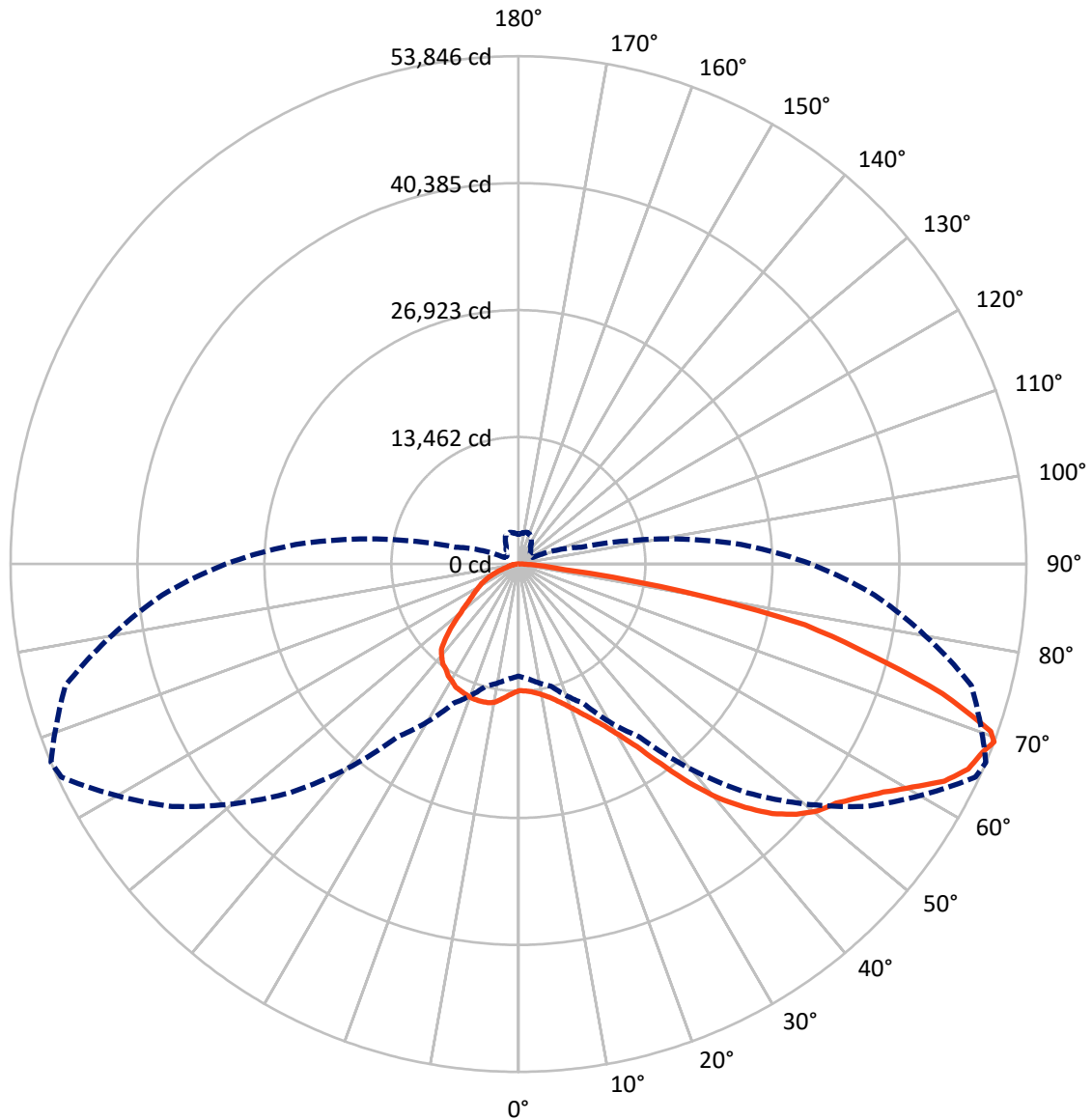
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 17.7 fc
 Type III - Medium - Semi-Cutoff

REPORT NUMBER: P232702
CATALOG NUMBER: CTN-10-9-D-E1-T3

Luminous Intensity Polar Plot



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

REPORT NUMBER: P232702

CATALOG NUMBER: CTN-10-9-D-E1-T3

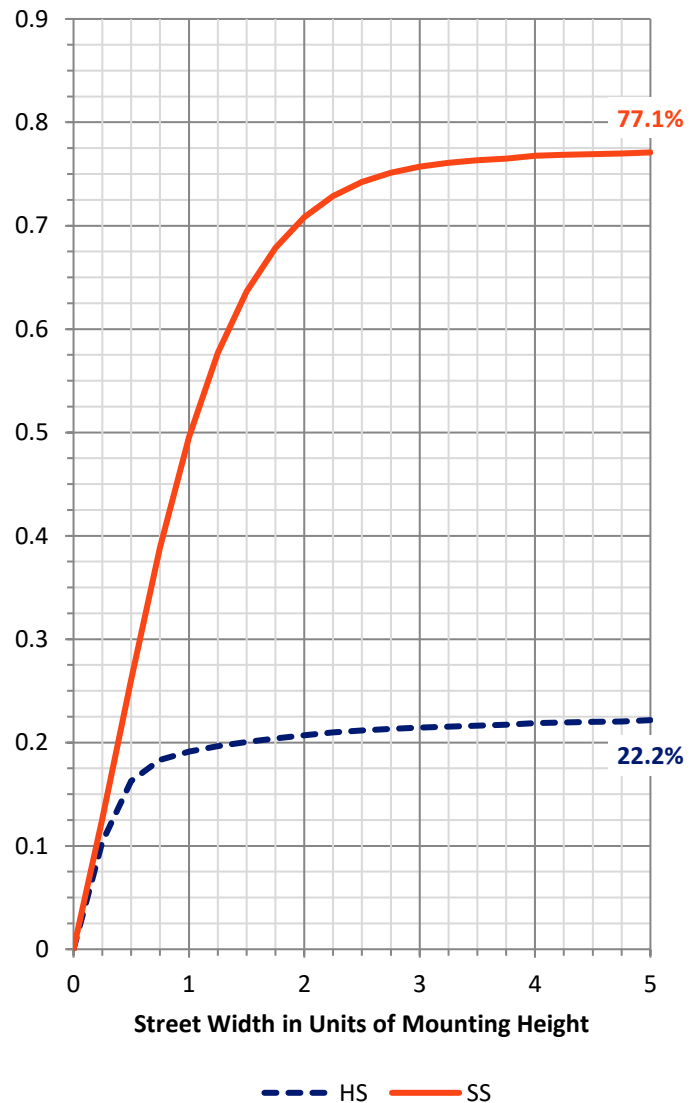
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	21099.8	0.0	21099.8
	% Fixture	22.7	0.0	22.7
Street Side	Lumens	71655.2	0.0	71655.2
	% Fixture	77.3	0.0	77.3
Total	Lumens	92755.0	0.0	92755.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1362.6	1.5
10°-20°	4376.3	4.7
20°-30°	7610.3	8.2
30°-40°	11464.0	12.4
40°-50°	15832.9	17.1
50°-60°	18896.6	20.4
60°-70°	19901.6	21.5
70°-80°	11674.5	12.6
80°-90°	1636.2	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°	92755.0	100.0
0°-180°	92755.0	100.0



REPORT NUMBER: P232702

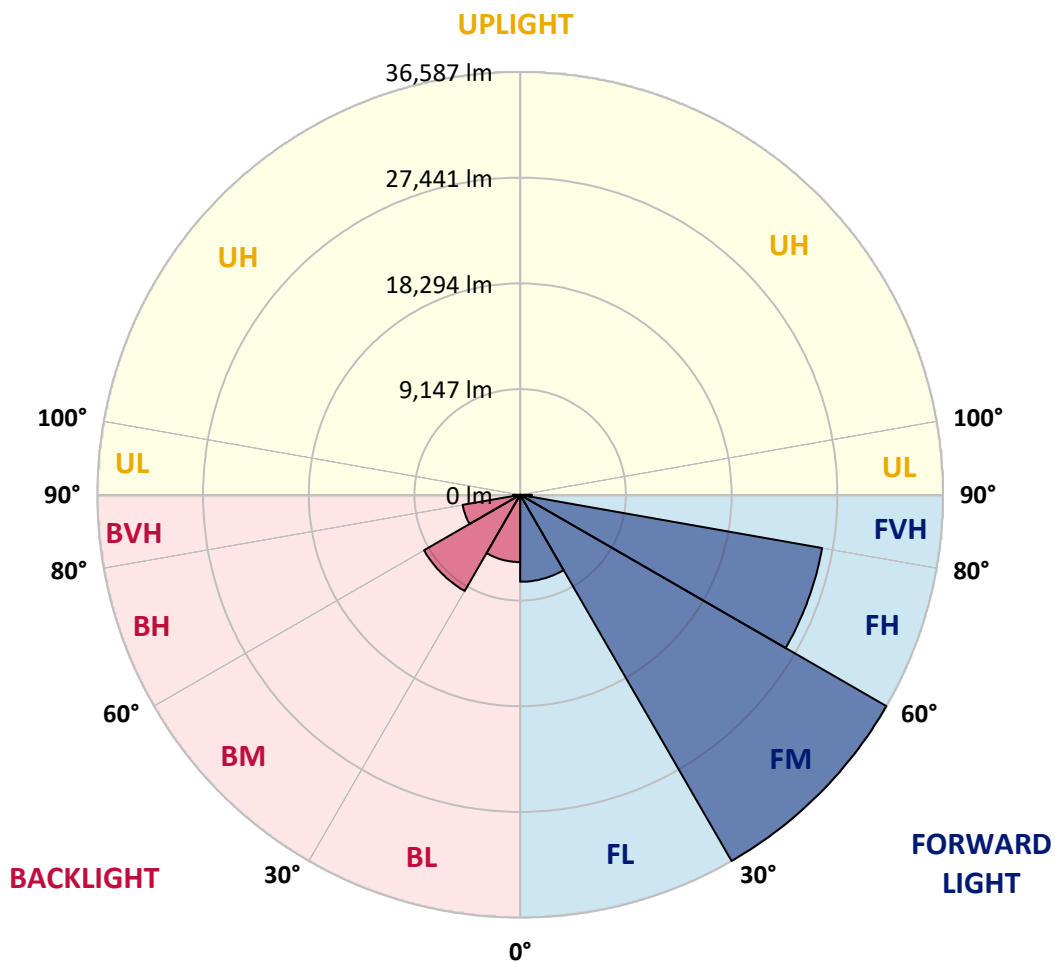
CATALOG NUMBER: CTN-10-9-D-E1-T3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	7527.0	8.1			
FM	(30°-60°)	36587.5	39.4			
FH	(60°-80°)	26523.9	28.6			G5
FVH	(80°-90°)	1016.9	1.1			G5
BL	(0°-30°)	5822.2	6.3	B5		
BM	(30°-60°)	9606.1	10.4	B5		
BH	(60°-80°)	5052.1	5.4	B5		G5
BVH	(80°-90°)	619.3	0.7			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 III Medium





REPORT NUMBER: P232702

CATALOG NUMBER: CTN-10-9-D-E1-T3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0
2.5°	13479.4	13497.2	13479.4	13449.7	13351.7	13396.3	13357.7	13482.4	13473.5	13425.9	13512.0
5°	13794.1	13814.9	13776.3	13752.5	13601.1	13621.9	13538.8	13607.1	13583.3	13503.1	13636.7
7.5°	14307.7	14328.5	14281.0	14248.4	14034.6	13987.1	13835.7	13856.5	13811.9	13684.3	13838.6
10°	14999.5	15017.3	14937.2	14857.0	14583.9	14468.1	14215.7	14174.1	14108.8	13984.1	14141.5
12.5°	15744.8	15771.5	15673.5	15569.6	15251.9	15061.9	14702.6	14575.0	14494.8	14343.4	14515.6
15°	16543.4	16576.1	16475.1	16356.4	16006.0	15712.1	15263.8	15070.8	14993.6	14803.6	14910.5
17.5°	17591.5	17582.6	17499.5	17336.2	16917.5	16487.0	15934.8	15646.8	15593.3	15409.3	15436.0
20°	18805.8	18764.3	18687.1	18461.4	18007.2	17472.7	16751.3	16386.1	16332.6	16178.2	16014.9
22.5°	20124.1	20082.5	20008.3	19720.3	19272.0	18571.3	17707.3	17276.8	17205.5	17012.5	16739.4
25°	21421.5	21377.0	21335.4	21062.3	20625.8	19830.1	18791.0	18241.7	18209.1	18013.1	17511.3
27.5°	22769.5	22742.8	22754.6	22520.1	22083.6	21258.2	20079.5	19482.8	19426.4	19177.0	18494.1
30°	24156.0	24162.0	24274.8	24025.4	23624.6	22793.2	21623.4	21014.8	21023.7	20801.0	19803.4
32.5°	25397.1	25403.0	25655.4	25530.7	25311.0	24482.6	23407.8	22980.3	23066.4	23048.6	22027.2
35°	26293.7	26332.3	26896.4	27065.7	26982.5	26261.1	25613.8	25717.7	25990.9	26762.8	25691.0
37.5°	27136.9	27151.8	27873.2	28265.2	28573.9	28140.5	28009.8	28995.5	29426.0	30494.9	28909.4
40°	27380.4	27585.2	28496.7	29043.0	29761.5	29975.3	30637.4	32095.2	32602.9	33247.2	31076.8
42.5°	27157.7	27448.7	28591.7	29889.2	30886.8	31946.7	33161.1	34811.9	35272.1	35669.9	33152.2
45°	26691.6	26914.2	28101.9	30043.6	31851.7	33953.8	35355.2	37332.6	37748.2	37489.9	34773.3
47.5°	26071.0	26240.3	27564.5	29797.2	32623.7	35753.0	37365.2	39354.5	39657.3	39054.6	35874.8
50°	25210.0	25411.9	26890.5	29458.7	33190.8	37258.3	38980.4	40874.6	41130.0	40028.4	36955.5
52.5°	24147.1	24399.5	26118.5	28882.7	33615.3	38380.6	40108.6	41887.1	42145.4	41429.8	37810.6
55°	22941.7	23292.0	25061.6	28182.0	33645.0	38977.4	40812.3	43371.6	43739.7	42967.8	38558.8
57.5°	21718.4	21944.1	23817.5	27110.2	33086.9	39176.3	41655.5	45099.5	45636.9	44458.2	39375.3
60°	20225.0	20441.8	22297.4	25676.2	31973.5	39482.1	43341.9	47572.7	48000.3	46195.1	40070.0
62.5°	18458.5	18704.9	20388.3	23713.6	30325.7	39606.8	45060.9	50203.3	50693.2	47774.6	40470.8
65°	16213.9	16487.0	18022.0	21338.4	27971.2	38722.1	45803.2	52148.0	52400.4	48986.0	40298.6
67.5°	13761.4	13987.1	15210.3	18384.2	24714.2	36415.1	45414.3	52866.5	53121.9	49808.4	39268.4
69°	11885.0	12232.4	13408.1	16279.2	22371.6	34304.2	44820.5	53457.4	53846.3	49716.4	37914.5
70°	10382.7	10771.6	11834.5	14423.5	20382.4	32113.0	43716.0	53009.0	53118.9	48828.6	36694.2
72.5°	6561.6	6689.2	7173.2	8895.2	14340.4	24963.6	38255.9	47059.1	47029.4	43564.6	32032.8
75°	3242.2	3408.4	4325.9	4993.9	7066.3	16056.5	30111.9	38650.8	38656.8	36768.5	26335.3
77.5°	1947.7	2018.9	2253.5	3218.4	4037.9	7205.8	20438.8	30598.8	31067.9	29924.8	18951.3
80°	1342.0	1306.4	1374.7	1582.5	2173.3	3788.5	8402.4	17297.6	17805.3	16421.7	8072.8
82.5°	1057.0	1027.3	1048.1	1101.5	1036.2	1754.7	3553.9	5172.0	5020.6	4426.8	3102.6
85°	739.3	679.9	718.5	697.7	617.6	1030.3	1728.0	2149.6	2134.7	2206.0	1689.4
87.5°	234.6	207.8	213.8	207.8	172.2	365.2	620.5	837.3	771.9	783.8	593.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P232702

CATALOG NUMBER: CTN-10-9-D-E1-T3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0	13423.0
2.5°	13532.8	13509.1	13535.8	13675.3	13642.7	13764.4	13794.1	13993.0	14001.9	13984.1	14073.2
5°	13699.1	13722.9	13823.8	14046.5	14120.7	14382.0	14500.7	14744.2	14767.9	14776.9	14863.0
7.5°	13939.6	13981.2	14197.9	14488.9	14628.4	14969.8	15148.0	15447.9	15468.6	15501.3	15599.3
10°	14295.9	14355.3	14527.5	14925.3	14969.8	15240.0	15403.3	15661.6	15643.8	15688.3	15777.4
12.5°	14655.1	14687.8	14818.4	15091.6	15061.9	15326.1	15397.4	15566.6	15554.7	15551.8	15617.1
15°	15041.1	14984.7	15002.5	15106.4	14996.6	15159.9	15109.4	15234.1	15070.8	15005.5	15050.0
17.5°	15450.8	15314.2	15139.1	15061.9	14854.1	14827.3	14655.1	14595.7	14482.9	14447.3	14482.9
20°	15937.7	15646.8	15222.2	14999.5	14545.3	14310.7	13981.2	13788.2	13526.9	13547.7	13598.2
22.5°	16433.6	16023.8	15382.5	14785.8	14144.5	13669.4	13013.3	12838.1	12496.6	12395.7	12496.6
25°	17042.2	16493.0	15462.7	14595.7	13538.8	12692.6	12027.5	11407.0	11148.7	10896.3	10991.3
27.5°	17840.9	17098.6	15753.7	14361.2	12852.9	11724.7	10667.7	9866.1	9545.4	9275.2	9293.1
30°	18877.1	17909.2	15863.5	13868.3	12027.5	10397.5	9067.4	8176.7	7775.9	7666.0	7618.5
32.5°	20792.1	19215.6	16059.5	13509.1	11000.3	8954.6	7321.6	6365.6	6113.2	6160.7	6315.1
35°	24185.7	21950.0	16653.3	12757.9	9866.1	7381.0	5688.7	4949.4	4990.9	5077.0	5059.2
37.5°	27113.2	24417.3	17642.0	12229.4	8479.5	5590.7	4296.2	3904.3	4153.7	4322.9	4317.0
40°	29102.4	26216.5	18936.5	11240.7	6727.8	3984.4	3162.0	2945.3	3263.0	3625.2	3687.5
42.5°	31076.8	27852.5	19562.9	10364.9	4723.7	2811.7	2289.1	2345.5	2752.3	3093.7	3156.1
45°	32496.0	29040.1	19839.0	8803.2	3016.5	2152.5	1998.2	2206.0	2645.4	2915.6	2945.3
47.5°	33538.1	29933.7	19539.2	7122.7	2220.8	1968.5	1971.4	2235.7	2678.1	2983.9	2995.7
50°	34458.5	30563.2	18330.8	5555.1	1998.2	1906.1	2010.0	2321.8	2773.1	3081.9	3072.9
52.5°	35088.0	30747.3	16864.1	4551.5	1935.8	1870.5	2042.7	2401.9	2802.8	3010.6	2992.8
55°	35506.6	30471.1	15735.9	3746.9	1882.4	1867.5	2096.1	2502.9	2832.5	2915.6	2874.0
57.5°	35764.9	29913.0	14782.8	3221.4	1837.8	1867.5	2155.5	2541.5	2942.3	3093.7	3046.2
60°	35687.7	29663.6	13491.3	2790.9	1775.5	1873.5	2188.2	2597.9	3384.7	3741.0	3749.9
62.5°	35533.3	29176.6	12229.4	2449.4	1701.3	1909.1	2229.7	2924.5	4156.6	4159.6	4011.2
65°	34800.0	27709.9	10394.6	2140.7	1624.1	1918.0	2238.6	3461.9	4661.4	4269.5	4076.5
67.5°	32781.0	25563.3	8248.0	1852.7	1538.0	1864.5	2229.7	3387.7	3764.7	3369.8	3271.9
69°	31020.4	23701.8	6891.1	1680.5	1475.6	1811.1	2238.6	3248.1	3485.6	3251.1	3162.0
70°	29737.8	22193.5	5854.9	1576.6	1419.2	1784.4	2238.6	3197.6	3447.0	3224.4	3138.3
72.5°	25524.7	17434.1	3509.4	1315.3	1255.9	1680.5	2217.9	3120.4	3476.7	3286.7	3173.9
75°	19554.0	12680.7	2042.7	1080.7	1057.0	1508.3	2108.0	3072.9	3577.7	3289.7	3043.3
77.5°	12529.3	5852.0	1523.1	878.8	858.0	1306.4	1968.5	2918.6	3675.7	3450.0	3138.3
80°	4352.6	2654.3	1137.1	694.8	665.1	1068.9	1725.0	2630.6	3500.5	3524.2	3289.7
82.5°	2387.1	1748.8	804.6	516.6	489.9	671.0	1342.0	2268.3	3239.2	3488.6	3506.4
85°	1312.3	985.7	528.5	332.5	374.1	576.0	929.3	1763.6	2606.8	3031.4	3165.0
87.5°	531.5	356.3	207.8	130.6	154.4	228.6	314.7	902.6	1573.6	2030.8	2235.7
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)