

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: P237565

Luminaire Tested: **CTN-10-9-D-E1-T2-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237565
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-25)
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-T2-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 4000K LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 84047 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B4 - U0 - G5

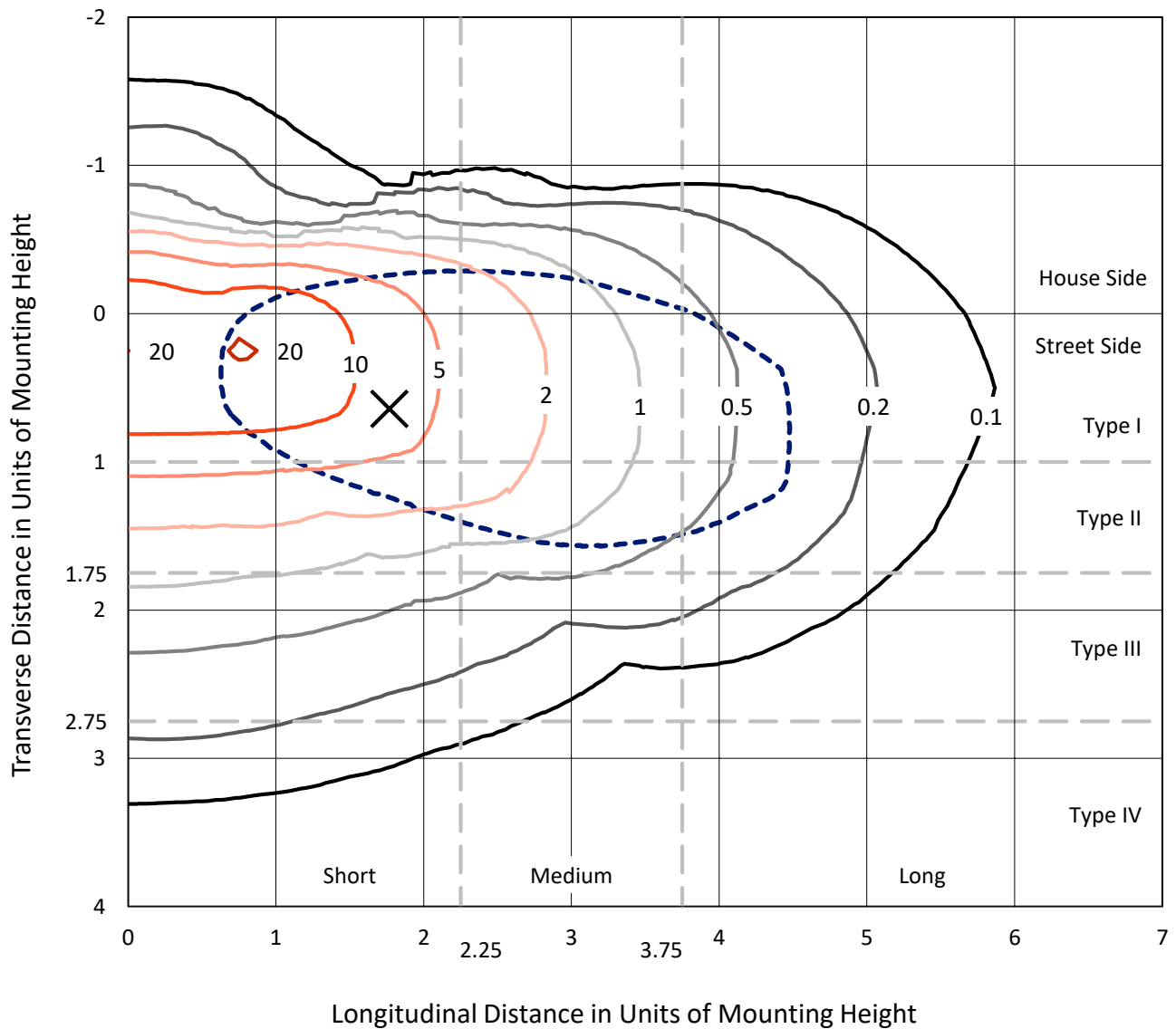
Input Watts (W): 760
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P237565
 CATALOG NUMBER: CTN-10-9-D-E1-T2-HSS

Iso-Footcandle Lines of Horizontal Illumination

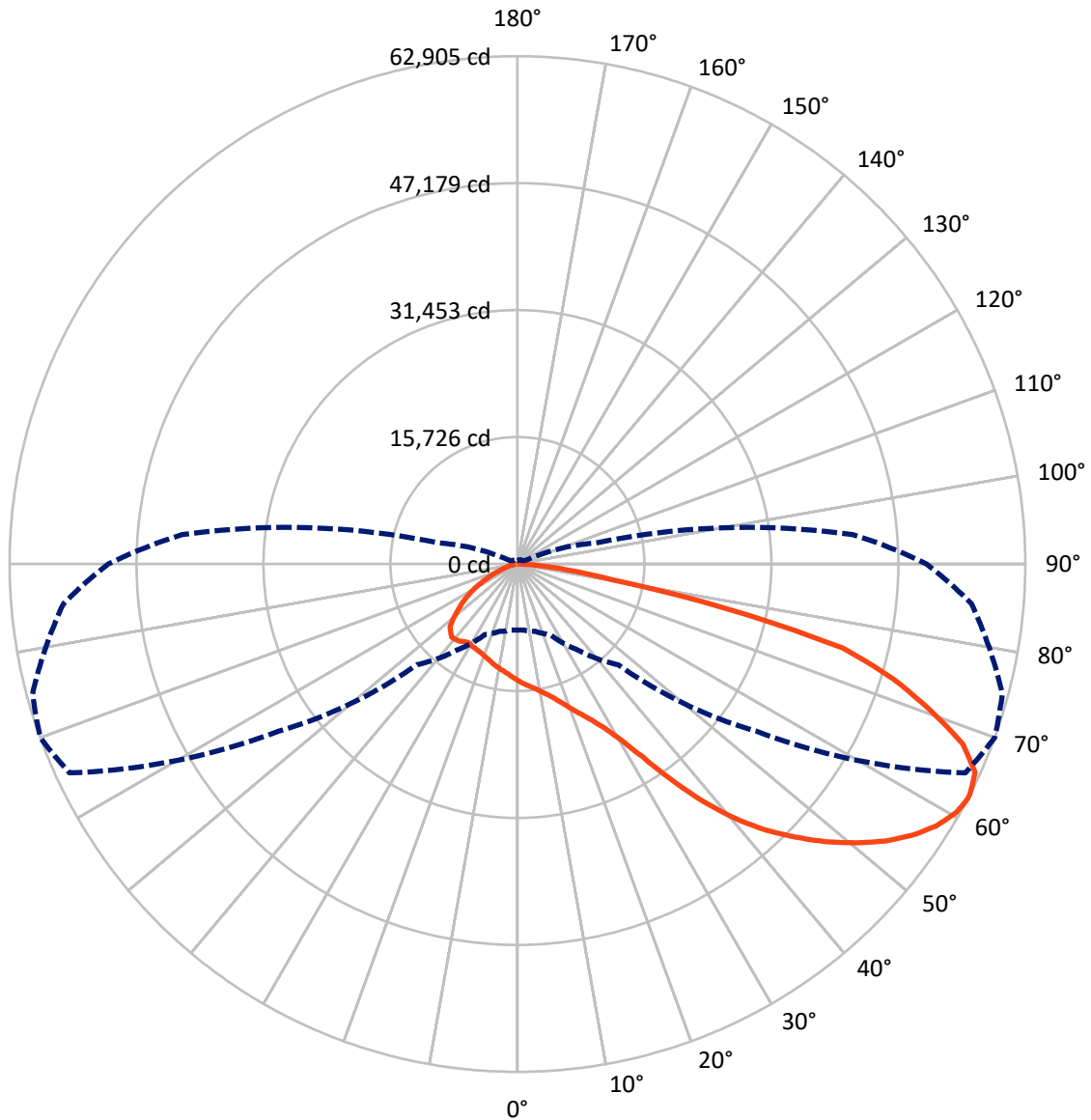
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 20.7 fc
 Type II - Short - Non-Cutoff

REPORT NUMBER: P237565
CATALOG NUMBER: CTN-10-9-D-E1-T2-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 62-Deg Vertical

REPORT NUMBER: P237565

CATALOG NUMBER: CTN-10-9-D-E1-T2-HSS

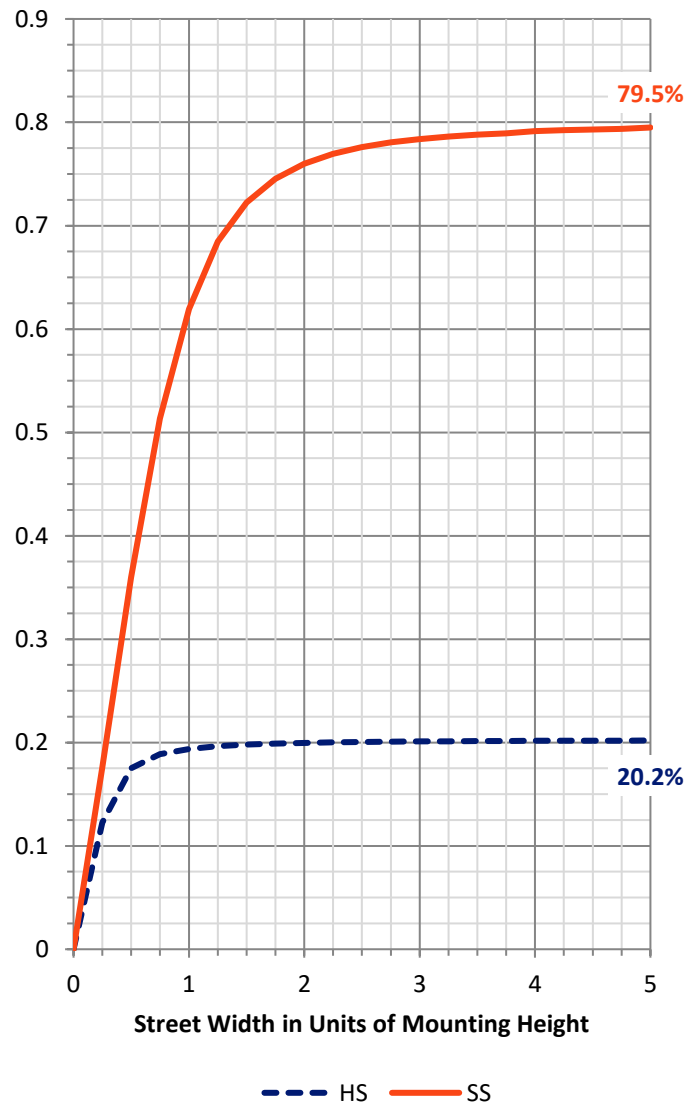
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	17192.6	0.0	17192.6
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	66854.4	0.0	66854.4
	% Fixture	79.5	0.0	79.5
Total	Lumens	84047.0	0.0	84047.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1377.3	1.6
10°-20°	4190.4	5.0
20°-30°	7055.0	8.4
30°-40°	10652.8	12.7
40°-50°	14938.6	17.8
50°-60°	17459.6	20.8
60°-70°	16939.1	20.2
70°-80°	9902.5	11.8
80°-90°	1531.8	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°	84047.0	100.0
0°-180°	84047.0	100.0



REPORT NUMBER: P237565

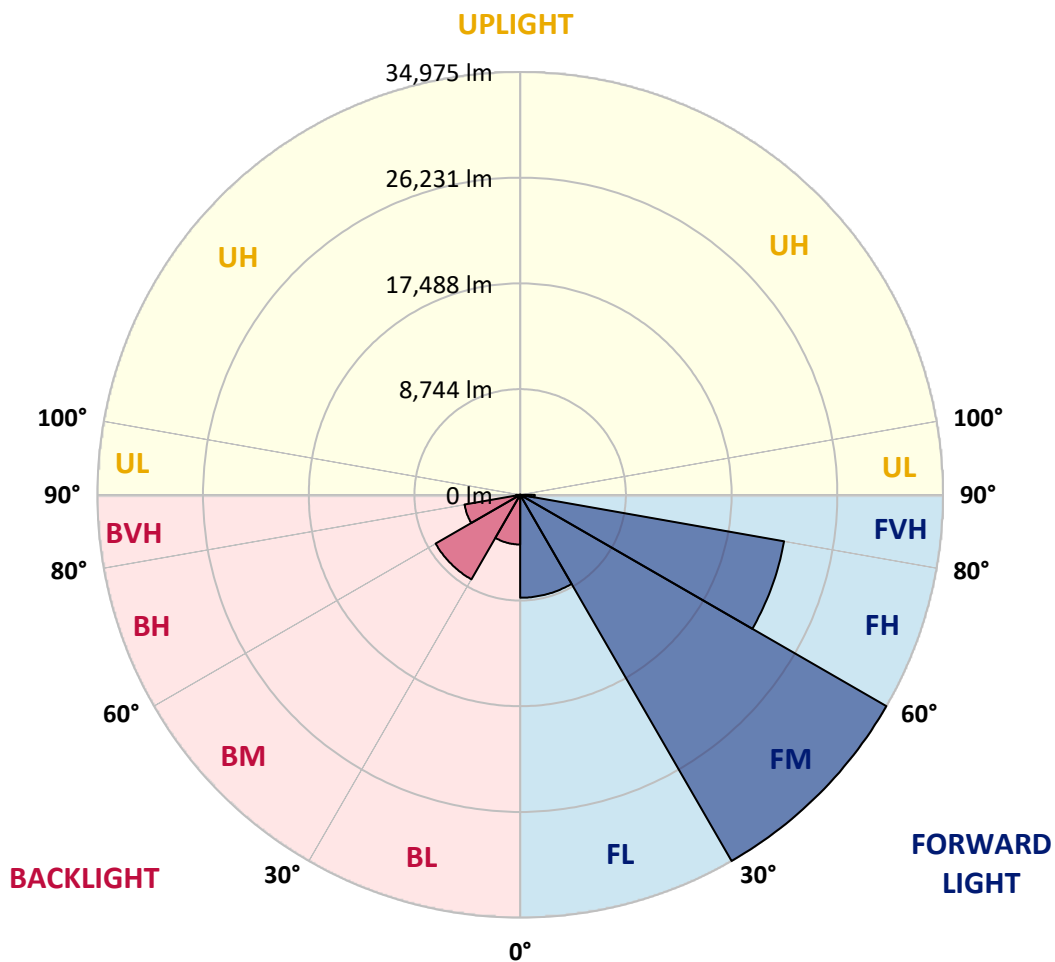
CATALOG NUMBER: CTN-10-9-D-E1-T2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	8512.1	10.1			
FM	(30°-60°)	34975.1	41.6			
FH	(60°-80°)	22166.9	26.4			G5
FVH	(80°-90°)	1200.4	1.4			G5
BL	(0°-30°)	4110.6	4.9	B4/5000		
BM	(30°-60°)	8075.9	9.6	B4/8500		
BH	(60°-80°)	4674.7	5.6	B4/5000		G4/5000
BVH	(80°-90°)	331.4	0.4			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 II Short





REPORT NUMBER: P237565

CATALOG NUMBER: CTN-10-9-D-E1-T2-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3
2.5°	15691.5	15587.5	15543.0	15608.3	15171.9	15180.8	14970.0	14937.3	14836.4	14693.9	14536.5
5°	16588.1	16466.4	16404.0	16442.6	15982.4	15902.3	15557.9	15388.6	15189.7	15011.5	14670.1
7.5°	17449.1	17324.4	17276.9	17256.2	16700.9	16579.2	16139.8	15839.9	15569.7	15341.1	14877.9
10°	18316.1	18188.4	18090.5	18117.2	17535.2	17318.5	16810.8	16398.1	16050.7	15753.8	15115.5
12.5°	19177.1	19022.7	18915.9	18915.9	18342.8	18132.0	17562.0	17033.5	16591.1	16217.0	15415.3
15°	20058.9	19857.0	19833.3	19833.3	19224.6	18969.3	18408.2	17823.2	17279.9	16798.9	15777.6
17.5°	20970.4	20715.1	20709.2	20747.8	20189.6	19901.6	19373.1	18826.8	18135.0	17526.3	16220.0
20°	21570.2	21341.6	21288.1	21403.9	20964.5	20777.5	20210.4	19827.4	19162.3	18437.8	16790.0
22.5°	22027.4	21887.9	21938.4	22128.4	21914.6	21754.3	21157.5	20813.1	20213.3	19471.1	17559.0
25°	22487.6	22395.6	22511.4	22846.9	22864.7	22909.2	22410.4	21971.0	21412.8	20750.7	18559.6
27.5°	22345.1	22318.4	22668.7	23360.5	23740.6	23942.5	23663.4	23509.0	22998.3	22300.6	19818.5
30°	22449.0	22383.7	22805.3	23681.2	24527.4	25112.3	25112.3	25462.6	25239.9	24539.3	21739.4
32.5°	22140.3	22018.5	22502.5	23758.4	25213.2	26350.4	26855.1	28096.2	28485.1	28232.8	25548.7
35°	20718.1	20810.1	21757.2	23449.6	25685.3	27561.8	28897.8	31558.1	32754.6	33039.7	29934.0
37.5°	19830.3	19868.9	20833.9	22944.9	25851.6	28752.3	31133.5	35554.5	37249.8	37425.0	33781.9
40°	18607.1	18752.6	19833.3	22267.9	25756.6	29758.9	33541.4	39494.4	41379.7	41234.3	37148.8
42.5°	17642.1	17683.7	18627.9	21193.1	25340.9	30560.5	35970.1	43072.1	45046.5	44639.8	40477.1
45°	16439.7	16516.9	17410.5	19857.0	24601.6	30967.3	38066.3	46427.1	48235.3	47727.6	43360.1
47.5°	14984.8	15323.3	16258.6	18417.1	23348.7	30925.7	39841.8	49330.9	51394.4	50613.5	46056.0
50°	12069.2	12481.9	14352.4	17119.6	21706.8	30343.8	41255.0	52528.5	54295.1	53508.3	48517.4
52.5°	10543.1	10623.3	11576.4	15661.8	19782.8	29043.3	42217.0	55171.0	57011.8	56183.5	50883.7
55°	9854.3	9937.4	10418.4	13301.4	18016.2	26739.3	42570.3	57691.7	59324.7	58374.6	52834.4
57.5°	9251.6	9278.3	9845.4	11249.8	16332.8	23704.9	41825.1	59793.8	61192.3	59900.7	54188.3
60°	8562.8	8669.6	9227.8	10270.0	14435.6	20180.7	39271.7	61138.8	62460.0	61311.0	55592.6
62°	8176.8	8203.5	8640.0	9661.3	12965.9	17633.2	36091.9	61216.0	62905.4	62178.0	56456.6
62.5°	8064.0	8081.8	8494.5	9506.9	12663.0	17128.5	35224.9	61153.7	62878.7	62329.4	56646.6
65°	7416.7	7458.3	7829.4	8776.5	11335.9	15160.0	31163.2	60135.3	62305.7	62074.1	56628.8
67.5°	6629.9	6641.8	7036.7	7888.8	9967.1	13310.3	26175.2	58187.6	59499.9	59200.0	54149.7
70°	5421.5	5638.2	6068.8	6819.9	8245.1	11041.9	19910.5	52121.8	54274.4	54571.3	49707.9
72.5°	4121.1	4106.2	4257.6	4780.2	6006.4	8482.6	13440.9	43671.9	48659.9	50266.1	44806.0
75°	2544.5	2642.5	3277.8	3696.5	4305.1	5982.6	8426.2	30400.2	41608.4	44384.4	39604.2
77.5°	1977.4	1995.2	2324.8	3049.2	3527.2	4239.8	5255.2	16564.4	26083.2	32986.2	30845.5
80°	1505.3	1538.0	1754.7	1912.1	2482.1	2583.1	3506.5	8568.7	11879.2	16638.6	20721.0
82.5°	908.5	959.0	1160.9	1252.9	1368.7	1294.5	1885.4	4622.8	6585.4	8515.3	10552.0
85°	457.2	549.3	772.0	730.4	620.5	573.0	807.6	2235.7	3147.2	4165.6	4842.5
87.5°	115.8	139.5	181.1	216.7	184.1	151.4	219.7	605.7	623.5	596.8	1671.6
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: P237565

CATALOG NUMBER: CTN-10-9-D-E1-T2-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3	14459.3
2.5°	14483.1	14361.3	14138.6	14011.0	13693.3	13571.6	13342.9	13426.1	13375.6	13325.1	13328.1
5°	14506.8	14287.1	13862.5	13556.7	13096.5	12862.0	12562.1	12514.6	12383.9	12303.8	12312.7
7.5°	14557.3	14242.6	13642.8	13155.9	12508.6	12140.5	11739.6	11671.4	11475.4	11386.3	11398.2
10°	14685.0	14313.8	13500.3	12784.8	12054.4	11543.7	11074.6	10923.2	10736.1	10635.2	10629.2
12.5°	14880.9	14420.7	13298.4	12502.7	11614.9	10952.8	10412.5	10169.0	9901.8	9812.7	9821.6
15°	15192.7	14557.3	13129.2	12113.8	11083.5	10394.7	9726.6	9432.7	9150.6	9046.7	9037.8
17.5°	15572.7	14682.0	13010.4	11656.5	10623.3	9797.9	9210.0	8809.2	8334.1	8265.9	8191.6
20°	15949.8	14931.4	12903.5	11324.0	10077.0	9198.1	8429.2	8019.4	7339.5	7084.2	6992.1
22.5°	16499.0	15326.3	12888.7	10929.1	9527.7	8542.0	7505.8	6843.7	6095.5	5662.0	5567.0
25°	17232.4	15759.8	12927.3	10629.2	8913.1	7707.7	6309.2	5353.2	4640.6	4150.7	4049.8
27.5°	18185.5	16350.6	13043.1	10299.7	8354.9	6707.1	4967.2	3984.5	3381.8	2972.0	2877.0
30°	19589.8	17342.3	13224.2	9993.8	7541.4	5403.7	3651.9	2871.1	2402.0	2149.6	2146.6
32.5°	22867.7	19557.2	13328.1	9613.8	6784.3	4085.4	2627.6	2078.3	1704.2	1609.2	1689.4
35°	26626.5	22695.5	14129.7	9204.1	5599.6	3004.7	1876.4	1478.6	1324.2	1348.0	1392.5
37.5°	30094.4	25712.0	15353.0	8539.0	4483.3	2116.9	1348.0	1175.7	1143.1	1229.2	1309.4
40°	33164.4	28318.9	16401.1	7808.6	3171.0	1478.6	1080.7	1086.7	1054.0	1092.6	1119.3
42.5°	36175.0	30735.7	17508.5	6825.9	2114.0	1092.6	976.8	1030.3	991.7	997.6	959.0
45°	39167.8	33286.1	17986.5	5611.5	1416.2	947.1	914.5	976.8	973.9	950.1	893.7
47.5°	41750.9	35043.8	18592.2	4233.9	1054.0	861.0	869.9	914.5	944.2	902.6	875.9
50°	43971.7	36908.3	18126.1	2802.8	941.2	804.6	837.3	837.3	884.8	813.5	780.9
52.5°	46094.6	38764.0	16929.6	1846.8	864.0	766.0	798.7	777.9	798.7	727.4	718.5
55°	47368.3	39723.0	15483.6	1440.0	816.5	733.4	748.2	742.3	724.4	650.2	665.1
57.5°	48769.7	40827.5	13684.4	1208.4	795.7	694.8	697.7	688.8	635.4	584.9	587.9
60°	49889.1	41652.9	11760.4	1065.9	772.0	674.0	632.4	617.6	543.3	513.6	516.6
62°	50672.9	41691.5	10082.9	991.7	742.3	659.1	593.8	561.2	478.0	454.3	451.3
62.5°	50759.0	41546.0	9673.2	973.9	730.4	653.2	590.8	543.3	460.2	442.4	436.5
65°	50438.3	39927.9	7716.6	875.9	679.9	617.6	549.3	472.1	394.9	371.1	362.2
67.5°	48051.2	37030.1	5893.6	795.7	617.6	593.8	507.7	415.7	350.3	320.7	314.7
70°	43395.7	33107.9	4207.2	694.8	555.2	540.4	510.7	380.0	323.6	282.1	276.1
72.5°	38223.6	28933.5	2862.2	617.6	492.9	445.4	377.1	359.3	302.8	249.4	243.5
75°	32529.0	23042.8	2036.8	531.5	424.6	377.1	317.7	332.5	285.0	222.7	216.7
77.5°	24957.9	16947.4	1511.2	436.5	329.6	305.8	267.2	293.9	258.3	201.9	198.9
80°	17042.4	11704.0	1074.8	329.6	216.7	216.7	225.6	252.4	228.6	181.1	178.1
82.5°	9581.1	6160.8	635.4	237.5	148.5	148.5	175.2	204.9	190.0	157.4	154.4
85°	3969.6	2229.8	335.5	148.5	98.0	100.9	124.7	151.4	148.5	124.7	121.7
87.5°	1380.6	561.2	98.0	50.5	41.6	44.5	50.5	71.3	71.3	62.4	65.3
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)