

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: INVUE

Report Number: P368571

Luminaire Tested: **MSA-SA4C-830-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368571
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-830-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14421 lumens
Efficiency: N/A
Efficacy: 64.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G3

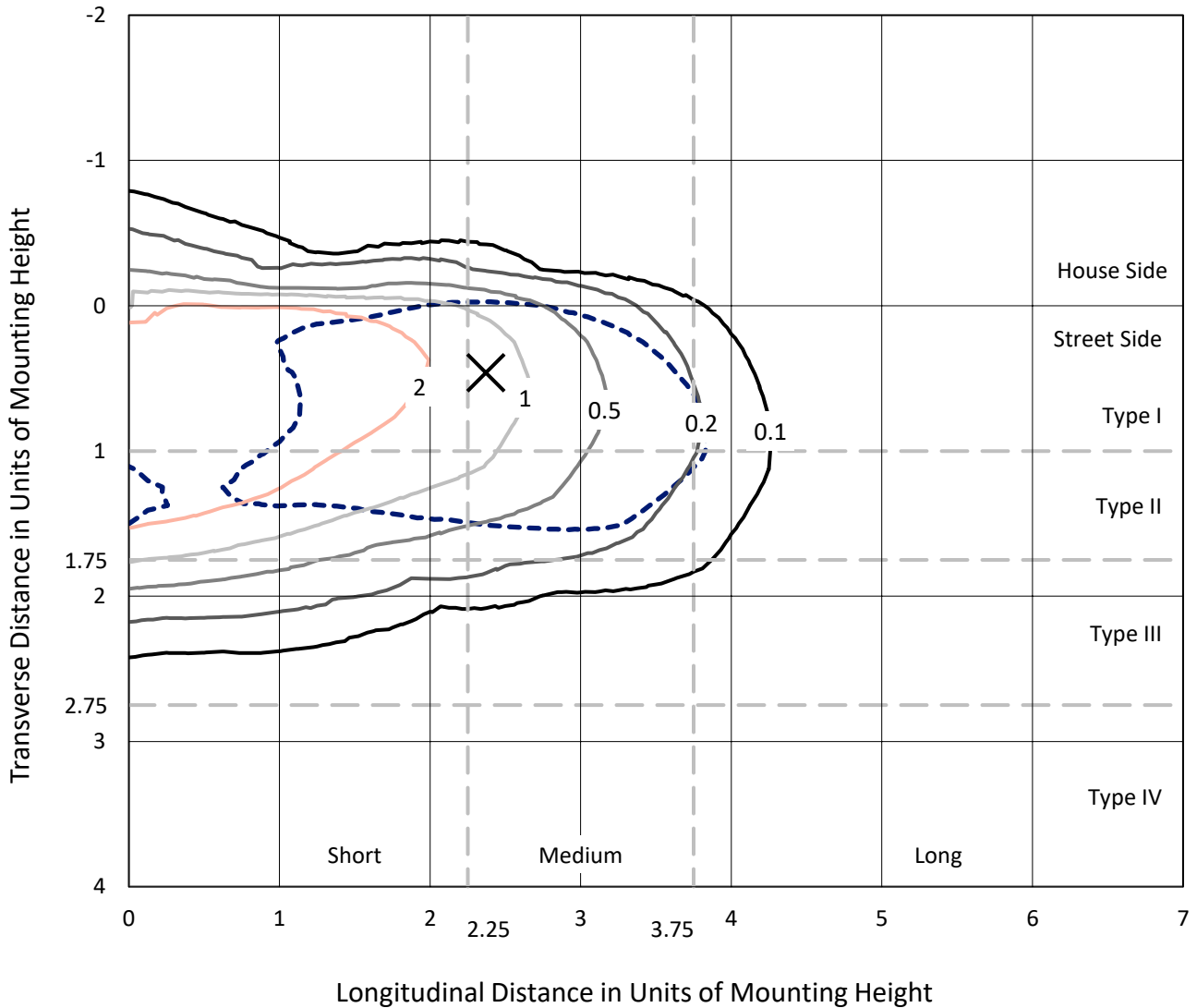
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368571
 CATALOG NUMBER: MSA-SA4C-830-U-T2-HSS

Iso-Footcandle Lines of Horizontal Illumination

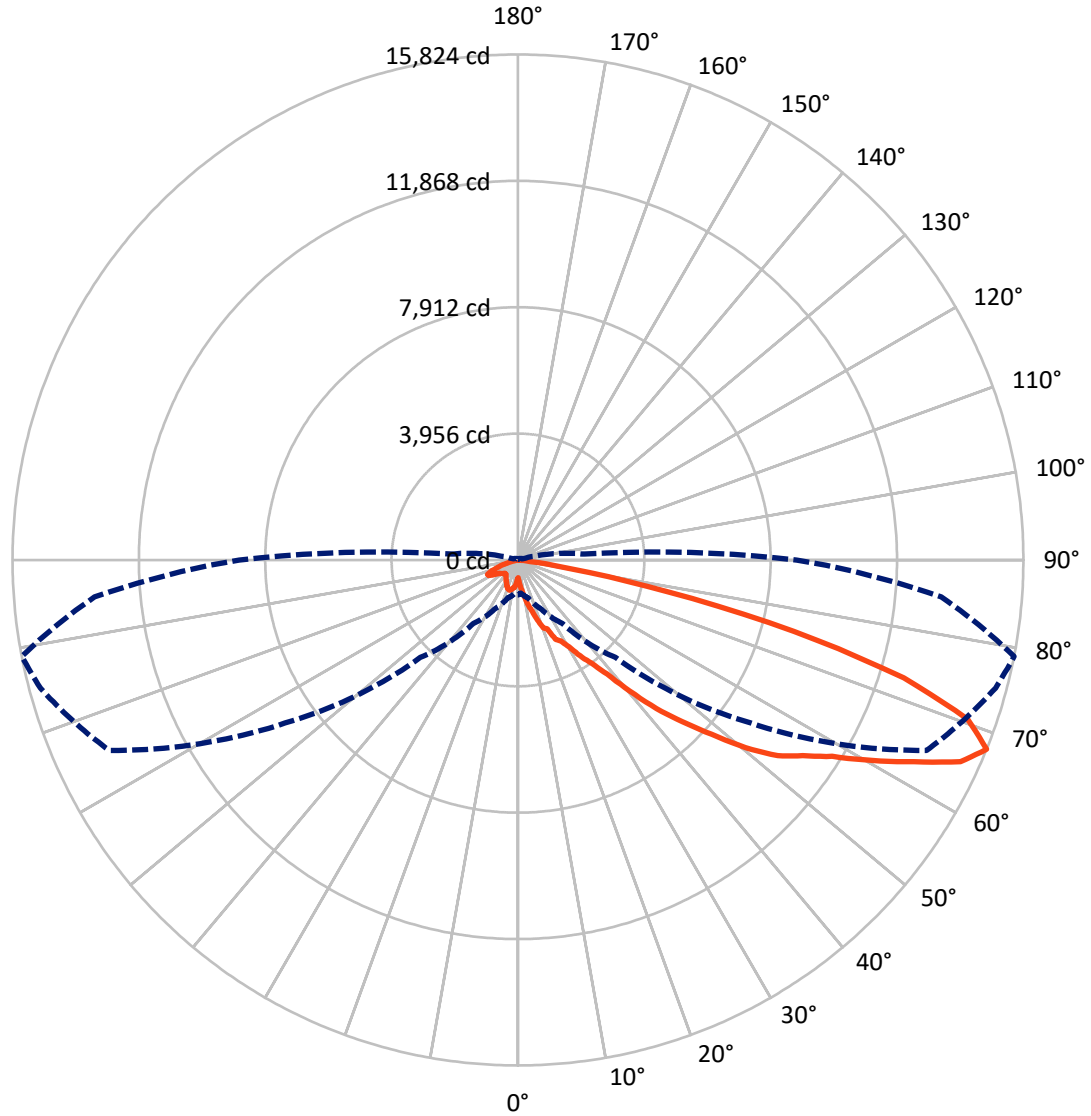
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type II - Medium - N/A

REPORT NUMBER: P368571
CATALOG NUMBER: MSA-SA4C-830-U-T2-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P368571
 CATALOG NUMBER: MSA-SA4C-830-U-T2-HSS

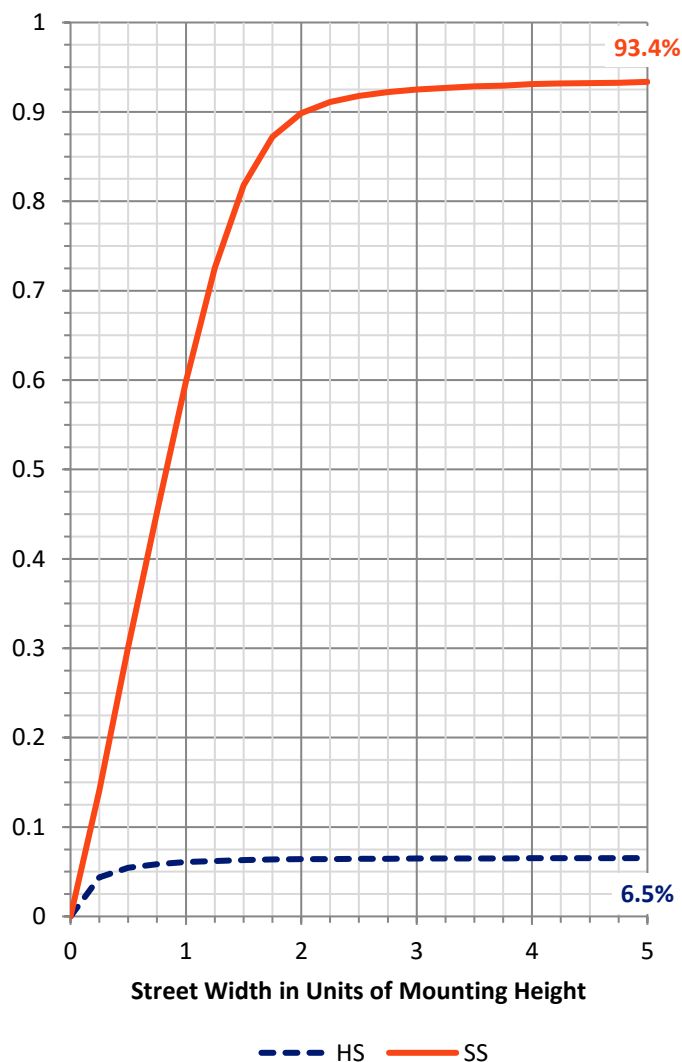
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	947.6	0.0	947.6
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	13473.4	0.0	13473.4
	% Fixture	93.4	0.0	93.4
Total	Lumens	14421.0	0.0	14421.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.8	0.6
10°-20°	322.2	2.2
20°-30°	621.7	4.3
30°-40°	1221.2	8.5
40°-50°	2446.3	17.0
50°-60°	3910.1	27.1
60°-70°	3934.2	27.3
70°-80°	1774.8	12.3
80°-90°	109.8	0.8
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°	14421.0	100.0
0°-180°	14421.0	100.0

Coefficient of Utilization

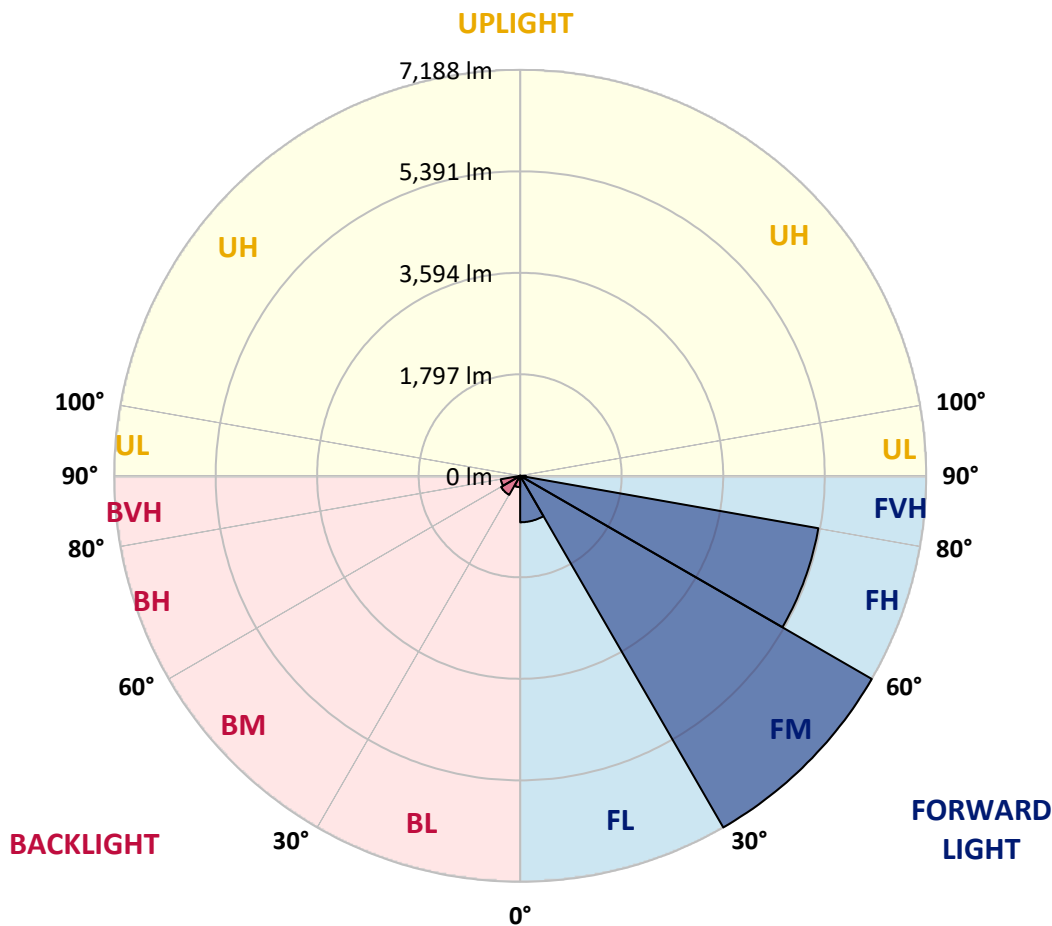


REPORT NUMBER: P368571
 CATALOG NUMBER: MSA-SA4C-830-U-T2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	823.3	5.7			
FM (30°-60°)	7187.6	49.8			
FH (60°-80°)	5359.7	37.2			G3/7500
FVH (80°-90°)	102.8	0.7			G2/225
BL (0°-30°)	201.4	1.4	B1/500		
BM (30°-60°)	389.9	2.7	B1/1000		
BH (60°-80°)	349.3	2.4	B1/500		G1/500
BVH (80°-90°)	7.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3
 Type II Medium





REPORT NUMBER: P368571

CATALOG NUMBER: MSA-SA4C-830-U-T2-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7
2.5°	750.4	723.4	679.7	704.3	702.7	715.5	691.6	665.4	623.3	665.4	668.6
5°	1080.4	1030.3	998.5	992.1	957.1	924.5	917.4	890.4	869.7	832.3	865.7
7.5°	1345.9	1322.8	1266.4	1260.0	1174.2	1126.5	1141.6	1129.6	1050.9	1012.0	1044.6
10°	1458.8	1419.0	1427.0	1419.0	1382.4	1396.0	1365.0	1329.2	1266.4	1202.0	1120.9
12.5°	1502.5	1496.1	1562.1	1554.2	1640.0	1743.4	1674.2	1614.6	1469.1	1453.2	1342.7
15°	1596.3	1636.0	1626.5	1659.9	1714.7	1890.4	1888.8	1903.1	1748.9	1666.2	1506.5
17.5°	1679.8	1709.2	1661.5	1699.6	1849.1	1955.6	2097.9	2042.3	2059.7	1975.5	1728.2
20°	1644.0	1677.4	1629.7	1606.6	1869.8	2071.7	2261.7	2221.1	2326.1	2273.6	1932.6
22.5°	1867.4	1804.6	1684.5	1609.8	1806.2	2069.3	2319.7	2489.0	2470.7	2342.0	2122.5
25°	2143.2	2105.1	1961.2	1829.2	1846.7	2055.0	2502.5	2751.4	2805.4	2750.6	2303.0
27.5°	2515.3	2506.5	2212.4	2155.1	1985.0	1992.2	2531.2	3082.1	2958.8	2873.0	2513.7
30°	3001.0	2931.8	2582.8	2508.1	2256.9	2133.7	2706.1	3367.5	3276.8	3160.0	2711.6
32.5°	3523.3	3533.6	3088.4	2842.0	2640.1	2493.8	2636.9	3501.0	3670.3	3575.7	2958.8
35°	4116.3	4162.4	3617.9	3328.5	2935.8	2720.4	2934.2	3911.2	4214.9	3966.1	3290.3
37.5°	5029.7	5028.1	4392.2	3815.8	3530.4	3296.7	3429.5	4284.1	4884.2	4534.5	3885.0
40°	5833.4	5658.5	5067.1	4404.9	3959.7	3896.1	3799.9	4794.4	5598.9	5388.3	4413.6
42.5°	6433.6	6310.4	5595.7	5080.6	4528.9	4327.0	4292.8	5542.5	6653.8	6358.9	5168.1
45°	7151.5	6747.6	6221.4	5757.1	5195.1	5136.3	5056.0	6301.7	7881.3	7216.7	5823.9
47.5°	7794.6	7414.6	6917.0	6320.7	5675.2	6160.2	5851.7	6968.6	8774.0	8150.0	6547.3
50°	8336.0	7932.1	7374.9	6920.9	6644.3	6973.4	6459.1	7518.0	9738.3	9232.7	7223.8
52.5°	8611.8	8154.7	7723.9	7443.2	7612.6	7538.6	7282.6	8183.3	10560.3	10181.9	7823.2
55°	8385.3	7938.5	7758.0	7897.2	8411.5	8197.7	8218.3	9214.4	11336.2	10814.7	8344.7
57.5°	7380.4	6972.6	7052.9	7433.7	8419.4	8979.1	9285.2	10216.1	11958.6	11603.3	9149.2
60°	5583.0	5254.7	5552.0	6227.7	7627.7	8823.3	10042.0	11217.7	12848.2	12736.9	10367.1
62.5°	3409.6	3231.5	3652.9	4495.5	6078.3	8059.3	10483.2	12553.3	13799.8	13918.2	11658.9
65°	1739.4	1659.1	2010.5	2751.4	4106.8	6620.4	10164.4	13383.2	14783.1	15220.3	12890.3
67.5°	1095.5	1043.8	1231.4	1678.2	2423.0	4318.2	8899.6	14109.0	15477.9	15823.7	13301.3
70°	759.2	726.6	888.8	1151.9	1528.7	2326.1	6607.7	13431.7	14927.0	14942.9	12306.8
72.5°	481.7	456.3	614.5	853.0	1128.1	1201.2	3788.0	10539.6	12777.4	12630.4	9966.4
75°	312.4	299.7	390.3	624.8	866.5	740.9	1872.1	7111.7	9161.9	8931.4	6619.7
77.5°	224.2	216.2	261.5	417.4	616.9	518.3	839.5	4238.7	5253.1	4749.1	3213.2
80°	135.1	134.3	189.2	261.5	438.8	365.7	387.9	1924.6	2036.7	1660.7	981.8
82.5°	67.6	70.0	105.7	168.5	282.2	239.3	177.3	640.7	546.9	403.0	198.7
85°	15.9	19.9	55.6	116.1	141.5	95.4	84.3	167.7	150.2	113.7	58.0
87.5°	0.0	0.0	17.5	27.8	38.2	15.9	28.6	31.8	40.5	31.8	11.9
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: P368571
 CATALOG NUMBER: MSA-SA4C-830-U-T2-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7	555.7
2.5°	669.4	659.8	601.8	586.7	585.1	568.4	572.4	556.5	557.3	593.0	593.0
5°	853.0	797.3	741.7	692.4	659.0	611.3	593.8	586.7	580.3	594.6	603.4
7.5°	1001.7	919.8	819.6	712.3	612.9	544.5	535.0	517.5	511.2	525.5	536.6
10°	1067.6	965.9	828.4	671.7	578.7	523.1	477.0	452.3	447.6	446.8	450.7
12.5°	1207.5	1081.1	837.9	656.6	555.7	494.5	442.0	400.7	362.5	366.5	362.5
15°	1319.6	1170.2	837.9	620.1	500.0	438.8	346.6	325.9	320.4	329.1	322.0
17.5°	1489.0	1258.4	795.8	554.9	452.3	341.0	306.1	304.5	315.6	328.3	320.4
20°	1590.7	1270.3	725.0	480.2	371.2	295.7	283.0	270.3	286.2	296.5	292.5
22.5°	1696.4	1271.1	654.3	440.4	298.9	269.5	248.8	238.5	240.9	250.4	252.0
25°	1741.8	1240.1	588.3	387.9	271.1	240.9	219.4	208.3	204.3	209.1	207.5
27.5°	1865.0	1180.5	516.7	330.7	257.6	213.8	194.0	180.5	168.5	176.5	178.1
30°	1882.5	1161.4	477.8	294.1	240.1	189.2	171.7	157.4	148.7	159.8	159.8
32.5°	1938.1	1056.5	457.9	279.0	221.8	174.9	151.0	140.7	139.1	146.3	147.1
35°	2024.0	1010.4	428.5	267.1	205.1	158.2	135.9	131.2	129.6	135.1	135.1
37.5°	2314.9	953.2	395.9	256.8	190.8	149.5	132.0	124.0	124.8	129.6	132.8
40°	2508.1	960.3	347.4	244.1	174.1	141.5	124.0	118.4	117.7	120.0	122.4
42.5°	2866.6	965.9	325.9	230.5	161.4	132.0	116.1	112.1	108.9	111.3	113.7
45°	3267.3	995.3	314.8	219.4	154.2	126.4	108.9	106.5	99.4	101.0	104.1
47.5°	3653.6	1102.6	301.3	203.5	147.9	123.2	101.8	96.2	91.4	90.6	93.8
50°	4092.5	1206.8	286.2	186.0	141.5	118.4	94.6	85.9	82.7	82.7	85.1
52.5°	4485.2	1306.1	271.9	174.1	136.7	109.7	88.2	79.5	77.1	77.1	80.3
55°	4898.6	1410.3	259.2	163.0	130.4	101.0	82.7	74.7	73.9	72.3	74.7
57.5°	5628.3	1637.6	243.3	153.4	121.6	93.8	77.9	70.0	68.4	66.0	68.4
60°	6691.2	1986.6	222.6	143.9	111.3	89.0	73.9	64.4	62.0	58.0	58.8
62.5°	7730.2	2268.8	198.7	132.0	101.8	84.3	67.6	58.0	54.1	49.3	50.1
65°	8620.6	2380.1	173.3	117.7	92.2	73.1	58.8	50.9	45.3	39.0	38.2
67.5°	8725.5	2101.9	148.7	104.1	82.7	62.0	50.1	45.3	36.6	31.0	29.4
70°	7852.6	1566.1	124.0	92.2	71.5	52.5	42.9	39.7	34.2	29.4	27.0
72.5°	6253.2	1155.9	104.1	81.9	62.8	44.5	36.6	37.4	34.2	28.6	25.4
75°	4135.4	661.4	85.1	68.4	52.5	35.8	33.4	33.4	32.6	27.0	23.8
77.5°	1989.8	285.4	65.2	54.1	42.1	27.0	30.2	30.2	31.0	24.6	19.9
80°	564.4	85.9	40.5	36.6	31.0	18.3	23.8	23.1	20.7	14.3	8.7
82.5°	101.0	33.4	18.3	19.1	17.5	7.2	13.5	12.7	10.3	5.6	0.8
85°	27.8	12.7	10.3	11.1	8.7	2.4	5.6	7.2	5.6	3.2	0.0
87.5°	7.2	5.6	7.2	7.9	6.4	0.8	2.4	0.8	2.4	0.8	0.0
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)