

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: P368333

Luminaire Tested: **MSA-SA4B-727-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368333
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-727-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12168 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

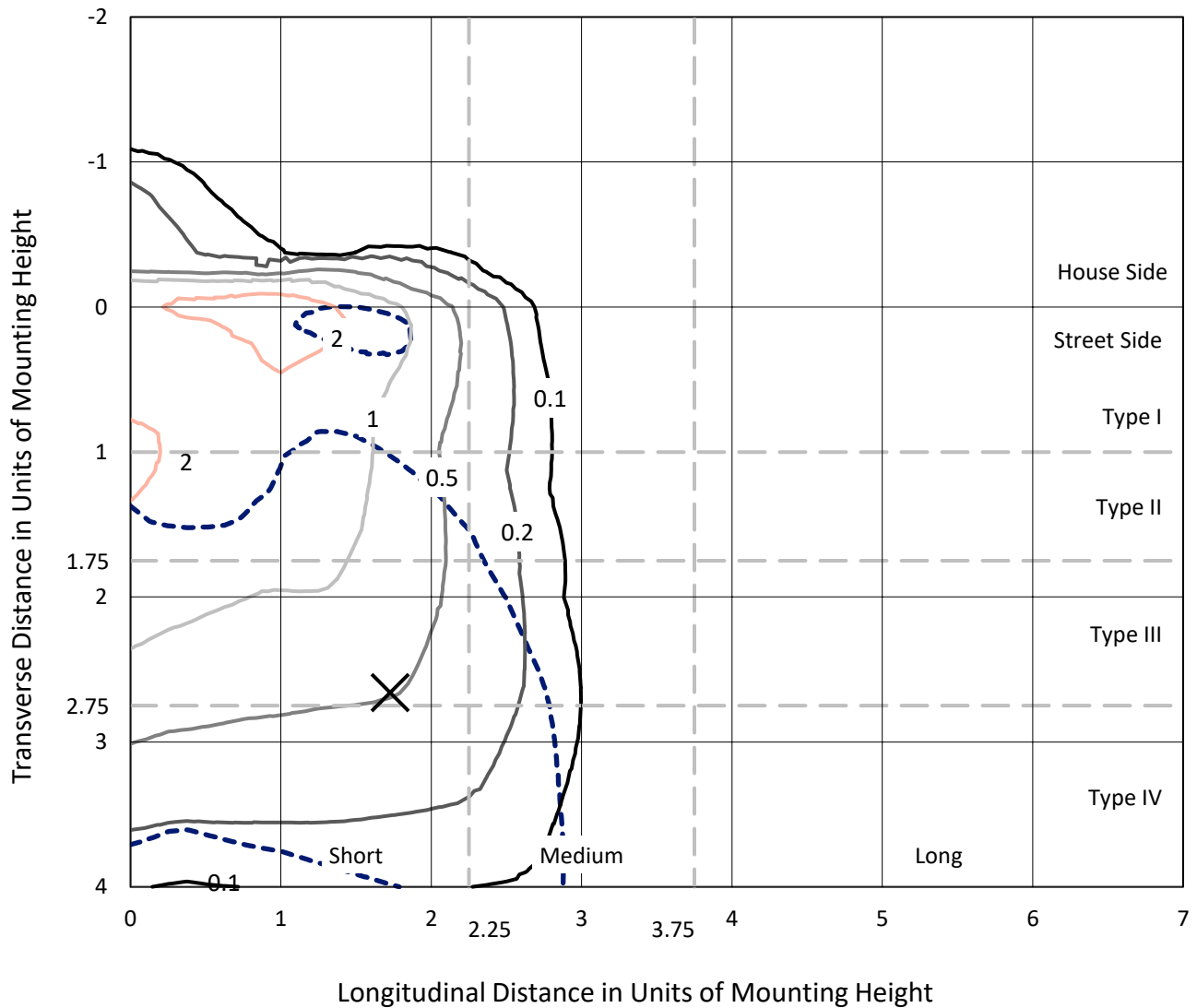
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

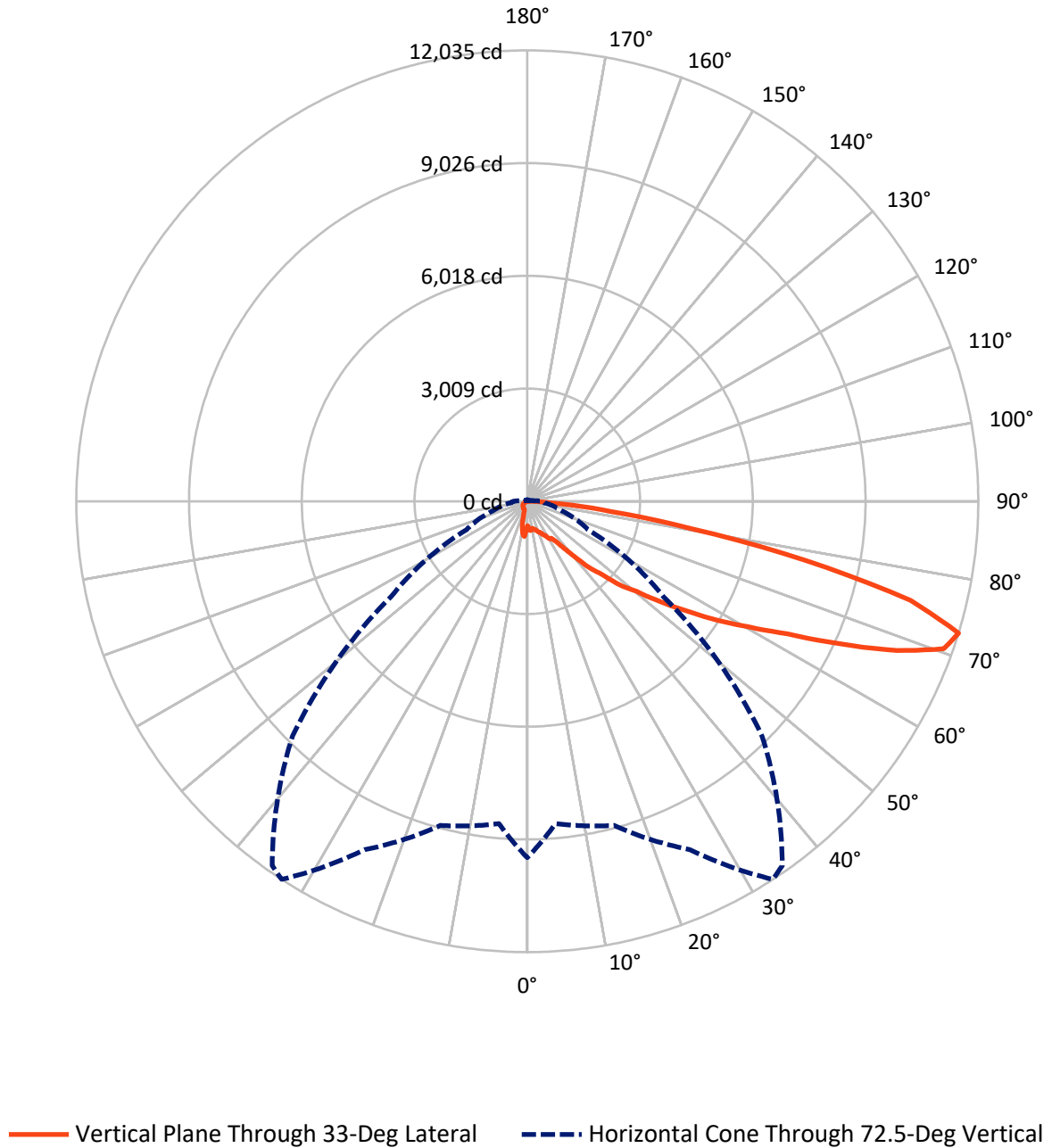
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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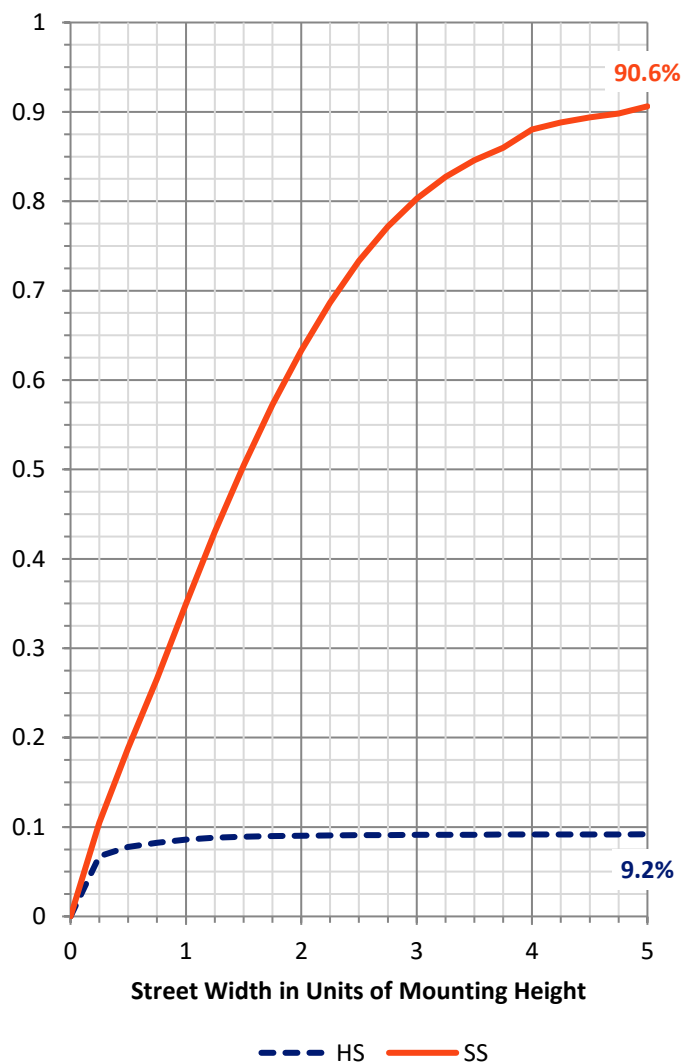
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1125.1	0.0	1125.1
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	11042.9	0.0	11042.9
	% Fixture	90.8	0.0	90.8
Total	Lumens	12168.0	0.0	12168.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.8	0.7
10°-20°	249.6	2.1
20°-30°	423.3	3.5
30°-40°	774.7	6.4
40°-50°	1635.1	13.4
50°-60°	2735.7	22.5
60°-70°	3661.8	30.1
70°-80°	2391.9	19.7
80°-90°	212.1	1.7
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°	12168.0	100.0
0°-180°	12168.0	100.0

Coefficient of Utilization

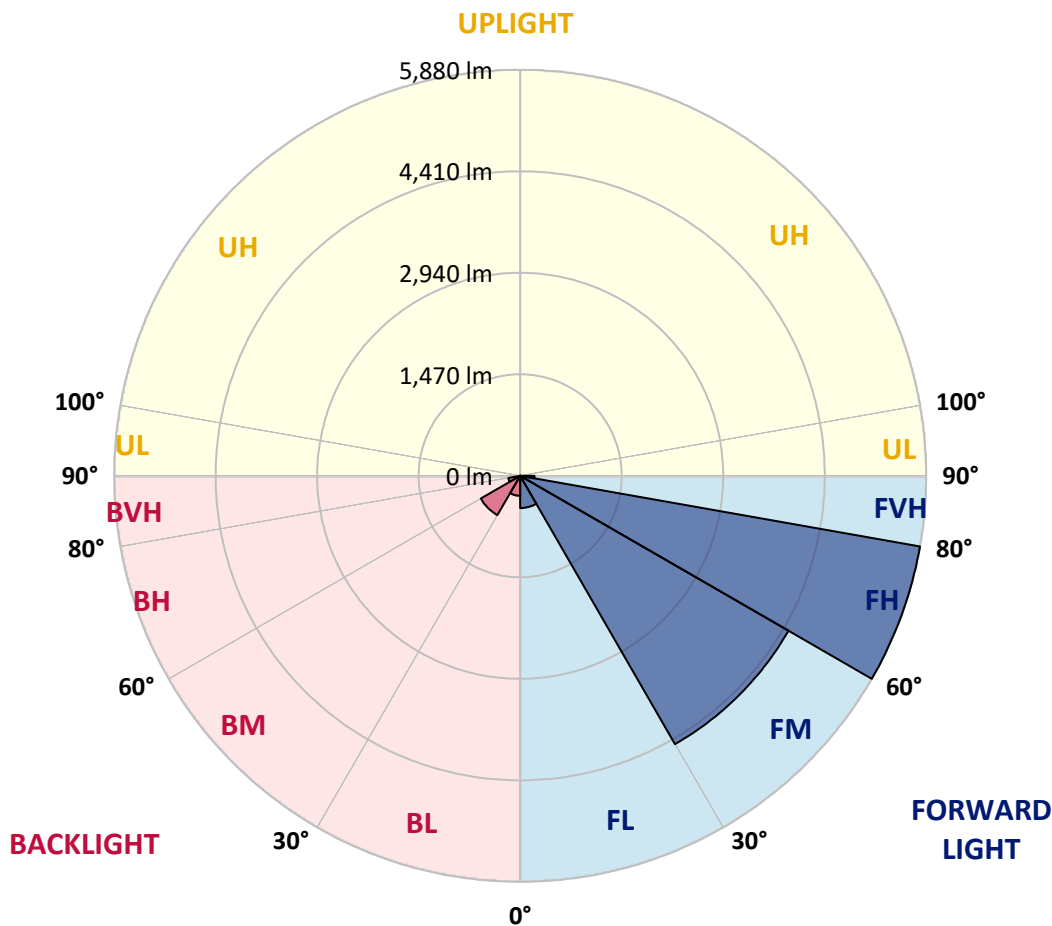


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	467.1	3.8			
FM (30°-60°)	4487.7	36.9			
FH (60°-80°)	5880.1	48.3			G3/7500
FVH (80°-90°)	208.0	1.7			G2/225
BL (0°-30°)	289.6	2.4	B1/500		
BM (30°-60°)	657.7	5.4	B1/1000		
BH (60°-80°)	173.7	1.4	B1/500		G1/500
BVH (80°-90°)	4.1	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	647.2	647.2	647.2	647.2	647.2	647.2	647.2	647.2	647.2	647.2	647.2
2.5°	771.5	741.8	698.5	701.2	708.7	714.8	731.0	724.2	711.4	710.7	771.5
5°	817.4	784.3	781.6	785.7	783.7	794.5	781.0	824.9	862.0	906.6	978.2
7.5°	795.1	779.6	760.0	780.3	779.6	774.2	783.0	872.2	962.0	1018.8	1137.0
10°	731.0	713.4	728.3	735.0	730.3	753.9	812.7	885.7	993.1	1112.0	1169.4
12.5°	712.7	723.5	728.9	728.9	774.2	786.4	876.2	945.1	1072.8	1166.7	1333.6
15°	783.7	804.6	767.4	759.3	773.5	780.3	880.3	963.4	1126.9	1298.4	1438.3
17.5°	896.5	895.1	837.7	806.0	828.2	844.5	899.9	997.1	1093.1	1401.8	1604.5
20°	974.2	975.5	872.2	806.0	879.6	889.1	950.5	1028.2	1103.9	1453.8	1713.2
22.5°	1074.2	1038.4	924.2	860.0	910.0	918.8	986.3	1047.8	1159.3	1447.7	1852.4
25°	1155.9	1132.9	989.0	944.4	989.0	976.9	1038.4	1130.9	1218.7	1544.4	1934.2
27.5°	1282.9	1243.7	1035.0	1043.1	1040.4	1049.2	1063.3	1205.2	1323.4	1549.1	2123.3
30°	1401.1	1378.2	1137.7	1137.7	1164.0	1147.1	1157.3	1328.8	1424.8	1658.5	2336.1
32.5°	1523.4	1524.8	1258.6	1194.4	1173.5	1243.0	1311.3	1389.0	1547.1	1846.3	2661.7
35°	1847.0	1820.0	1490.3	1330.2	1313.3	1309.3	1418.7	1628.8	1763.9	2090.9	3100.2
37.5°	2498.9	2405.0	1988.9	1638.3	1574.8	1553.1	1677.4	1892.9	2027.4	2450.3	3825.1
40°	3167.7	2995.5	2533.4	2138.2	1932.1	1838.9	1983.5	2166.6	2405.7	2847.5	4495.9
42.5°	3754.8	3542.0	2943.5	2677.3	2409.1	2368.5	2232.8	2530.7	2946.2	3425.8	5153.2
45°	4327.0	3908.2	3308.3	3097.5	2771.9	2794.8	2748.9	3007.0	3507.6	4059.5	5736.3
47.5°	4720.9	4344.6	3755.5	3481.9	3351.5	3217.1	3581.9	3850.1	4007.5	4462.1	6240.2
50°	5145.1	4764.1	4139.9	3948.7	3777.1	3912.9	4386.5	4422.3	4409.4	4837.8	6583.4
52.5°	5693.0	5243.8	4581.0	4364.9	4462.1	4597.3	5143.8	5150.5	4766.8	5153.9	6830.7
55°	6199.7	5701.8	5168.8	4964.8	5168.1	5282.3	5888.3	5666.0	4974.9	5368.8	6952.3
57.5°	6913.8	6337.5	5950.4	5591.0	6003.1	5893.7	6542.9	6212.5	5208.6	5511.3	6907.7
60°	7816.3	7138.1	6750.3	6370.0	6811.8	6886.1	7182.0	6485.5	5299.2	5557.9	6639.5
62.5°	8734.4	8052.1	7542.1	7284.0	7785.3	8029.8	7773.8	6621.3	5190.4	5466.7	6032.2
65°	9873.5	8999.9	8404.1	8252.8	9181.7	9541.1	8473.7	6654.4	4980.3	4964.8	4849.9
67.5°	10653.7	9803.2	9256.7	9510.0	10632.1	10661.2	9102.0	6664.5	4273.0	3887.2	3183.3
70°	10838.8	9928.2	9683.6	10429.5	11789.4	11423.9	9304.6	6151.1	3169.1	2307.1	1455.2
72.5°	9514.7	8637.8	8956.0	10255.8	12035.3	11867.7	8856.7	4437.8	1784.2	922.8	446.6
75°	5836.3	5305.9	6718.5	8695.3	10564.6	10456.5	6909.7	2292.9	718.8	368.9	166.9
77.5°	2538.1	2357.1	3506.2	5769.4	7591.4	7494.8	4048.7	844.5	371.6	259.4	84.4
80°	839.7	814.7	1328.2	2732.0	4446.6	4361.5	1705.8	351.3	264.8	208.1	47.3
82.5°	199.3	197.9	463.4	1257.2	2265.2	2194.3	523.6	193.9	191.9	164.2	25.0
85°	50.0	51.3	128.4	514.1	920.1	811.4	136.5	96.6	135.1	111.5	12.8
87.5°	0.0	0.0	33.1	73.6	139.2	87.1	14.9	25.7	37.8	39.9	6.8
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°	647.2	647.2	647.2	647.2	647.2	647.2	647.2	647.2	647.2	647.2	647.2
2.5°	785.0	777.6	716.8	731.6	754.6	752.6	767.4	756.0	745.8	795.8	791.1
5°	998.5	958.0	939.0	965.4	951.2	918.1	945.8	941.1	933.0	949.9	962.7
7.5°	1158.6	1121.4	1104.6	1049.2	968.8	905.3	915.4	891.8	869.5	895.8	922.8
10°	1211.3	1191.0	1189.0	1080.9	1005.2	913.4	804.6	710.7	685.7	652.6	667.5
12.5°	1354.5	1366.7	1290.3	1164.0	1018.1	841.8	648.5	515.5	461.4	426.3	428.3
15°	1472.1	1514.6	1403.8	1176.8	895.8	641.8	431.7	312.1	278.3	269.6	266.9
17.5°	1647.0	1688.2	1439.0	1085.6	722.2	435.1	277.7	243.2	245.2	251.3	250.0
20°	1776.7	1770.7	1408.6	924.2	532.3	285.1	232.4	227.7	238.5	256.0	252.0
22.5°	1901.7	1859.8	1389.6	774.9	344.5	229.0	224.3	223.6	233.7	250.6	255.4
25°	1990.9	1997.7	1357.9	606.7	250.6	212.8	216.9	222.9	233.1	251.3	248.6
27.5°	2246.3	2057.1	1225.5	440.5	211.5	204.0	214.2	226.3	229.7	252.7	253.3
30°	2411.8	2281.4	1139.0	296.6	195.2	188.5	208.8	225.0	229.0	258.7	260.8
32.5°	2700.3	2378.0	1039.0	220.2	181.7	183.8	196.6	218.2	237.1	268.9	270.2
35°	3059.0	2688.1	858.0	197.9	177.0	173.6	179.7	204.7	235.8	270.2	277.0
37.5°	3742.0	2873.9	680.3	191.9	177.0	170.9	177.0	191.9	231.7	283.7	297.9
40°	4199.3	3252.2	490.5	190.5	173.6	168.2	170.2	185.1	220.2	275.6	296.6
42.5°	4762.8	3411.6	361.4	187.1	170.2	162.1	163.5	182.4	208.8	258.7	274.3
45°	5224.2	3527.8	284.4	185.8	162.1	159.4	162.1	180.4	197.9	222.3	236.4
47.5°	5574.8	3662.9	228.3	177.0	160.1	159.4	156.1	168.9	179.7	185.8	195.2
50°	5831.5	3632.5	189.2	163.5	153.4	157.4	151.3	153.4	156.1	152.7	163.5
52.5°	5988.9	3523.1	157.4	147.3	145.2	148.6	141.2	135.1	130.4	127.7	134.4
55°	6046.4	3303.5	133.8	126.3	131.1	132.4	126.3	115.5	107.4	103.4	108.8
57.5°	5937.6	2969.1	116.2	104.7	115.5	115.5	107.4	95.9	86.5	79.7	85.1
60°	5662.0	2599.6	103.4	87.1	98.6	99.3	89.9	77.7	70.3	63.5	66.9
62.5°	5148.5	2197.0	90.5	75.7	85.1	85.8	74.3	62.8	57.4	50.0	52.7
65°	4121.7	1680.1	77.0	66.9	73.6	71.6	61.5	53.4	46.6	39.9	41.2
67.5°	2675.3	1037.0	66.9	60.8	62.2	60.1	52.0	46.6	39.2	33.8	34.5
70°	1197.8	446.6	58.8	54.7	54.0	50.7	43.9	43.2	38.5	33.8	33.8
72.5°	369.5	168.2	50.7	49.3	46.6	42.6	38.5	41.2	37.8	32.4	31.8
75°	145.9	77.0	41.9	41.9	40.5	35.1	34.5	37.2	35.1	29.7	28.4
77.5°	76.3	48.6	34.5	35.8	35.1	27.0	31.1	33.8	32.4	25.0	20.9
80°	45.3	29.7	25.7	29.0	28.4	18.9	23.6	21.6	15.5	7.4	2.0
82.5°	25.0	13.5	11.5	16.9	16.9	6.8	12.2	10.8	6.1	0.0	0.0
85°	12.2	9.5	8.8	9.5	6.8	2.0	6.1	6.1	3.4	0.0	0.0
87.5°	6.1	5.4	4.1	3.4	2.7	0.0	2.0	2.7	0.0	0.0	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)