

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: P367368

Luminaire Tested: **MSA-SA2B-760-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367368
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2B-760-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10100 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

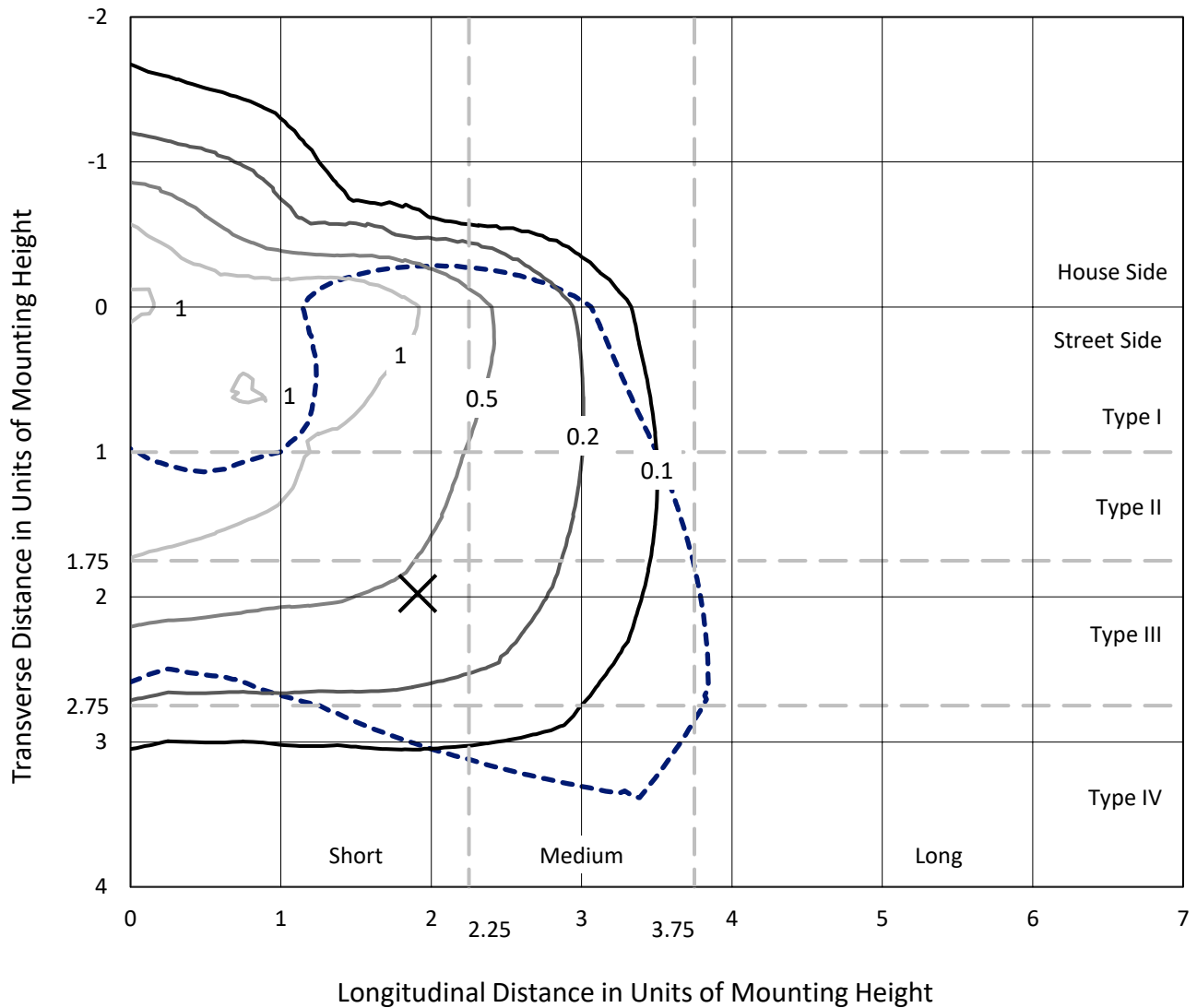
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

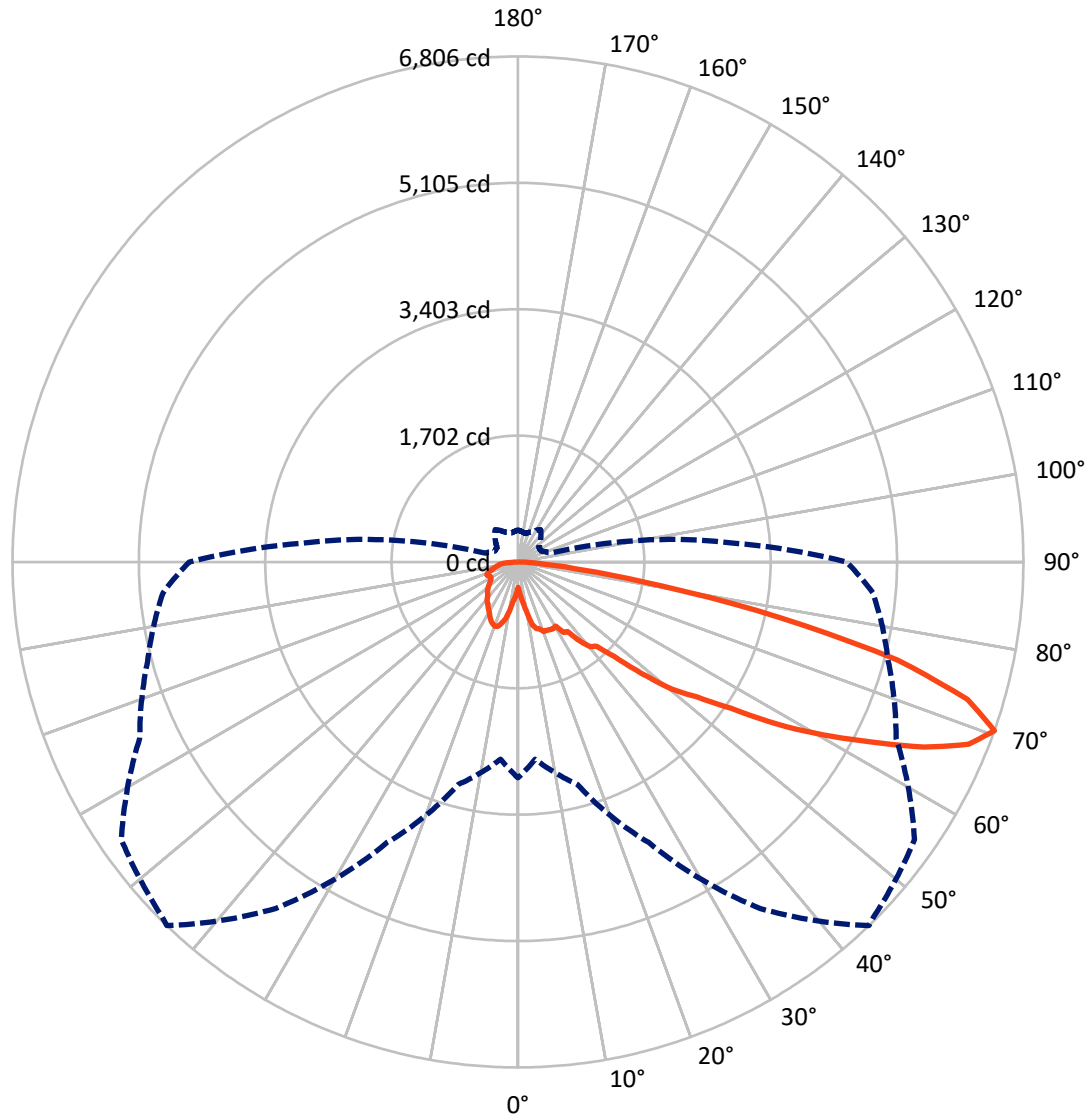
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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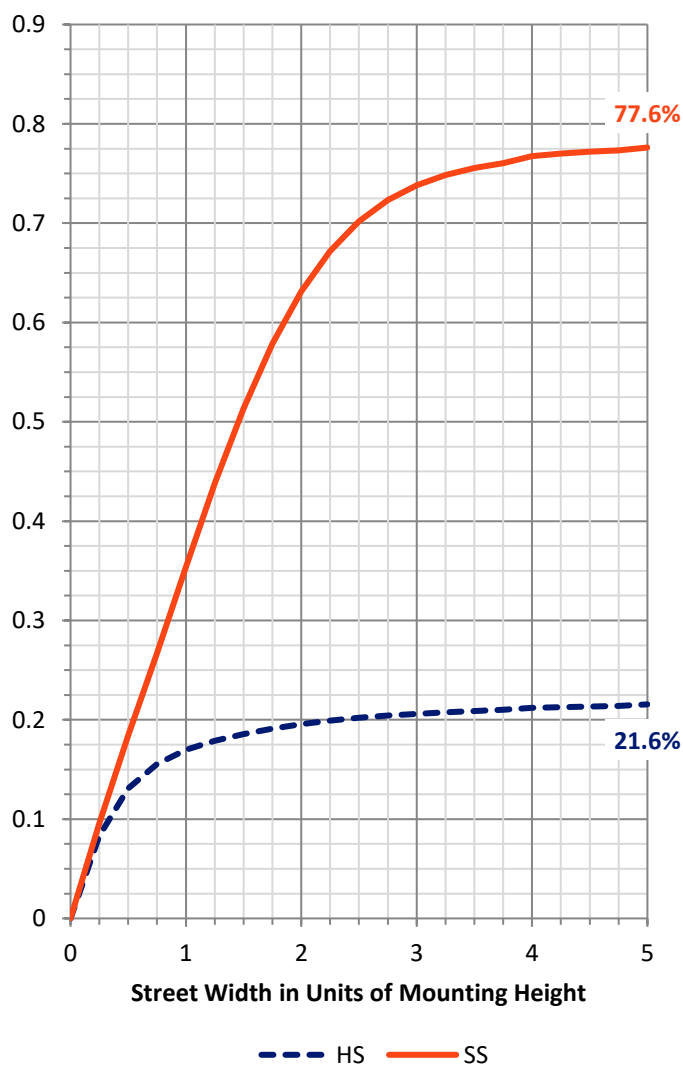
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2228.5	0.0	2228.5
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	7871.5	0.0	7871.5
	% Fixture	77.9	0.0	77.9
Total	Lumens	10100.0	0.0	10100.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.8	0.5
10°-20°	247.9	2.5
20°-30°	463.2	4.6
30°-40°	743.5	7.4
40°-50°	1255.0	12.4
50°-60°	2236.4	22.1
60°-70°	3059.1	30.3
70°-80°	1798.9	17.8
80°-90°	242.2	2.4
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°	10100.0	100.0
0°-180°	10100.0	100.0

Coefficient of Utilization



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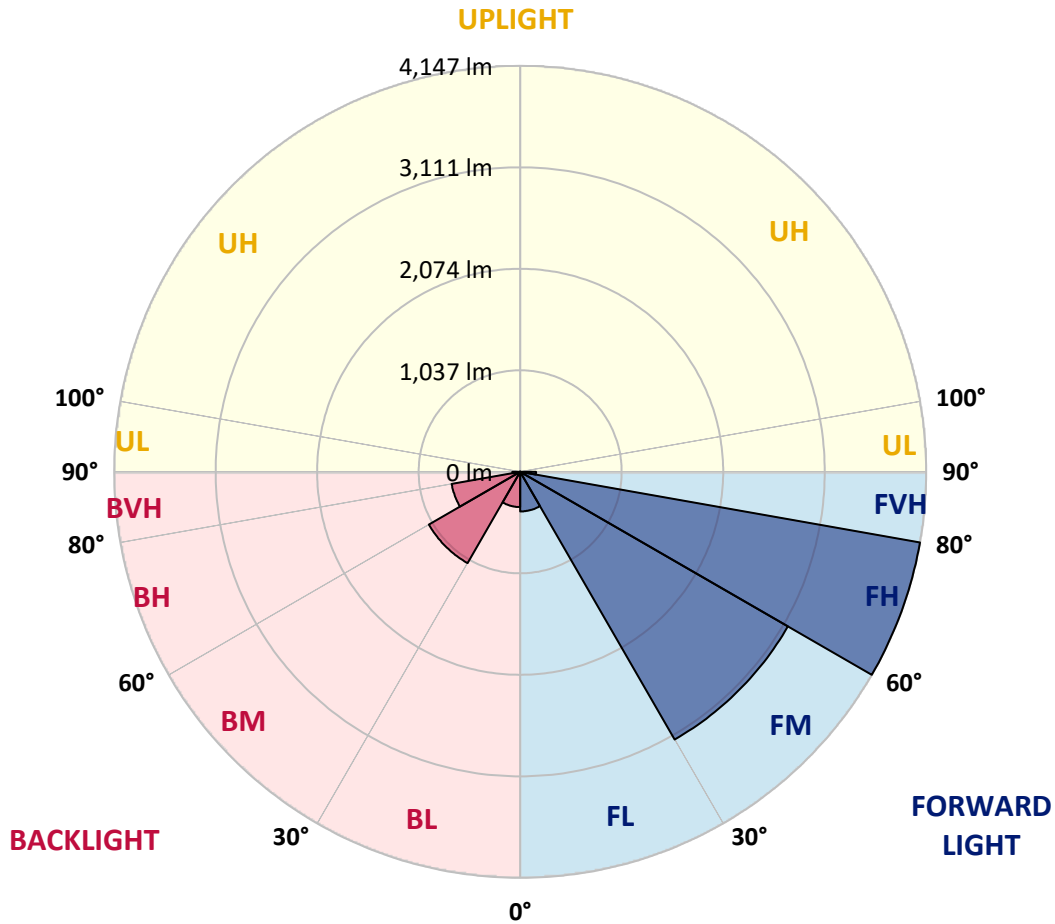
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	404.7	4.0			
FM (30°-60°)	3158.0	31.3			
FH (60°-80°)	4147.4	41.1			G2/5000
FVH (80°-90°)	161.4	1.6			G2/225
BL (0°-30°)	360.2	3.6	B1/500		
BM (30°-60°)	1076.9	10.7	B2/2500		
BH (60°-80°)	710.6	7.0	B2/1000		G2/1000
BVH (80°-90°)	80.8	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	343.3	343.3	343.3	343.3	343.3	343.3	343.3	343.3	343.3	343.3	343.3
2.5°	416.6	408.3	388.5	395.1	403.4	406.7	405.8	405.0	392.2	387.6	410.4
5°	566.1	547.9	533.4	527.6	508.5	493.6	484.5	508.5	504.8	511.0	526.8
7.5°	706.9	695.3	662.6	651.0	612.1	586.4	583.5	602.6	607.5	597.6	624.5
10°	797.6	777.7	771.1	743.4	716.4	712.3	709.8	701.1	689.1	688.3	664.3
12.5°	868.0	878.4	883.7	851.9	852.7	867.6	859.7	824.5	804.2	768.6	771.5
15°	994.3	1009.2	966.6	946.3	907.4	929.7	926.8	897.4	894.5	871.3	844.4
17.5°	1104.5	1111.1	1039.9	993.5	980.2	947.9	956.6	957.5	919.4	960.8	936.8
20°	1113.6	1137.2	1055.2	962.8	1002.6	998.5	999.7	991.4	941.3	1009.6	1000.5
22.5°	1158.3	1122.3	1048.6	981.1	991.4	997.6	1003.4	993.5	990.6	1028.7	1056.4
25°	1150.0	1138.4	1063.9	1006.7	1008.0	1009.2	1012.1	1041.9	1038.6	1090.4	1104.9
27.5°	1227.5	1209.7	1068.5	1054.4	1022.1	1015.0	995.2	1057.3	1105.7	1104.5	1184.4
30°	1374.9	1356.7	1174.5	1133.5	1075.1	1003.0	1041.1	1123.9	1162.0	1174.9	1276.3
32.5°	1605.2	1635.0	1383.2	1218.0	1145.5	1129.7	1125.6	1117.3	1211.7	1275.1	1367.5
35°	1935.6	1912.0	1629.2	1398.9	1219.6	1152.1	1161.2	1211.7	1324.0	1365.0	1450.3
37.5°	2314.1	2265.3	1944.3	1603.9	1433.3	1348.8	1318.6	1367.5	1392.3	1424.6	1598.9
40°	2698.9	2579.6	2253.7	1873.5	1561.7	1497.9	1471.4	1411.3	1469.7	1535.2	1756.7
42.5°	3070.3	2978.0	2590.4	2195.3	1777.9	1550.5	1536.0	1477.2	1658.2	1727.3	1984.5
45°	3459.6	3245.5	2935.3	2558.5	2093.8	1808.5	1787.0	1681.4	1913.3	2057.4	2305.9
47.5°	3721.4	3523.0	3251.3	2853.3	2358.5	2240.0	2199.0	2018.5	2228.8	2416.0	2802.4
50°	3969.0	3764.8	3479.5	3175.9	2837.6	2701.4	2614.0	2313.3	2621.8	2926.6	3438.9
52.5°	4323.5	4140.9	3744.5	3501.0	3352.4	3017.3	2952.3	2787.1	3081.5	3492.8	4134.7
55°	4702.4	4453.5	4094.5	3959.5	3899.4	3470.4	3417.4	3312.2	3693.6	4072.1	4810.9
57.5°	4869.7	4610.1	4412.1	4331.4	4326.4	4128.9	4068.0	3994.7	4319.4	4569.1	5447.4
60°	5002.7	4724.0	4644.9	4690.0	4854.0	4724.0	4644.9	4580.3	4828.7	5060.2	5966.8
62.5°	4978.2	4698.7	4739.3	4876.8	5295.5	5333.6	5272.7	5116.1	5333.6	5462.8	6264.5
65°	4584.0	4325.6	4562.0	4888.4	5705.9	6010.2	6006.9	5597.4	5672.7	5672.7	6233.0
67.5°	3893.2	3625.7	4012.9	4786.1	5989.5	6546.5	6547.4	6107.6	5703.8	5651.6	5746.0
70°	2907.2	2664.9	3100.2	4168.2	5696.7	6806.2	6768.5	6519.2	5618.5	5162.5	4799.7
72.5°	1736.4	1579.9	1980.4	3034.3	4859.4	6328.7	6428.9	6045.0	5143.5	4293.3	3431.1
75°	788.5	720.6	930.5	1743.1	3469.2	5278.9	5387.8	5101.6	4085.4	3087.7	1982.8
77.5°	337.5	319.3	406.3	773.2	1912.9	3610.0	3833.2	3646.0	2768.0	1794.4	877.1
80°	217.0	205.4	249.7	371.9	888.3	1950.5	2142.7	2072.7	1410.1	697.8	308.9
82.5°	129.6	125.9	166.9	233.6	484.5	858.5	967.4	993.1	585.6	313.1	176.8
85°	70.8	71.6	91.5	141.6	290.7	334.2	357.8	389.3	275.8	181.4	85.7
87.5°	23.6	27.3	36.9	57.6	103.5	94.4	94.8	110.2	116.4	75.4	27.3
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°	343.3	343.3	343.3	343.3	343.3	343.3	343.3	343.3	343.3	343.3	343.3
2.5°	414.1	406.7	387.6	388.9	395.9	397.6	399.6	387.6	385.1	407.9	410.0
5°	529.3	504.8	493.6	489.9	479.1	475.4	495.3	504.4	513.5	531.3	540.0
7.5°	621.6	594.3	574.0	555.3	539.6	530.5	564.0	589.7	605.5	641.9	658.5
10°	663.8	640.2	632.8	617.9	629.9	657.2	663.4	664.3	699.0	698.2	705.3
12.5°	747.9	732.6	708.2	713.5	745.0	773.2	765.3	777.3	789.7	819.6	805.9
15°	824.5	820.4	797.6	801.3	807.6	842.8	847.3	859.3	878.4	902.0	885.8
17.5°	919.0	917.3	861.8	856.8	871.3	905.7	894.9	873.8	936.8	962.0	955.4
20°	983.1	970.7	899.5	878.4	915.2	919.8	907.4	873.8	928.5	983.6	998.5
22.5°	1036.6	1022.1	948.8	907.4	899.9	902.0	902.0	895.8	922.7	967.8	967.4
25°	1079.6	1093.3	1000.1	960.4	920.6	870.9	864.7	870.1	885.4	972.4	969.5
27.5°	1187.7	1150.0	1017.5	987.7	906.1	827.8	844.8	853.1	858.1	953.3	969.1
30°	1258.1	1269.7	1079.6	1003.8	885.0	779.8	785.6	809.6	838.6	951.3	955.8
32.5°	1353.0	1328.1	1176.5	976.9	828.7	750.8	740.0	772.3	815.4	917.7	930.1
35°	1441.2	1470.6	1217.5	972.0	789.3	707.3	718.9	730.1	774.8	880.4	894.9
37.5°	1648.2	1581.1	1332.7	947.9	756.6	685.4	673.0	689.9	728.0	809.6	843.2
40°	1805.6	1809.7	1357.5	917.7	694.1	653.9	627.4	644.4	660.5	725.6	740.0
42.5°	2100.9	2010.6	1418.4	851.4	654.7	606.7	591.8	599.2	601.7	629.1	653.1
45°	2476.5	2264.9	1442.4	762.4	603.0	587.2	557.0	553.3	539.6	543.3	564.5
47.5°	2996.2	2661.6	1425.0	667.6	557.0	562.0	518.5	501.5	482.5	487.0	506.9
50°	3668.3	3168.5	1423.8	587.2	525.5	528.8	493.2	462.6	443.5	453.1	470.4
52.5°	4422.5	3677.0	1429.6	532.2	491.2	489.5	476.7	439.4	424.1	434.0	453.9
55°	5143.9	4114.4	1472.6	497.4	455.5	458.4	463.4	431.9	415.0	424.1	444.8
57.5°	5771.7	4459.7	1456.5	460.5	422.4	435.7	448.9	421.6	408.7	422.0	442.7
60°	6210.7	4620.0	1328.9	425.3	398.0	416.2	441.9	420.3	418.7	447.3	472.1
62.5°	6370.9	4560.8	1080.5	397.6	383.5	413.7	458.0	447.7	449.3	484.5	518.9
65°	6137.0	4249.4	805.9	379.8	372.3	425.7	495.3	463.8	441.0	470.0	501.5
67.5°	5471.5	3695.7	588.9	364.4	359.5	444.8	529.7	462.2	419.9	449.3	475.0
70°	4426.6	2917.1	456.0	345.0	342.5	431.9	533.0	449.7	397.1	416.2	430.7
72.5°	3033.1	1997.3	377.7	326.3	313.1	382.7	506.1	422.0	369.8	381.0	393.0
75°	1695.0	1121.0	317.6	303.1	274.2	340.8	474.6	405.4	349.5	352.8	369.4
77.5°	760.8	484.9	269.6	272.5	239.0	301.5	433.6	378.9	318.5	311.0	327.6
80°	287.8	236.5	218.7	230.3	200.9	261.3	390.9	354.9	285.7	276.2	285.7
82.5°	166.9	143.3	162.3	177.2	159.4	240.2	373.1	333.0	251.8	227.8	236.1
85°	77.4	74.1	97.3	115.1	111.4	187.2	319.3	250.5	179.3	151.6	167.7
87.5°	20.3	22.8	34.4	40.6	41.4	64.2	123.0	93.2	70.0	53.0	50.9
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)