

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: P367540

Luminaire Tested: **MSA-SA2D-727-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367540
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-727-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11264 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

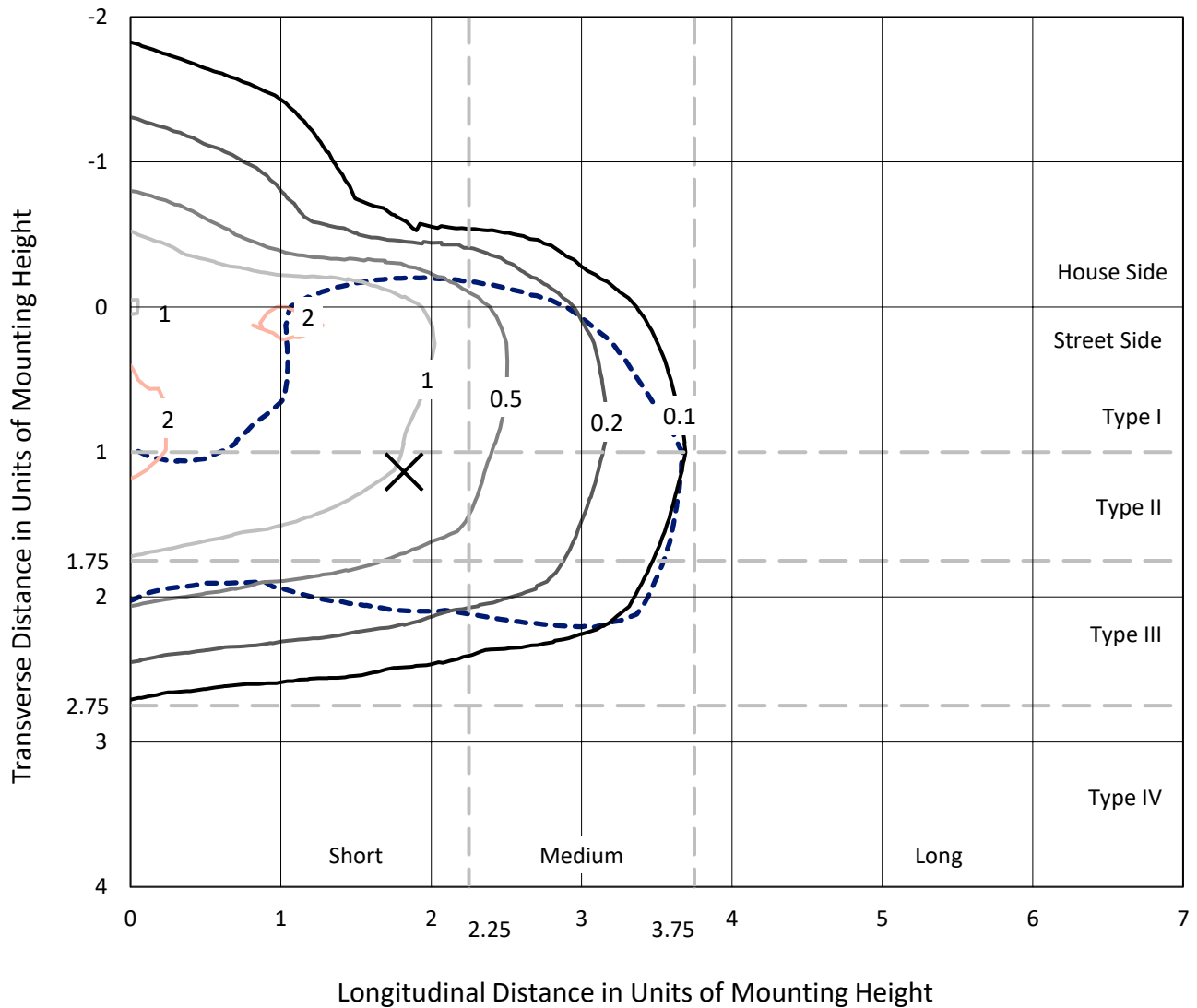
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

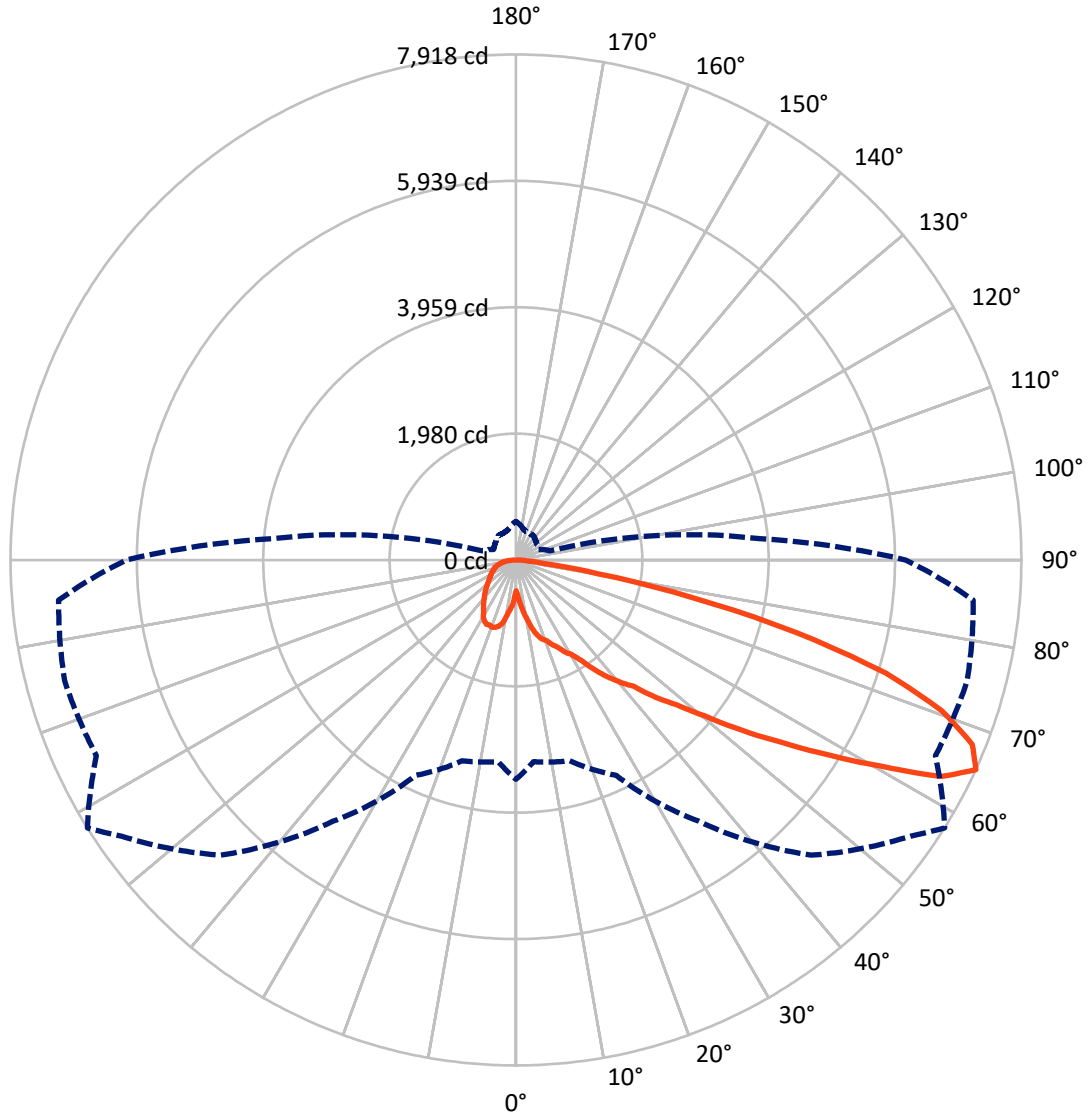
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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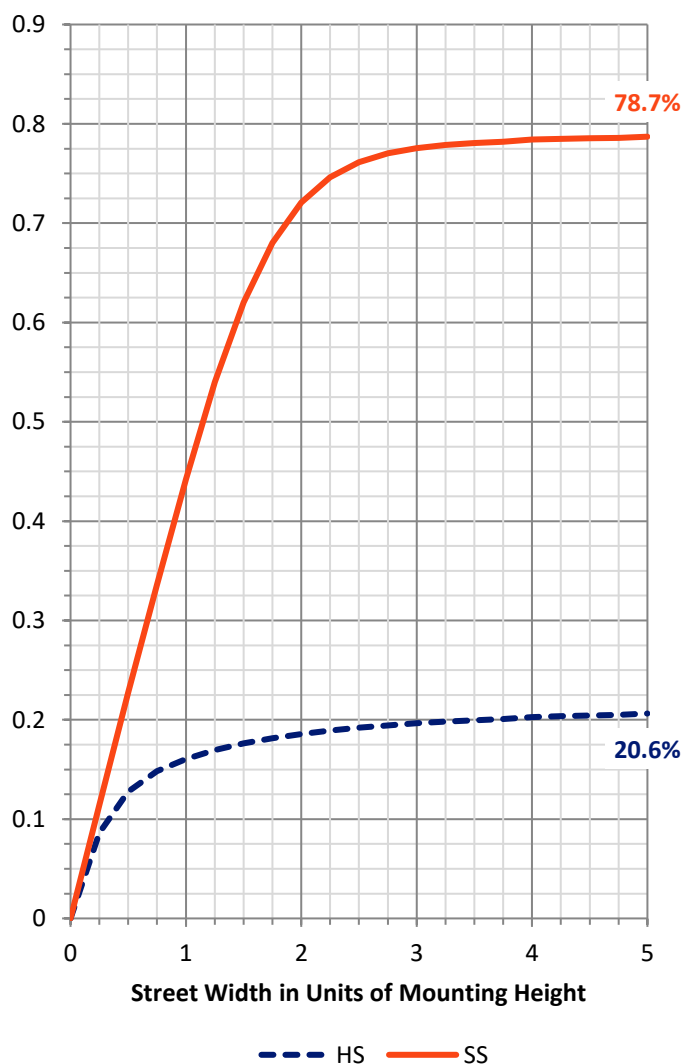
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2372.5	0.0	2372.5
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	8891.5	0.0	8891.5
	% Fixture	78.9	0.0	78.9
Total	Lumens	11264.0	0.0	11264.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.7	0.7
10°-20°	321.5	2.9
20°-30°	616.8	5.5
30°-40°	1018.4	9.0
40°-50°	1692.7	15.0
50°-60°	2795.4	24.8
60°-70°	3135.9	27.8
70°-80°	1425.8	12.7
80°-90°	183.9	1.6
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°	11264.0	100.0
0°-180°	11264.0	100.0

Coefficient of Utilization



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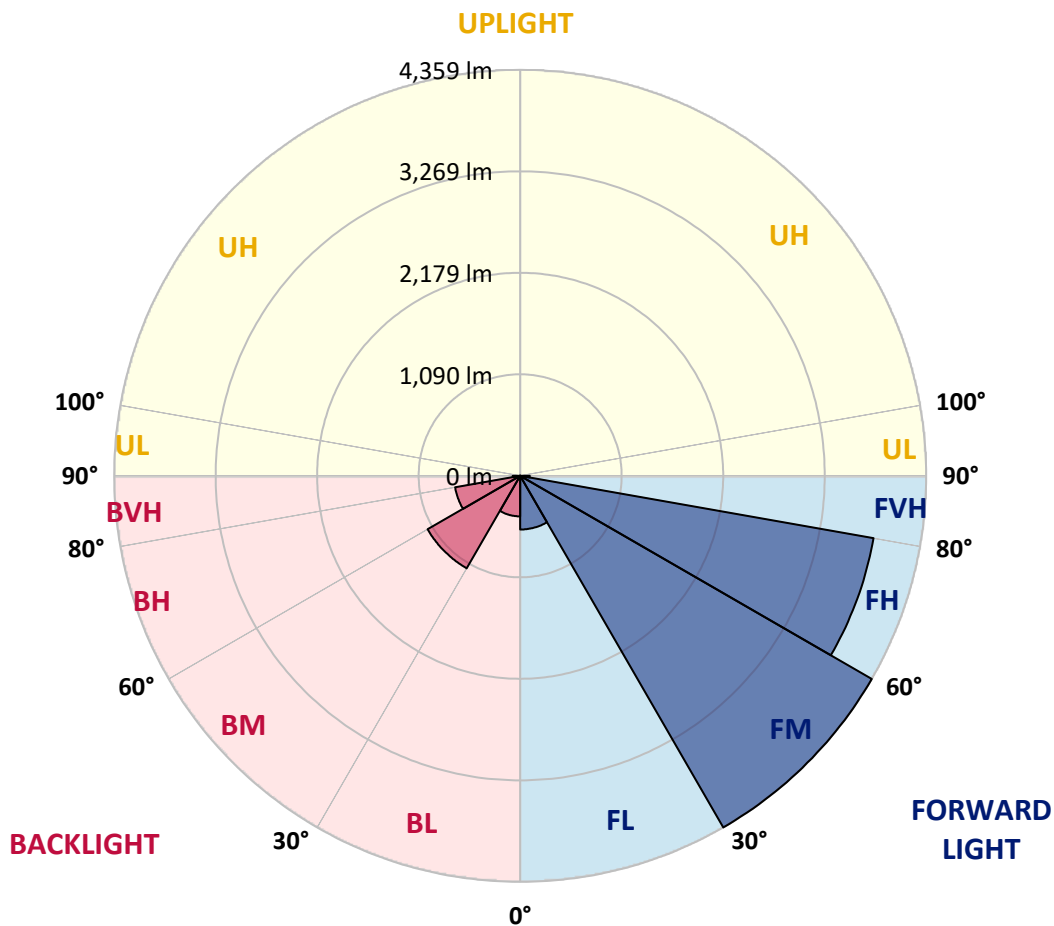
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	576.4	5.1			
FM (30°-60°)	4359.0	38.7			
FH (60°-80°)	3852.5	34.2			G2/5000
FVH (80°-90°)	103.6	0.9			G2/225
BL (0°-30°)	435.6	3.9	B1/500		
BM (30°-60°)	1147.4	10.2	B2/2500		
BH (60°-80°)	709.2	6.3	B2/1000		G2/1000
BVH (80°-90°)	80.3	0.7			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	483.6	483.6	483.6	483.6	483.6	483.6	483.6	483.6	483.6	483.6	483.6
2.5°	577.4	560.1	531.0	538.0	554.9	564.3	558.7	551.2	541.3	539.4	582.6
5°	747.7	714.4	700.8	695.2	674.5	662.3	683.5	680.6	691.9	712.5	754.8
7.5°	872.0	848.6	826.1	823.7	783.8	769.8	797.9	812.9	833.1	833.6	890.8
10°	938.6	918.5	918.0	896.9	893.6	920.3	920.8	932.1	934.4	958.3	947.1
12.5°	1010.9	1009.5	1035.3	1034.8	1064.8	1108.9	1086.9	1086.9	1093.4	1064.3	1100.0
15°	1183.0	1198.0	1149.7	1157.7	1157.7	1200.9	1199.4	1207.9	1228.1	1220.6	1204.6
17.5°	1362.2	1371.6	1318.1	1268.4	1272.2	1262.8	1296.5	1299.8	1280.6	1367.8	1348.6
20°	1477.6	1514.2	1401.6	1339.2	1351.4	1362.2	1363.6	1343.5	1333.6	1467.8	1441.5
22.5°	1620.2	1589.3	1486.1	1417.1	1435.4	1420.9	1418.0	1433.5	1447.1	1497.8	1540.5
25°	1715.4	1713.1	1589.3	1513.7	1493.6	1489.3	1518.0	1511.9	1544.2	1636.2	1609.4
27.5°	1853.8	1897.0	1677.4	1696.2	1607.5	1514.2	1606.1	1633.8	1692.0	1677.0	1736.5
30°	2122.1	2089.8	1860.4	1855.2	1754.8	1676.5	1740.3	1716.8	1821.5	1818.2	1862.3
32.5°	2341.2	2363.7	2075.2	2021.3	1946.7	1852.4	1810.2	1875.4	1931.7	2024.1	2049.0
35°	2572.9	2567.8	2295.2	2186.4	2063.0	2024.1	2076.2	2103.4	2223.0	2307.9	2248.8
37.5°	2933.2	2892.4	2580.4	2374.5	2282.1	2268.0	2357.1	2317.7	2447.2	2467.4	2500.7
40°	3268.1	3145.2	2841.2	2605.3	2458.5	2511.0	2513.8	2519.0	2588.4	2643.3	2807.9
42.5°	3586.6	3500.3	3106.3	2929.0	2712.7	2661.6	2693.5	2704.3	2879.7	2991.8	3219.8
45°	4021.9	3790.7	3487.2	3305.2	3063.1	2997.9	2975.4	3068.3	3237.6	3492.8	3688.4
47.5°	4390.1	4181.4	3892.0	3652.3	3381.6	3567.8	3440.3	3388.2	3615.7	3931.9	4243.3
50°	4695.5	4465.7	4181.9	4043.5	4000.3	4166.4	3835.2	3841.3	4049.6	4495.7	4852.7
52.5°	4931.9	4686.6	4435.2	4364.8	4605.9	4701.6	4462.4	4426.3	4578.3	5105.5	5534.2
55°	5152.9	4892.5	4698.3	4841.9	5248.1	5258.9	5242.0	5041.7	5224.6	5758.9	6239.7
57.5°	5209.6	4929.1	4800.1	5006.1	5555.4	5982.7	6150.6	5757.5	5943.8	6353.3	6843.9
60°	4917.4	4677.2	4625.6	4905.2	5721.4	6346.2	6784.8	6549.8	6479.9	6830.3	7267.0
62.5°	4318.8	4040.2	4082.0	4470.4	5546.4	6490.2	7285.8	7469.2	7046.1	7209.8	7451.9
65°	3437.4	3171.5	3255.9	3723.1	4997.1	6538.1	7541.9	7918.1	7250.6	7317.2	7190.1
67.5°	2424.2	2182.6	2289.1	2893.3	4157.0	5925.5	7586.0	7708.9	7033.0	7010.9	6475.2
70°	1373.5	1222.0	1337.4	1841.2	2934.1	4720.4	7240.3	7078.5	6642.7	6330.3	5417.9
72.5°	630.0	577.9	633.3	937.2	1689.2	3141.0	5910.9	6057.7	5723.8	5333.0	4121.8
75°	334.9	316.6	340.1	468.1	790.4	1708.9	4199.7	4529.9	4352.2	4044.9	2688.8
77.5°	249.1	235.0	246.3	303.5	422.2	668.4	2386.2	2802.8	2870.3	2587.5	1493.1
80°	190.9	179.7	190.9	229.4	292.2	317.6	1020.3	1306.4	1487.9	1202.3	593.4
82.5°	141.7	134.2	151.5	172.2	205.5	198.4	362.1	450.8	581.2	397.3	231.3
85°	112.6	103.2	109.8	116.8	131.3	108.8	165.6	185.3	196.1	164.2	85.4
87.5°	44.1	40.8	79.7	62.9	53.5	32.8	49.7	56.3	57.7	55.4	24.9
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°	483.6	483.6	483.6	483.6	483.6	483.6	483.6	483.6	483.6	483.6	483.6
2.5°	587.3	582.6	554.9	563.8	578.4	581.2	587.3	570.4	562.0	592.9	594.3
5°	758.5	733.2	720.0	721.4	712.1	697.5	719.6	734.1	739.7	762.7	771.2
7.5°	891.3	860.8	838.7	813.4	777.7	754.8	793.2	821.4	836.4	884.2	903.0
10°	950.4	926.0	921.3	889.4	888.4	888.0	886.1	876.2	908.6	903.9	917.1
12.5°	1072.3	1067.2	1022.6	1009.9	1011.3	1009.9	970.5	968.7	969.1	1012.3	996.8
15°	1185.8	1186.8	1146.0	1100.0	1058.7	1046.1	1030.6	1023.5	1033.9	1058.3	1043.2
17.5°	1326.1	1330.8	1214.0	1141.3	1086.9	1085.5	1048.4	1004.8	1067.6	1082.6	1066.2
20°	1416.6	1396.9	1253.4	1131.4	1115.9	1073.7	1027.8	967.7	1022.1	1058.7	1069.0
22.5°	1502.5	1468.2	1290.0	1148.8	1074.7	1024.5	979.9	941.0	958.3	999.1	992.6
25°	1560.6	1551.3	1340.6	1190.5	1073.3	961.6	901.6	876.7	885.6	949.0	942.9
27.5°	1699.5	1598.2	1331.7	1201.3	1028.2	875.8	845.8	819.0	810.1	878.6	897.4
30°	1792.4	1750.6	1391.3	1184.4	971.5	805.4	761.3	755.7	758.5	836.4	841.5
32.5°	1950.0	1841.6	1488.9	1119.7	888.9	753.3	702.7	705.0	717.7	774.5	786.2
35°	2114.2	2049.4	1502.0	1073.3	821.8	698.0	677.4	660.9	668.0	717.7	720.0
37.5°	2419.1	2195.3	1582.7	1001.5	772.6	676.9	637.5	622.9	626.7	654.8	675.0
40°	2687.4	2488.5	1545.2	932.1	711.6	648.7	599.5	588.7	577.4	605.1	617.8
42.5°	3117.5	2697.7	1532.5	855.6	683.0	610.7	577.0	548.4	537.6	561.0	584.0
45°	3547.7	2919.6	1463.5	778.2	642.6	607.9	544.1	516.9	519.7	540.9	564.3
47.5°	4027.1	3217.4	1346.7	703.2	598.6	594.3	511.3	499.6	508.0	531.5	554.9
50°	4593.7	3533.6	1250.1	635.6	567.1	553.5	507.1	493.0	501.0	528.7	551.6
52.5°	5213.4	3880.3	1179.7	573.2	531.5	521.2	512.7	499.1	508.5	532.4	556.3
55°	5829.3	4196.9	1131.9	530.5	501.0	507.5	524.4	514.6	519.3	537.1	561.0
57.5°	6286.2	4363.9	1035.7	485.0	476.1	499.6	525.8	509.4	512.2	537.1	562.9
60°	6551.7	4395.8	877.7	448.0	456.4	483.6	511.3	490.2	488.3	529.1	561.5
62.5°	6522.6	4210.5	696.1	414.2	433.9	459.7	489.3	469.1	474.2	530.1	564.3
65°	6106.1	3831.9	553.5	385.6	406.7	433.4	471.0	463.0	487.8	567.6	604.6
67.5°	5374.3	3278.9	444.7	358.8	381.4	415.6	483.6	504.7	515.5	606.1	644.1
70°	4355.4	2547.6	370.6	335.4	361.2	424.1	520.2	516.0	507.1	587.8	617.8
72.5°	3146.6	1746.4	326.0	312.4	336.3	398.7	521.2	498.6	487.4	536.6	558.2
75°	1968.7	1041.8	284.7	283.3	298.3	357.4	497.7	477.5	447.0	471.4	499.6
77.5°	1124.4	533.3	239.7	252.4	261.3	310.1	445.6	427.3	400.1	410.4	438.1
80°	429.2	258.0	202.2	224.2	221.9	262.7	377.6	373.4	342.4	345.7	362.6
82.5°	202.2	144.5	167.9	192.8	180.1	209.2	306.8	305.4	278.2	251.9	265.5
85°	75.1	76.9	122.9	146.8	125.2	135.1	221.9	215.8	189.5	160.0	176.8
87.5°	16.9	27.7	60.5	76.5	43.6	41.7	89.6	77.9	75.1	44.6	46.9
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)