

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: P367593

Luminaire Tested: **MSA-SA2D-750-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367593
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-750-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11054 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

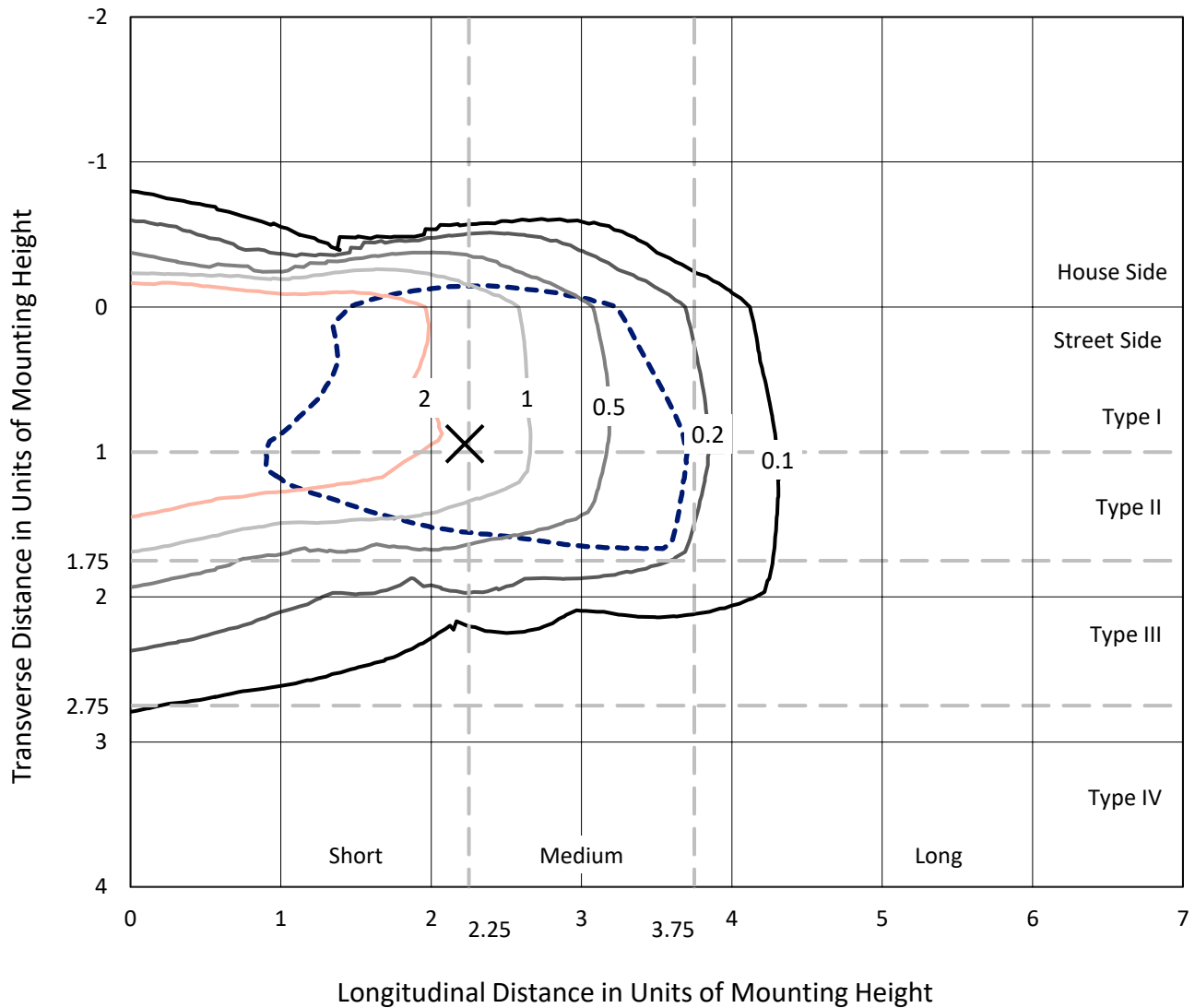
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

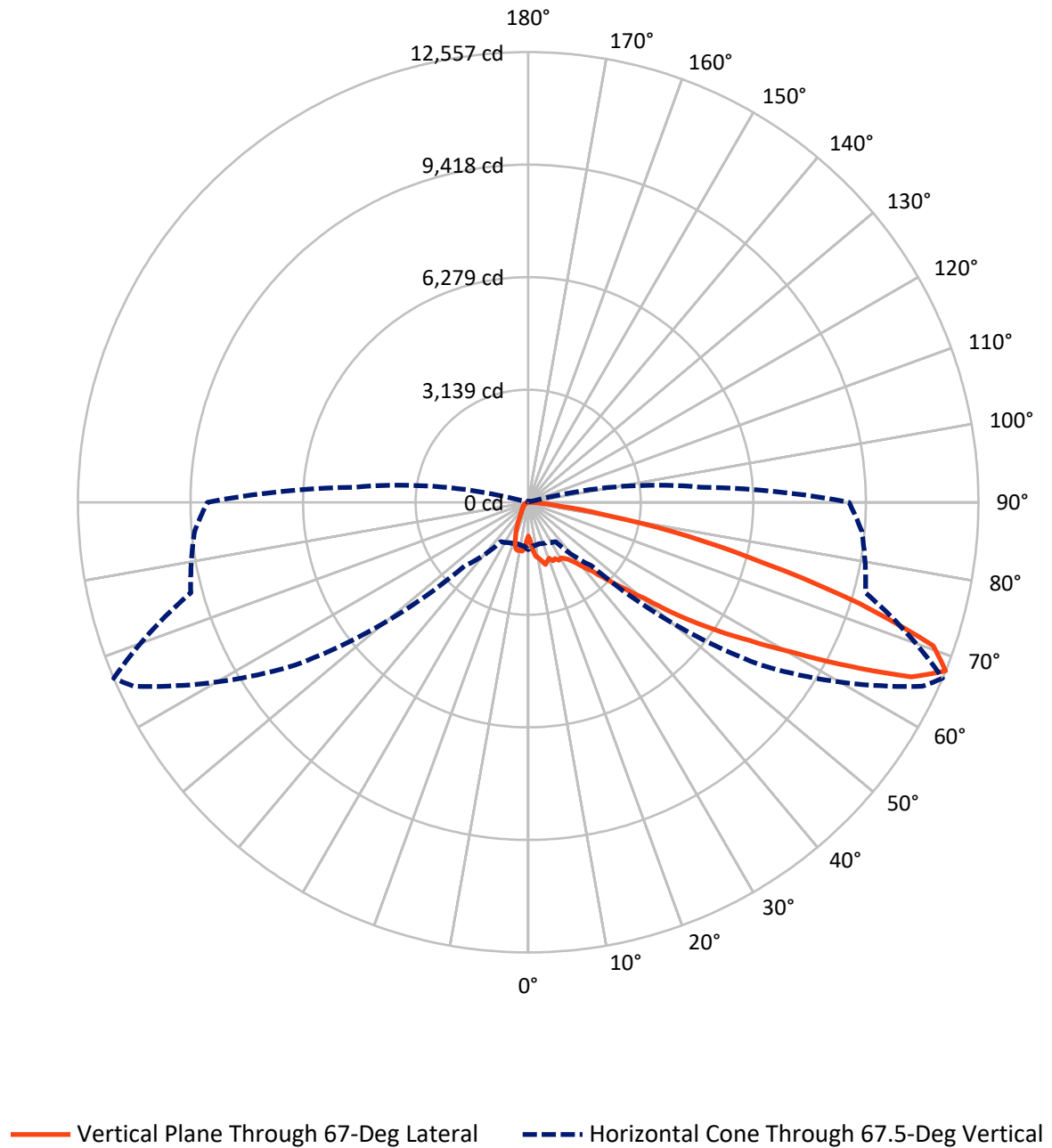
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.6 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



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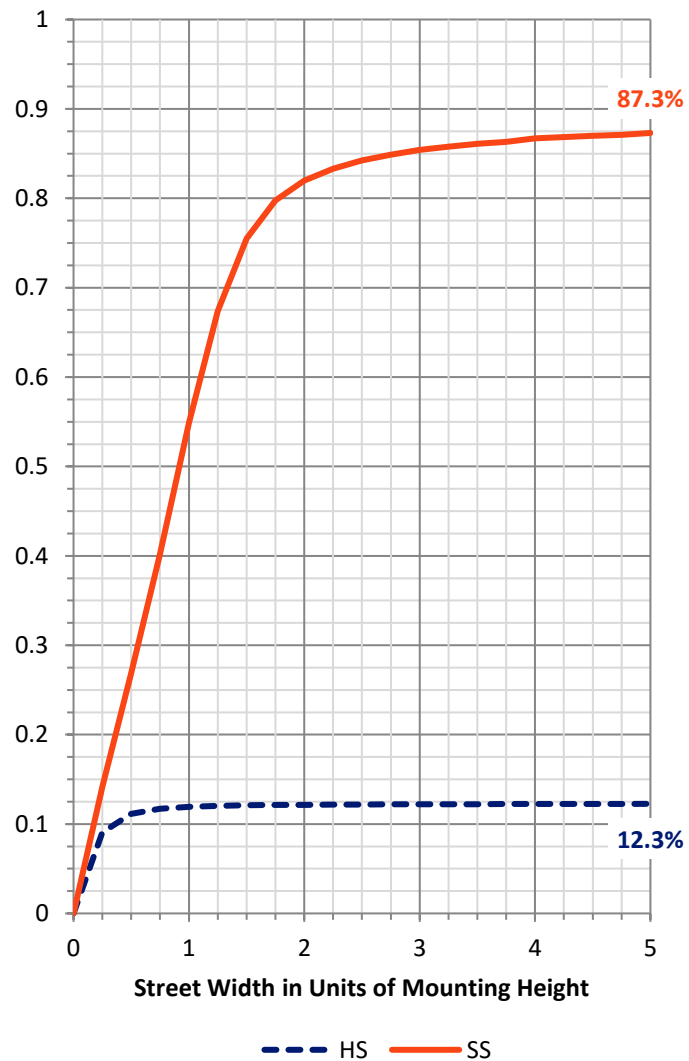
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1367.1	0.0	1367.1
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	9686.9	0.0	9686.9
	% Fixture	87.6	0.0	87.6
Total	Lumens	11054.0	0.0	11054.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	1.1
10°-20°	349.7	3.2
20°-30°	548.0	5.0
30°-40°	883.6	8.0
40°-50°	1623.7	14.7
50°-60°	2742.2	24.8
60°-70°	3031.6	27.4
70°-80°	1586.7	14.4
80°-90°	170.4	1.5
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°	11054.0	100.0
0°-180°	11054.0	100.0

Coefficient of Utilization



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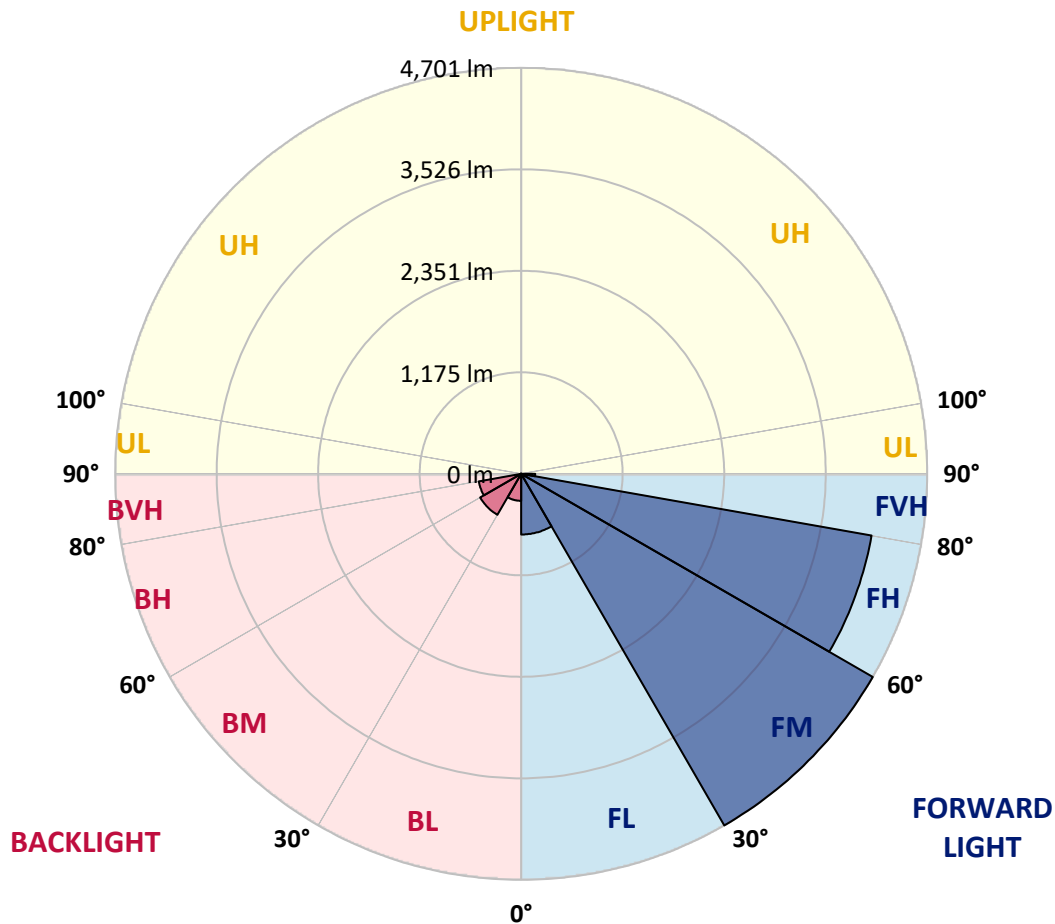
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	702.9	6.4			
FM	(30°-60°)	4701.3	42.5			
FH	(60°-80°)	4119.6	37.3			G2/5000
FVH	(80°-90°)	163.1	1.5			G2/225
BL	(0°-30°)	313.0	2.8	B1/500		
BM	(30°-60°)	548.1	5.0	B1/1000		
BH	(60°-80°)	498.7	4.5	B1/500		G1/500
BVH	(80°-90°)	7.3	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	941.5	941.5	941.5	941.5	941.5	941.5	941.5	941.5	941.5	941.5	941.5
2.5°	1111.4	1073.8	1009.9	1028.4	1065.4	1096.3	1081.7	1053.1	1053.6	1024.5	1129.3
5°	1293.1	1242.6	1205.6	1218.5	1216.8	1215.7	1284.7	1311.0	1322.2	1370.5	1441.7
7.5°	1345.2	1327.3	1288.6	1300.4	1261.7	1264.5	1385.6	1500.0	1517.9	1547.7	1674.4
10°	1325.0	1290.3	1304.3	1304.3	1304.9	1367.7	1449.0	1558.3	1580.2	1694.6	1708.0
12.5°	1303.2	1304.9	1360.4	1350.3	1426.5	1539.2	1566.7	1689.5	1678.9	1778.1	1925.6
15°	1384.5	1427.1	1391.2	1405.2	1412.5	1544.9	1589.2	1752.3	1799.4	1925.0	2020.9
17.5°	1524.1	1529.7	1455.1	1434.9	1487.7	1525.2	1614.4	1692.9	1724.3	2054.0	2189.7
20°	1549.3	1585.2	1509.5	1392.9	1504.5	1556.1	1618.3	1655.9	1669.3	2093.8	2285.0
22.5°	1701.3	1661.5	1540.4	1451.8	1483.7	1539.8	1578.5	1691.8	1772.5	2018.7	2376.4
25°	1779.2	1768.6	1653.1	1577.4	1544.9	1540.4	1629.0	1714.8	1740.6	2096.6	2398.9
27.5°	1966.0	1941.9	1718.1	1708.6	1601.5	1507.3	1630.6	1784.9	1833.1	2023.2	2483.0
30°	2220.0	2211.0	1913.3	1907.1	1736.6	1567.3	1721.5	1828.0	1798.9	2060.7	2539.1
32.5°	2475.7	2548.6	2244.1	2070.3	1942.4	1787.7	1695.7	1814.6	1866.7	2152.1	2642.2
35°	2784.7	2837.4	2527.3	2401.1	2116.8	1890.8	1866.7	1943.0	1965.4	2260.9	2759.4
37.5°	3325.2	3245.6	2981.5	2766.7	2617.6	2259.2	2140.4	2079.8	2132.0	2408.4	2998.9
40°	3724.5	3674.0	3348.8	3220.4	2877.2	2667.5	2356.8	2300.2	2358.5	2559.8	3165.4
42.5°	4206.1	4101.3	3795.1	3708.2	3354.9	2950.6	2635.5	2655.1	2618.7	2858.7	3457.6
45°	4641.8	4405.2	4234.7	4254.4	4066.0	3519.8	3100.4	3090.8	3060.5	3291.6	3764.8
47.5°	4935.1	4728.2	4562.2	4507.8	4485.4	4520.7	3772.1	3602.8	3580.4	3746.3	4248.8
50°	5092.7	4866.1	4660.9	4672.1	5127.5	5470.1	4465.2	4224.7	4233.1	4406.3	4910.4
52.5°	4986.7	4730.4	4514.0	4724.3	5625.4	6103.1	5612.5	5037.2	5232.3	5188.0	5798.1
55°	4497.2	4274.6	4120.9	4497.2	5679.8	6784.5	7025.0	6260.2	6216.4	6115.5	6703.1
57.5°	3673.4	3481.7	3386.9	3783.9	5084.8	7333.4	8443.7	7642.4	7269.5	6846.7	7454.5
60°	2737.0	2595.7	2497.0	2706.7	4006.5	6800.2	9372.9	8945.0	8513.2	7551.6	8129.7
62.5°	2027.1	1912.1	1807.3	1826.3	2758.9	5848.6	9729.5	10325.0	10077.1	8295.7	8766.7
65°	1617.7	1512.9	1439.4	1397.4	1708.6	4400.2	9233.2	11456.0	11742.0	8996.6	9226.5
67.5°	1321.1	1232.5	1196.1	1244.3	1340.2	2508.2	7907.6	12142.4	12557.3	9740.1	9339.8
70°	1074.9	1002.1	998.1	1128.2	1234.2	1529.2	5816.6	11668.5	11980.9	9866.9	8660.7
72.5°	749.2	717.2	768.2	952.7	1223.0	1273.5	3340.4	9656.0	9667.2	8714.5	7123.7
75°	423.9	418.9	499.6	759.8	1191.0	1260.6	1862.2	6823.7	6828.8	6591.0	4935.1
77.5°	233.3	218.1	291.0	513.6	1022.8	1231.4	1201.1	4659.2	4539.8	3667.8	2254.2
80°	107.7	101.5	157.6	329.2	748.0	1164.7	962.8	2560.9	2309.1	1194.9	550.1
82.5°	44.3	42.1	72.3	211.4	472.7	938.1	811.4	1136.1	911.8	227.1	169.9
85°	7.9	8.4	29.7	127.8	264.7	432.3	657.8	539.4	396.4	62.8	93.1
87.5°	0.0	0.0	6.2	30.8	63.9	118.3	266.9	150.8	103.7	18.5	27.5
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°	941.5	941.5	941.5	941.5	941.5	941.5	941.5	941.5	941.5	941.5	941.5
2.5°	1150.1	1140.6	1044.1	1048.6	1055.3	1049.2	1048.0	1021.1	996.4	1077.8	1076.6
5°	1454.6	1386.7	1320.0	1294.2	1238.7	1165.8	1166.3	1143.4	1119.8	1152.9	1152.9
7.5°	1671.6	1577.9	1493.3	1342.4	1195.5	1062.6	1050.8	1019.4	983.5	1026.7	1035.1
10°	1722.0	1640.7	1531.4	1309.9	1170.8	1041.3	898.9	781.7	727.3	702.1	697.6
12.5°	1877.4	1816.8	1572.3	1327.3	1127.1	907.8	674.6	535.5	440.7	433.5	423.4
15°	1981.1	1938.5	1612.7	1284.1	942.1	652.7	423.9	325.2	287.1	283.7	278.7
17.5°	2142.0	2068.0	1574.0	1146.7	736.8	430.7	284.9	256.8	261.3	271.4	263.6
20°	2207.7	2063.0	1489.9	947.7	517.6	288.8	247.3	232.1	243.9	253.5	249.0
22.5°	2274.9	2077.6	1415.3	781.1	338.1	238.9	220.4	212.5	213.6	223.2	223.7
25°	2274.4	2117.9	1329.0	608.4	251.8	212.5	199.1	189.0	185.0	191.8	190.1
27.5°	2384.8	2071.4	1171.4	451.4	221.5	190.1	177.2	164.9	150.8	157.6	157.6
30°	2385.4	2147.1	1061.5	324.1	203.0	169.3	158.1	139.1	122.8	128.4	129.0
32.5°	2448.8	2081.5	960.0	247.8	188.4	157.0	132.3	115.0	105.4	108.8	108.8
35°	2521.1	2137.6	804.1	218.7	173.8	139.6	113.3	99.3	92.0	94.8	94.8
37.5°	2760.0	2125.8	695.9	203.6	164.3	126.2	103.2	87.5	84.1	85.8	88.0
40°	2846.3	2209.3	549.0	194.6	148.6	113.8	90.8	79.1	74.6	75.7	76.3
42.5°	3066.2	2227.8	438.5	187.3	134.6	98.7	80.7	72.3	66.7	66.7	68.4
45°	3309.0	2274.4	348.8	181.1	122.8	88.6	72.9	66.2	57.8	56.6	58.9
47.5°	3660.5	2452.7	284.3	168.8	108.8	82.4	67.3	57.2	50.5	48.2	50.5
50°	4248.8	2755.5	251.2	153.6	98.7	77.4	59.4	48.8	43.7	40.9	42.6
52.5°	5078.7	3278.7	233.8	139.6	89.7	69.5	53.3	42.6	37.6	35.3	36.4
55°	6000.5	3878.7	225.4	125.6	81.9	61.1	46.5	37.6	33.1	30.3	30.8
57.5°	6852.9	4442.8	217.0	112.1	74.0	54.4	40.9	33.1	28.6	25.8	26.4
60°	7692.9	4893.1	196.8	96.4	66.7	48.8	35.9	28.6	25.8	22.4	22.4
62.5°	8435.8	5162.2	167.7	83.6	60.0	43.2	32.0	25.8	23.6	20.2	20.2
65°	8941.6	5174.6	135.1	71.8	52.7	37.0	28.0	24.1	21.9	17.9	17.4
67.5°	8948.9	4838.1	108.2	63.9	46.5	32.5	25.2	23.0	20.2	16.8	15.7
70°	8009.7	3997.0	90.3	56.1	40.4	28.6	21.9	21.9	19.6	16.3	14.6
72.5°	6407.1	3054.4	75.7	48.8	35.9	24.7	20.2	20.7	19.1	16.3	14.6
75°	4306.5	1751.8	62.8	41.5	31.4	20.7	19.6	20.2	19.6	16.3	14.0
77.5°	1983.4	557.9	48.8	34.2	26.9	17.4	19.1	19.1	17.9	14.6	12.3
80°	446.9	137.4	35.3	25.2	21.9	12.9	17.4	15.7	14.0	10.1	7.3
82.5°	162.6	42.1	21.3	15.7	13.5	5.0	11.2	11.2	10.1	7.3	4.5
85°	93.1	21.9	11.8	10.1	7.3	2.2	6.2	6.7	5.6	5.0	2.2
87.5°	30.3	5.0	5.6	6.2	5.6	1.1	2.2	2.2	1.7	1.1	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)