

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: P368507

Luminaire Tested: **MSA-SA4C-740-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368507
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-740-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17769 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

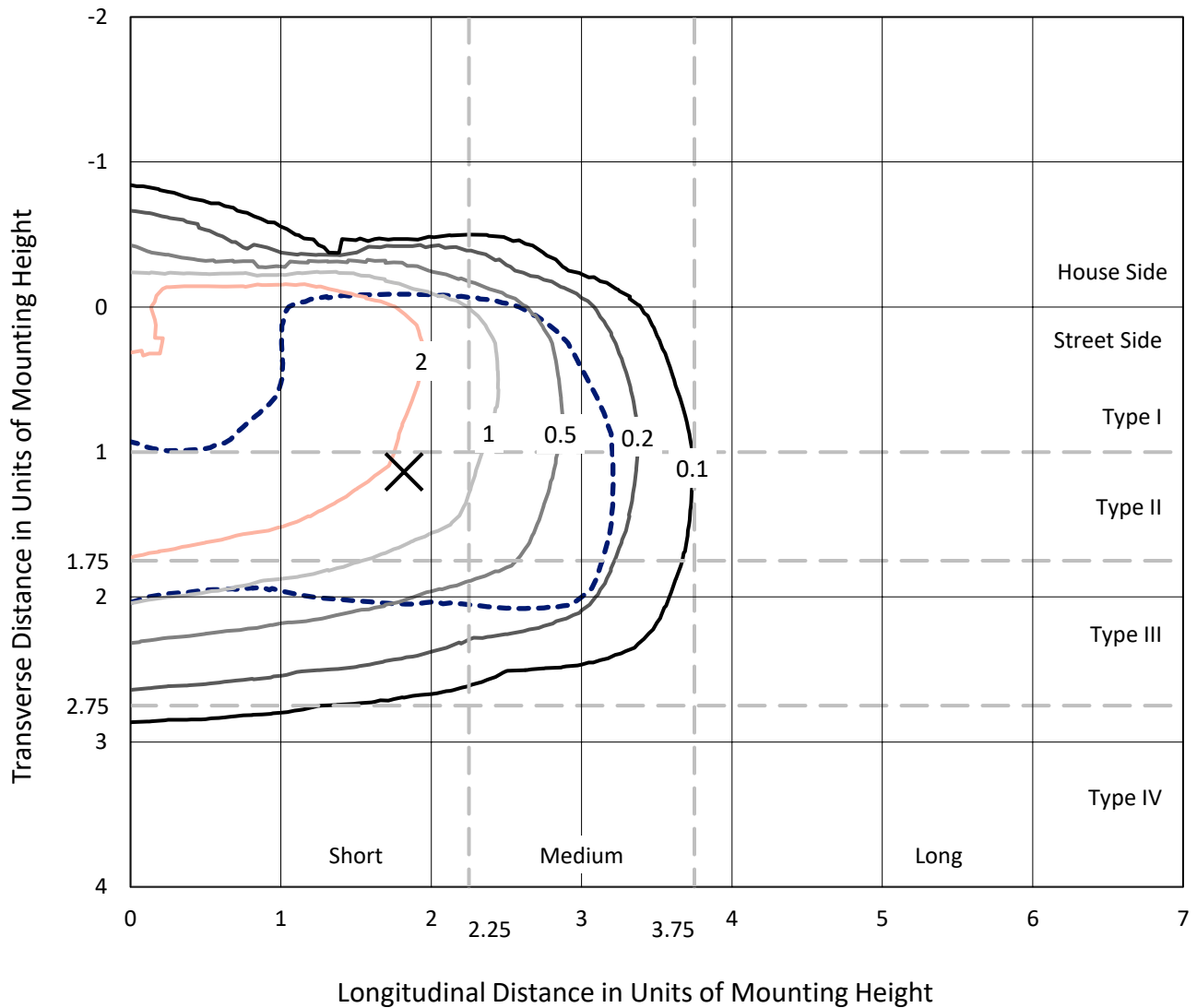
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P368507
 CATALOG NUMBER: MSA-SA4C-740-U-T3-HSS

Iso-Footcandle Lines of Horizontal Illumination

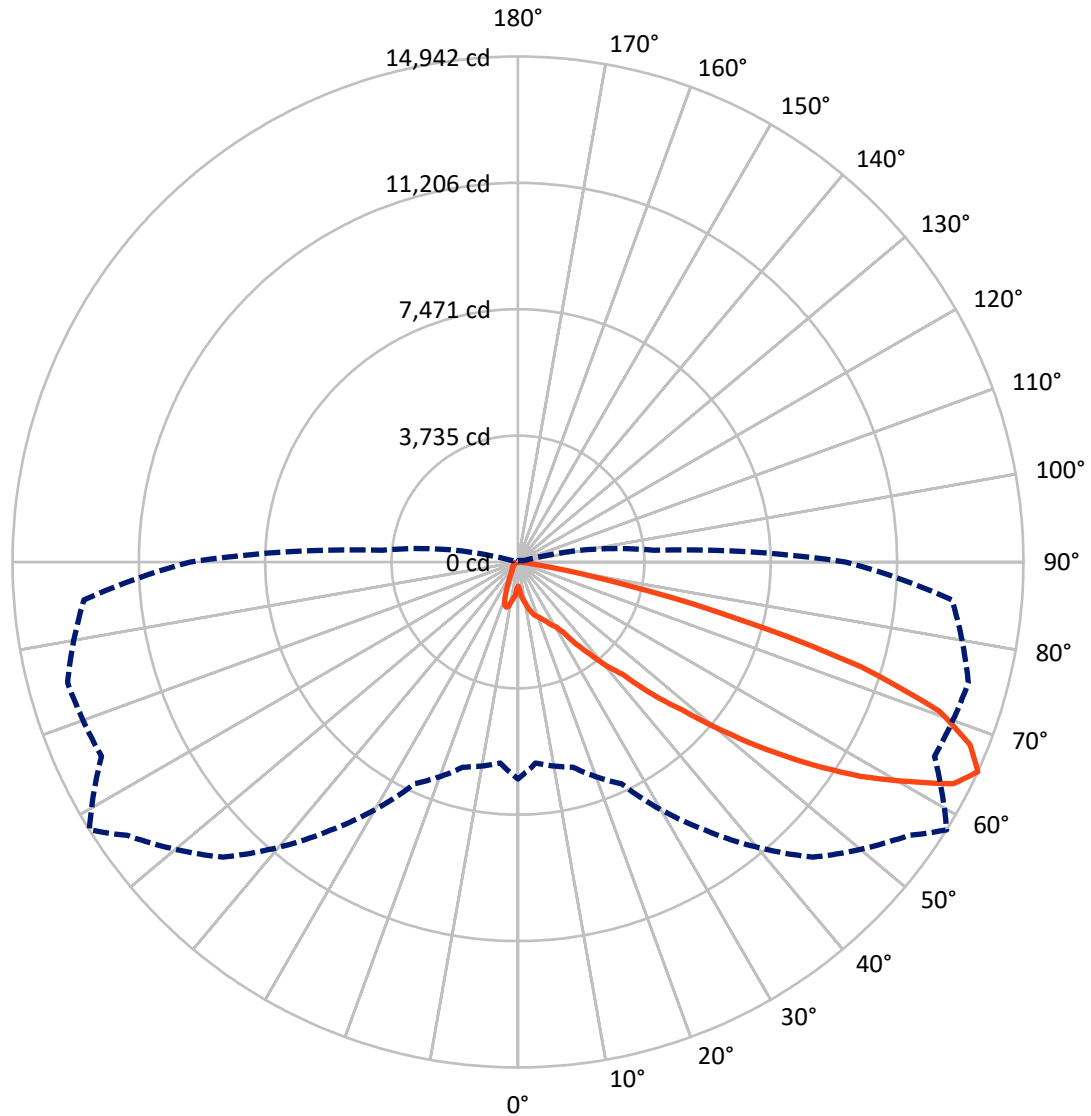
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type III - Short - N/A

REPORT NUMBER: P368507
CATALOG NUMBER: MSA-SA4C-740-U-T3-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P368507

CATALOG NUMBER: MSA-SA4C-740-U-T3-HSS

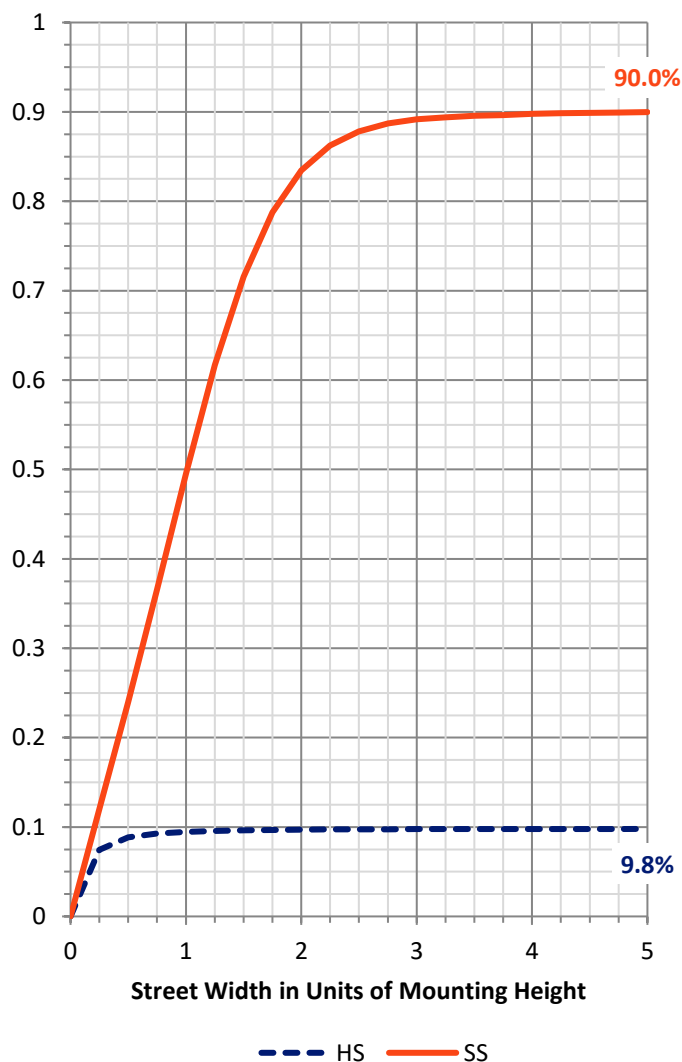
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1753.3	0.0	1753.3
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	16015.7	0.0	16015.7
	% Fixture	90.1	0.0	90.1
Total	Lumens	17769.0	0.0	17769.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.0	0.6
10°-20°	364.7	2.1
20°-30°	706.0	4.0
30°-40°	1408.6	7.9
40°-50°	2879.7	16.2
50°-60°	5107.8	28.7
60°-70°	5385.0	30.3
70°-80°	1745.8	9.8
80°-90°	71.4	0.4
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°	17769.0	100.0
0°-180°	17769.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368507

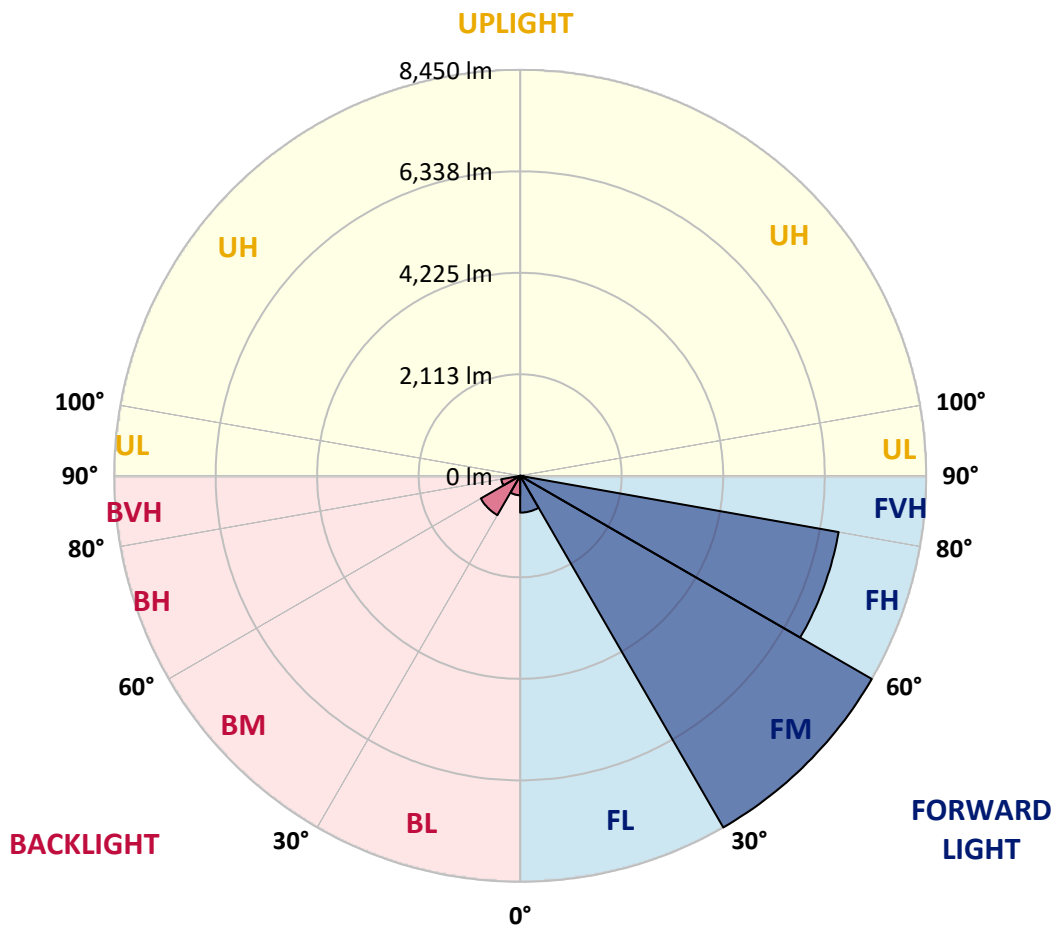
CATALOG NUMBER: MSA-SA4C-740-U-T3-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	766.6	4.3			
FM (30°-60°)	8450.1	47.6			
FH (60°-80°)	6730.6	37.9			G3/7500
FVH (80°-90°)	68.4	0.4			G1/100
BL (0°-30°)	404.1	2.3	B1/500		
BM (30°-60°)	946.0	5.3	B1/1000		
BH (60°-80°)	400.2	2.3	B1/500		G1/500
BVH (80°-90°)	3.0	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 III Short





REPORT NUMBER: P368507

CATALOG NUMBER: MSA-SA4C-740-U-T3-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	868.4	842.4	801.4	808.4	816.4	832.4	819.4	807.4	794.4	777.4	842.4
5°	1048.5	1005.5	1001.5	992.4	985.4	984.4	1000.5	995.4	1002.5	1034.5	1067.5
7.5°	1114.5	1096.5	1062.5	1076.5	1054.5	1037.5	1108.5	1131.5	1175.5	1190.5	1276.6
10°	1107.5	1081.5	1095.5	1102.5	1117.5	1179.5	1224.6	1249.6	1287.6	1369.6	1352.6
12.5°	1139.5	1162.5	1177.5	1178.5	1255.6	1369.6	1401.6	1422.6	1490.7	1522.7	1606.7
15°	1246.6	1284.6	1260.6	1270.6	1295.6	1434.6	1509.7	1555.7	1651.7	1755.8	1776.8
17.5°	1399.6	1423.6	1373.6	1337.6	1406.6	1482.7	1618.7	1666.8	1727.8	1970.9	2015.9
20°	1592.7	1633.7	1525.7	1382.6	1473.7	1563.7	1711.8	1734.8	1799.8	2117.0	2188.0
22.5°	2043.9	1982.9	1817.8	1594.7	1567.7	1607.7	1748.8	1838.8	1948.9	2199.0	2364.1
25°	2489.1	2468.1	2225.0	1975.9	1795.8	1705.8	1892.9	1942.9	2123.0	2394.1	2485.1
27.5°	2984.3	3026.4	2620.2	2469.1	2116.0	1821.8	1982.9	2108.0	2321.0	2465.1	2684.2
30°	3637.6	3570.6	3094.4	2943.3	2540.1	2141.0	2216.0	2224.0	2537.1	2699.2	2907.3
32.5°	4149.9	4192.9	3594.6	3362.5	3040.4	2632.2	2391.1	2495.1	2719.2	3080.4	3277.5
35°	4704.1	4700.1	4116.9	3804.7	3383.5	3033.4	2910.3	2986.3	3267.5	3676.7	3728.7
37.5°	5532.5	5461.5	4773.2	4315.9	3957.8	3658.6	3564.6	3463.6	3753.7	4143.9	4339.0
40°	6313.8	6068.7	5432.4	4890.2	4432.0	4309.9	3969.8	4031.8	4117.9	4633.1	5172.3
42.5°	7103.2	6951.1	6100.7	5646.5	5083.3	4793.2	4571.1	4542.0	4951.2	5561.5	6118.8
45°	8144.7	7679.5	6999.2	6600.0	5947.7	5656.5	5477.5	5584.5	5952.7	6844.1	7215.3
47.5°	9019.1	8590.9	8006.6	7400.3	6716.0	7043.2	6707.0	6537.9	7043.2	7964.6	8457.8
50°	9770.4	9293.2	8701.9	8252.7	8141.7	8455.8	7775.5	7837.5	8165.7	9248.2	9526.3
52.5°	10316.6	9814.4	9298.2	9081.1	9536.3	9694.4	9353.2	9216.2	9514.3	10342.7	10477.7
55°	10727.8	10213.6	9810.4	10109.6	10990.0	10937.9	11058.0	10589.8	10874.9	11484.2	11420.1
57.5°	10752.8	10143.6	9907.5	10388.7	11597.2	12402.6	12753.7	11957.4	12119.5	12376.6	12232.5
60°	9966.5	9360.2	9341.2	10024.5	11773.3	12781.8	13550.1	13161.9	12944.8	13135.9	12862.8
62.5°	8399.8	7975.6	8173.7	8929.0	11118.0	12572.7	13974.3	14441.5	13596.1	13639.1	13251.0
65°	6413.9	5968.7	6278.8	7230.3	9685.4	12338.6	14094.4	14941.7	13584.1	13782.2	12878.8
67.5°	4247.9	3989.8	4341.0	5389.4	7700.5	10891.9	14032.3	14416.5	13152.9	13223.0	11497.2
70°	2193.0	2130.0	2414.1	3241.5	5177.3	8367.8	13423.0	13213.0	12277.5	11391.1	8868.0
72.5°	702.3	705.3	978.4	1480.7	2791.3	5094.3	10317.7	10605.8	9824.4	8332.8	5414.4
75°	311.1	306.1	409.2	621.3	1163.5	2284.0	6409.9	6721.0	6116.8	4584.1	2276.0
77.5°	224.1	217.1	262.1	363.2	576.3	774.3	3005.4	3243.5	2773.2	1588.7	521.2
80°	158.1	157.1	190.1	255.1	360.2	344.2	949.4	1064.5	852.4	385.2	153.1
82.5°	89.0	92.0	132.1	180.1	219.1	172.1	267.1	294.1	287.1	205.1	67.0
85°	43.0	48.0	86.0	130.1	115.1	67.0	95.0	103.0	120.1	119.1	34.0
87.5°	0.0	0.0	35.0	59.0	31.0	10.0	29.0	33.0	32.0	38.0	8.0
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: P368507
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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	855.4	849.4	773.3	779.4	796.4	789.4	795.4	781.4	765.3	830.4	829.4
5°	1081.5	1036.5	1012.5	990.4	994.4	949.4	975.4	987.4	985.4	1022.5	1032.5
7.5°	1279.6	1219.5	1171.5	1125.5	1055.5	992.4	1031.5	1056.5	1073.5	1137.5	1162.5
10°	1372.6	1323.6	1304.6	1214.5	1164.5	1125.5	1078.5	1044.5	1058.5	1041.5	1058.5
12.5°	1576.7	1543.7	1470.7	1379.6	1319.6	1239.6	1064.5	918.4	828.4	829.4	823.4
15°	1762.8	1760.8	1651.7	1500.7	1326.6	1098.5	825.4	641.3	556.3	532.2	524.2
17.5°	2005.9	1975.9	1776.8	1553.7	1240.6	850.4	562.3	439.2	431.2	445.2	439.2
20°	2161.0	2117.0	1838.8	1476.7	1022.5	575.3	424.2	389.2	413.2	433.2	428.2
22.5°	2316.0	2250.0	1885.8	1382.6	727.3	421.2	383.2	377.2	392.2	417.2	421.2
25°	2401.1	2388.1	1977.9	1206.5	498.2	369.2	369.2	367.2	372.2	390.2	387.2
27.5°	2648.2	2472.1	1908.9	941.4	385.2	339.2	344.2	342.2	324.1	342.2	343.2
30°	2802.3	2721.2	1913.9	670.3	339.2	300.1	313.1	297.1	270.1	285.1	282.1
32.5°	3112.4	2910.3	1898.9	452.2	309.1	286.1	266.1	243.1	223.1	229.1	224.1
35°	3473.6	3319.5	1695.8	363.2	288.1	253.1	221.1	198.1	177.1	182.1	181.1
37.5°	4191.9	3702.7	1527.7	327.1	274.1	232.1	195.1	163.1	152.1	155.1	158.1
40°	4857.2	4342.0	1214.5	311.1	250.1	207.1	161.1	138.1	131.1	133.1	136.1
42.5°	5851.6	4850.2	917.4	295.1	226.1	175.1	134.1	119.1	112.1	116.1	118.1
45°	6814.1	5282.4	685.3	281.1	206.1	151.1	113.1	103.0	95.0	98.0	102.0
47.5°	7775.5	5762.6	511.2	259.1	184.1	130.1	97.0	90.0	85.0	86.0	91.0
50°	8635.9	5986.7	402.2	232.1	166.1	113.1	88.0	81.0	79.0	80.0	84.0
52.5°	9268.2	5988.7	339.2	208.1	149.1	100.0	83.0	75.0	74.0	76.0	80.0
55°	9839.4	5828.6	294.1	187.1	134.1	91.0	79.0	72.0	72.0	74.0	78.0
57.5°	10218.6	5534.5	255.1	165.1	121.1	86.0	76.0	69.0	68.0	67.0	70.0
60°	10403.7	5133.3	216.1	145.1	109.0	83.0	74.0	61.0	60.0	58.0	60.0
62.5°	10286.6	4631.1	181.1	125.1	97.0	79.0	65.0	53.0	51.0	47.0	50.0
65°	9688.4	4020.8	153.1	107.0	84.0	67.0	55.0	45.0	40.0	35.0	34.0
67.5°	8464.8	3266.5	128.1	92.0	72.0	55.0	45.0	40.0	31.0	27.0	26.0
70°	6343.9	2230.0	106.0	79.0	60.0	47.0	38.0	36.0	29.0	26.0	24.0
72.5°	3721.7	1203.5	89.0	69.0	51.0	39.0	31.0	33.0	29.0	24.0	22.0
75°	1486.7	400.2	71.0	55.0	41.0	28.0	26.0	27.0	26.0	22.0	18.0
77.5°	339.2	126.1	55.0	43.0	32.0	18.0	21.0	23.0	23.0	18.0	13.0
80°	106.0	50.0	32.0	27.0	23.0	10.0	15.0	16.0	11.0	5.0	0.0
82.5°	34.0	14.0	11.0	11.0	10.0	2.0	3.0	2.0	0.0	0.0	0.0
85°	13.0	9.0	7.0	7.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.0	4.0	3.0	4.0	2.0	0.0	0.0	0.0	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)