

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: P597173

Luminaire Tested: **MSA-SA4D-835-U-T3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597173
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-835-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: 16016 lumens
Efficiency: N/A
Efficacy: 61.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

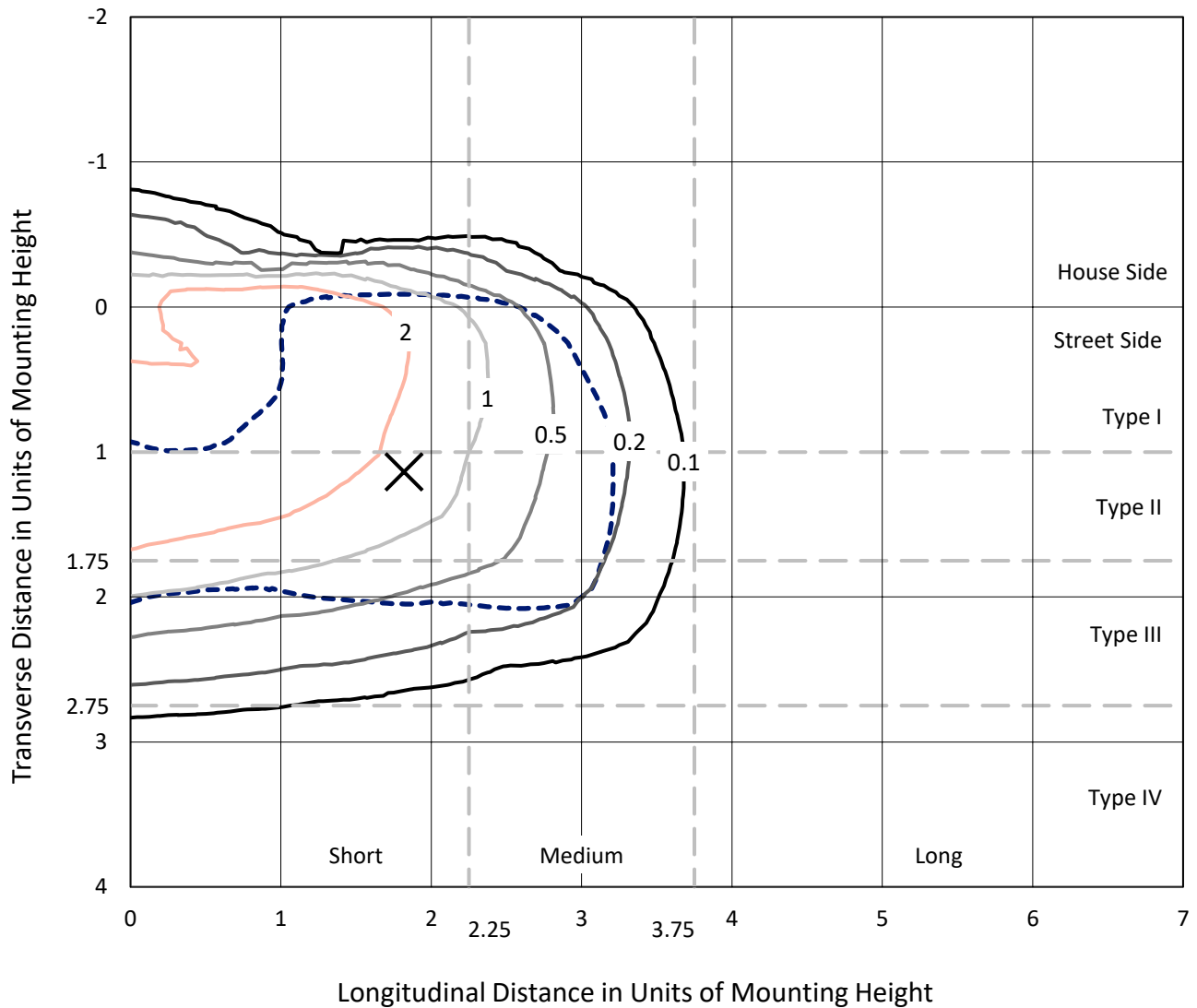
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

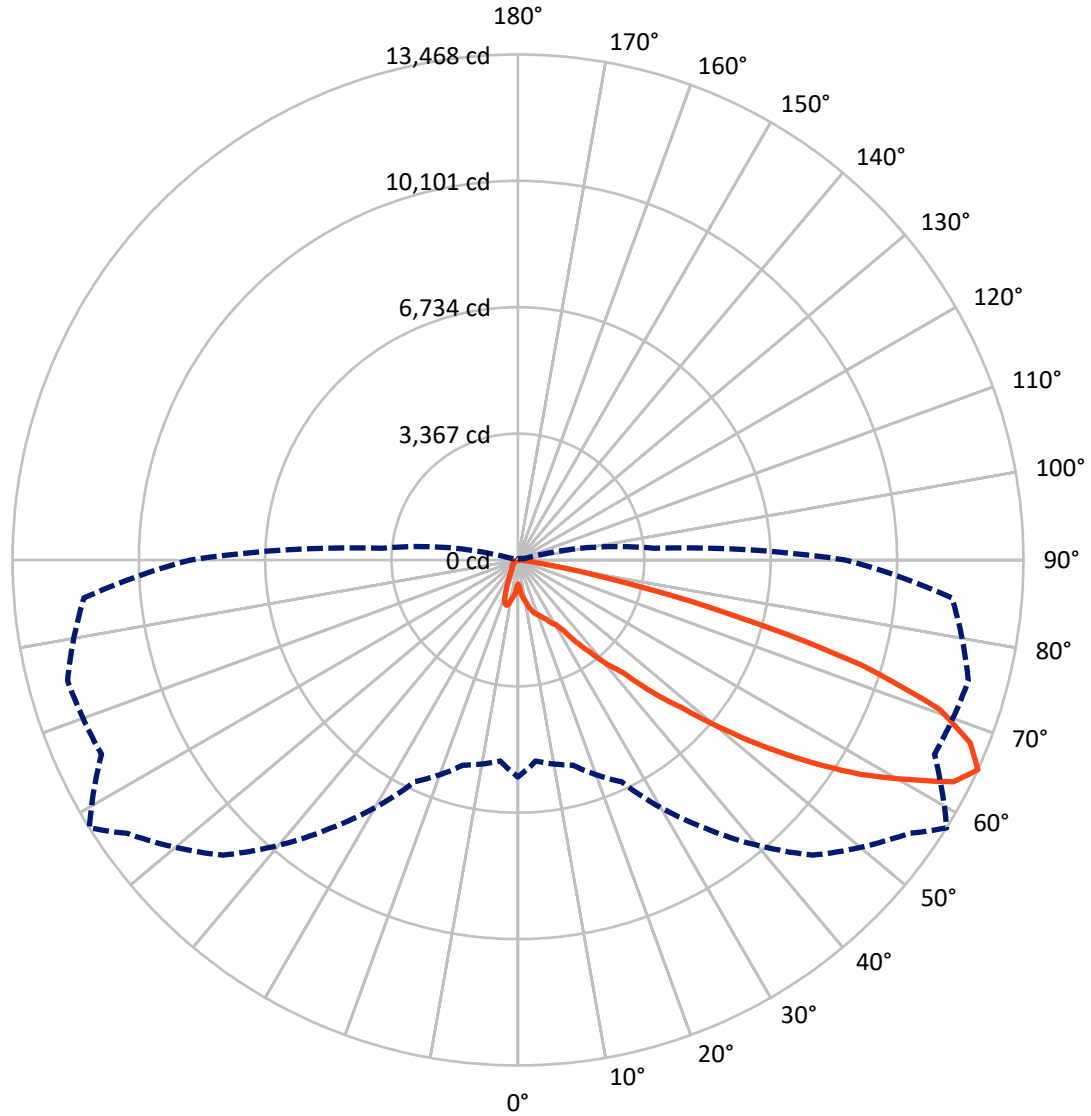
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 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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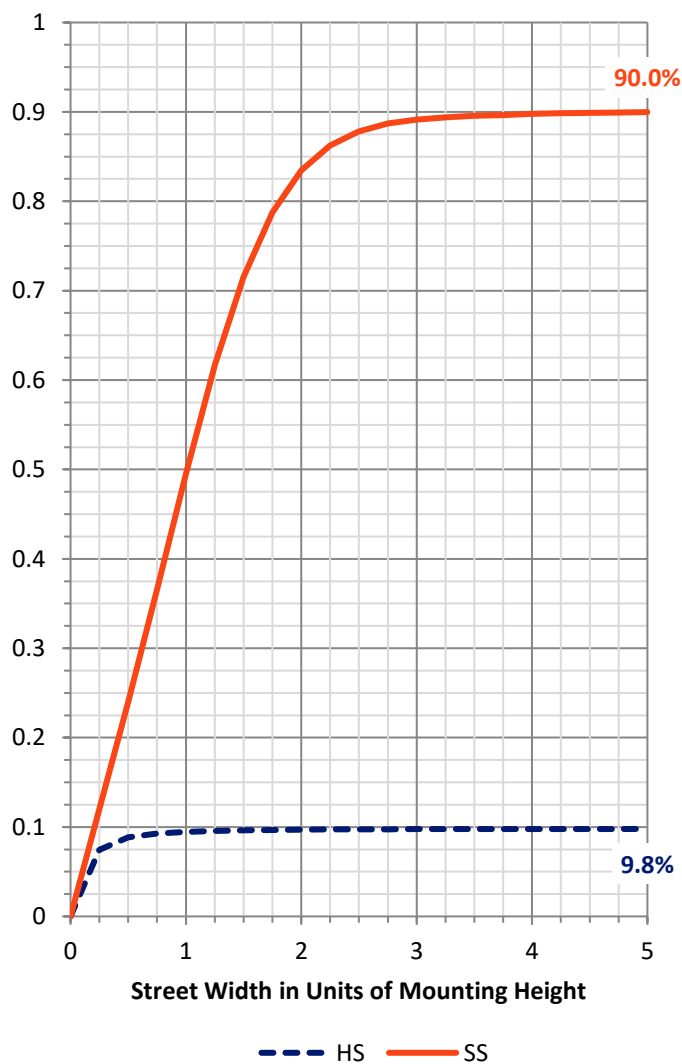
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1580.4	0.0	1580.4
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	14435.6	0.0	14435.6
	% Fixture	90.1	0.0	90.1
Total	Lumens	16016.0	0.0	16016.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.1	0.6
10°-20°	328.8	2.1
20°-30°	636.4	4.0
30°-40°	1269.6	7.9
40°-50°	2595.6	16.2
50°-60°	4603.8	28.7
60°-70°	4853.7	30.3
70°-80°	1573.6	9.8
80°-90°	64.3	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°	16016.0	100.0
0°-180°	16016.0	100.0

Coefficient of Utilization



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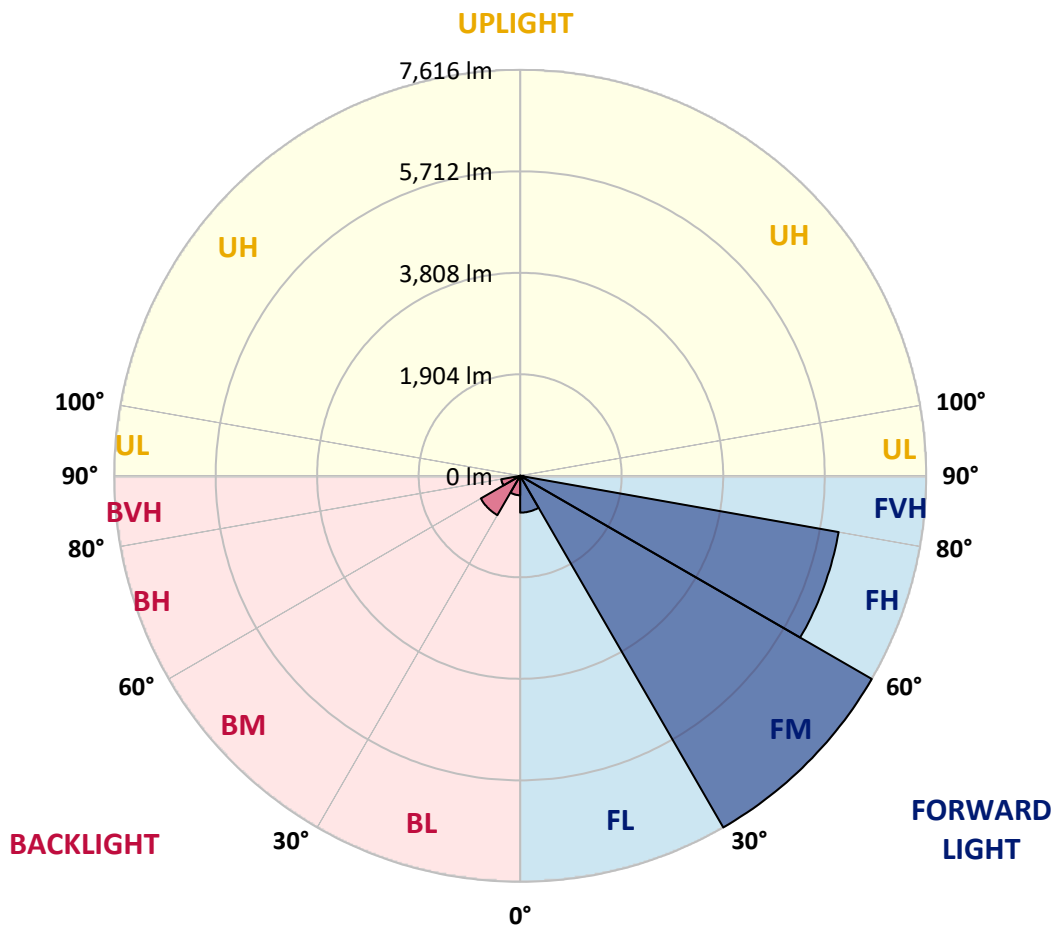
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	691.0	4.3			
FM (30°-60°)	7616.4	47.6			
FH (60°-80°)	6066.6	37.9			G3/7500
FVH (80°-90°)	61.6	0.4			G1/100
BL (0°-30°)	364.3	2.3	B1/500		
BM (30°-60°)	852.7	5.3	B1/1000		
BH (60°-80°)	360.7	2.3	B1/500		G1/500
BVH (80°-90°)	2.7	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	641.1	641.1	641.1	641.1	641.1	641.1	641.1	641.1	641.1	641.1	641.1
2.5°	782.7	759.3	722.3	728.6	735.8	750.3	738.5	727.7	716.0	700.7	759.3
5°	945.0	906.3	902.7	894.5	888.2	887.3	901.8	897.2	903.6	932.4	962.2
7.5°	1004.6	988.3	957.7	970.3	950.4	935.1	999.1	1019.9	1059.6	1073.1	1150.6
10°	998.2	974.8	987.4	993.7	1007.3	1063.2	1103.7	1126.3	1160.6	1234.5	1219.2
12.5°	1027.1	1047.8	1061.4	1062.3	1131.7	1234.5	1263.4	1282.3	1343.6	1372.5	1448.2
15°	1123.6	1157.8	1136.2	1145.2	1167.8	1293.1	1360.7	1402.2	1488.8	1582.6	1601.5
17.5°	1261.6	1283.2	1238.1	1205.6	1267.9	1336.4	1459.0	1502.3	1557.3	1776.5	1817.0
20°	1435.6	1472.6	1375.2	1246.2	1328.3	1409.4	1542.9	1563.6	1622.3	1908.1	1972.1
22.5°	1842.3	1787.3	1638.5	1437.4	1413.0	1449.1	1576.3	1657.4	1756.6	1982.0	2130.8
25°	2243.6	2224.6	2005.5	1781.0	1618.6	1537.5	1706.1	1751.2	1913.5	2157.9	2240.0
27.5°	2689.9	2727.8	2361.7	2225.5	1907.2	1642.1	1787.3	1900.0	2092.1	2221.9	2419.4
30°	3278.8	3218.4	2789.1	2653.0	2289.5	1929.7	1997.4	2004.6	2286.8	2432.9	2620.5
32.5°	3740.5	3779.2	3240.0	3030.8	2740.4	2372.5	2155.2	2249.0	2451.0	2776.5	2954.1
35°	4240.0	4236.4	3710.7	3429.4	3049.7	2734.1	2623.2	2691.7	2945.1	3313.9	3360.8
37.5°	4986.7	4922.7	4302.3	3890.2	3567.3	3297.7	3212.9	3121.9	3383.4	3735.1	3910.9
40°	5691.0	5470.0	4896.5	4407.8	3994.8	3884.7	3578.1	3634.1	3711.6	4176.0	4662.1
42.5°	6402.4	6265.4	5498.9	5089.5	4581.8	4320.3	4120.1	4094.0	4462.8	5012.8	5515.1
45°	7341.2	6921.8	6308.7	5948.9	5360.9	5098.5	4937.1	5033.6	5365.4	6168.9	6503.4
47.5°	8129.3	7743.3	7216.7	6670.3	6053.5	6348.3	6045.3	5892.9	6348.3	7178.8	7623.4
50°	8806.5	8376.4	7843.4	7438.5	7338.5	7621.6	7008.4	7064.3	7360.1	8335.8	8586.5
52.5°	9298.9	8846.2	8380.9	8185.2	8595.5	8738.0	8430.5	8306.9	8575.7	9322.3	9444.0
55°	9669.5	9206.0	8842.6	9112.2	9905.7	9858.8	9967.1	9545.0	9802.0	10351.2	10293.5
57.5°	9692.0	9142.9	8930.0	9363.8	10453.1	11179.0	11495.5	10777.7	10923.8	11155.6	11025.7
60°	8983.2	8436.8	8419.7	9035.5	10611.8	11520.8	12213.3	11863.4	11667.8	11840.0	11593.8
62.5°	7571.1	7188.8	7367.3	8048.1	10021.2	11332.3	12595.7	13016.8	12254.8	12293.6	11943.7
65°	5781.1	5379.8	5659.4	6517.0	8729.9	11121.3	12703.9	13467.7	12244.0	12422.5	11608.2
67.5°	3828.8	3596.2	3912.7	4857.7	6940.8	9817.4	12648.0	12994.2	11855.3	11918.4	10362.9
70°	1976.6	1919.8	2175.9	2921.7	4666.6	7542.2	12098.8	11909.4	11066.3	10267.3	7993.1
72.5°	633.0	635.7	881.9	1334.6	2515.9	4591.7	9299.8	9559.5	8855.2	7510.7	4880.3
75°	280.4	275.9	368.8	560.0	1048.7	2058.7	5777.5	6058.0	5513.3	4131.8	2051.5
77.5°	202.0	195.7	236.3	327.3	519.4	698.0	2708.9	2923.5	2499.7	1432.0	469.8
80°	142.5	141.6	171.3	229.9	324.6	310.2	855.8	959.5	768.3	347.2	138.0
82.5°	80.3	83.0	119.0	162.3	197.5	155.1	240.8	265.1	258.8	184.9	60.4
85°	38.8	43.3	77.6	117.2	103.7	60.4	85.7	92.9	108.2	107.3	30.7
87.5°	0.0	0.0	31.6	53.2	28.0	9.0	26.2	29.8	28.9	34.3	7.2
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°	641.1	641.1	641.1	641.1	641.1	641.1	641.1	641.1	641.1	641.1	641.1
2.5°	771.0	765.6	697.1	702.5	717.8	711.5	716.9	704.3	689.8	748.5	747.6
5°	974.8	934.2	912.6	892.7	896.3	855.8	879.2	890.0	888.2	921.6	930.6
7.5°	1153.3	1099.2	1056.0	1014.5	951.3	894.5	929.7	952.2	967.6	1025.3	1047.8
10°	1237.2	1193.0	1175.9	1094.7	1049.6	1014.5	972.1	941.4	954.1	938.7	954.1
12.5°	1421.2	1391.4	1325.6	1243.5	1189.4	1117.3	959.5	827.8	746.7	747.6	742.1
15°	1588.9	1587.1	1488.8	1352.6	1195.7	990.1	743.9	578.0	501.4	479.7	472.5
17.5°	1808.0	1781.0	1601.5	1400.4	1118.2	766.5	506.8	395.9	388.7	401.3	395.9
20°	1947.8	1908.1	1657.4	1331.0	921.6	518.5	382.3	350.8	372.4	390.5	385.9
22.5°	2087.6	2028.0	1699.8	1246.2	655.6	379.6	345.4	340.0	353.5	376.0	379.6
25°	2164.2	2152.5	1782.8	1087.5	449.1	332.7	332.7	330.9	335.5	351.7	349.0
27.5°	2386.9	2228.2	1720.5	848.5	347.2	305.7	310.2	308.4	292.2	308.4	309.3
30°	2525.8	2452.8	1725.1	604.2	305.7	270.5	282.2	267.8	243.5	257.0	254.3
32.5°	2805.3	2623.2	1711.5	407.6	278.6	257.9	239.9	219.1	201.1	206.5	202.0
35°	3130.9	2992.0	1528.5	327.3	259.7	228.1	199.3	178.5	159.6	164.1	163.2
37.5°	3778.3	3337.4	1377.0	294.9	247.1	209.2	175.8	147.0	137.1	139.8	142.5
40°	4378.0	3913.6	1094.7	280.4	225.4	186.7	145.2	124.4	118.1	119.9	122.6
42.5°	5274.3	4371.7	826.9	266.0	203.8	157.8	120.8	107.3	101.0	104.6	106.4
45°	6141.8	4761.2	617.7	253.4	185.8	136.2	101.9	92.9	85.7	88.4	92.0
47.5°	7008.4	5194.1	460.8	233.6	165.9	117.2	87.5	81.2	76.6	77.6	82.1
50°	7783.9	5396.1	362.5	209.2	149.7	101.9	79.4	73.0	71.2	72.1	75.7
52.5°	8353.8	5397.9	305.7	187.6	134.4	90.2	74.8	67.6	66.7	68.5	72.1
55°	8868.7	5253.6	265.1	168.6	120.8	82.1	71.2	64.9	64.9	66.7	70.3
57.5°	9210.5	4988.5	229.9	148.8	109.1	77.6	68.5	62.2	61.3	60.4	63.1
60°	9377.3	4626.9	194.8	130.8	98.3	74.8	66.7	55.0	54.1	52.3	54.1
62.5°	9271.8	4174.2	163.2	112.7	87.5	71.2	58.6	47.8	46.0	42.4	45.1
65°	8732.6	3624.1	138.0	96.5	75.7	60.4	49.6	40.6	36.1	31.6	30.7
67.5°	7629.7	2944.2	115.4	83.0	64.9	49.6	40.6	36.1	28.0	24.3	23.4
70°	5718.0	2010.0	95.6	71.2	54.1	42.4	34.3	32.5	26.2	23.4	21.6
72.5°	3354.5	1084.8	80.3	62.2	46.0	35.2	28.0	29.8	26.2	21.6	19.8
75°	1340.0	360.7	64.0	49.6	37.0	25.2	23.4	24.3	23.4	19.8	16.2
77.5°	305.7	113.6	49.6	38.8	28.9	16.2	18.9	20.7	20.7	16.2	11.7
80°	95.6	45.1	28.9	24.3	20.7	9.0	13.5	14.4	9.9	4.5	0.0
82.5°	30.7	12.6	9.9	9.9	9.0	1.8	2.7	1.8	0.0	0.0	0.0
85°	11.7	8.1	6.3	6.3	3.6	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.5	3.6	2.7	3.6	1.8	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)