

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: P596920

Luminaire Tested: **MSA-SA2A-835-U-SL2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596920
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-835-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6509 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G2

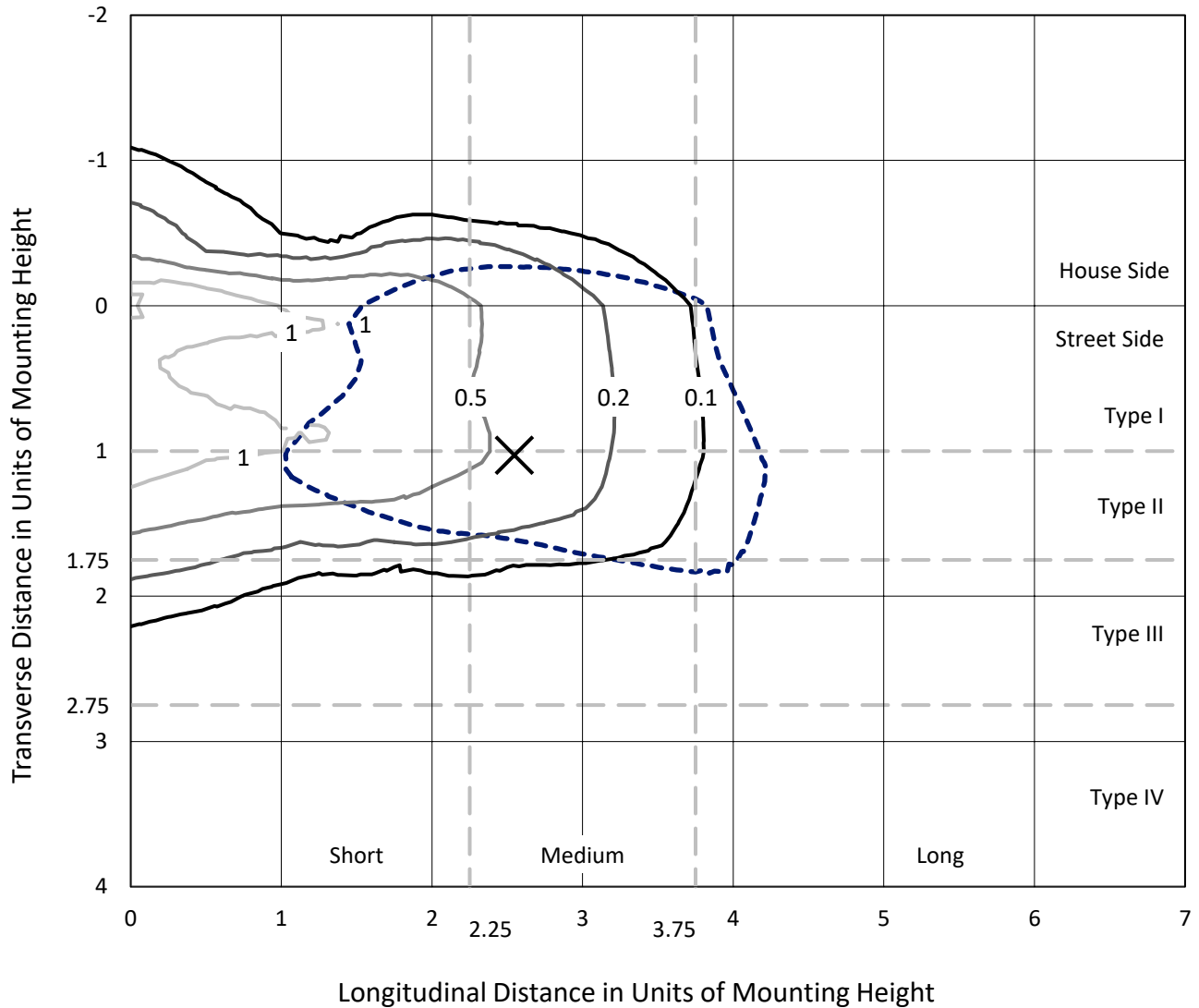
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

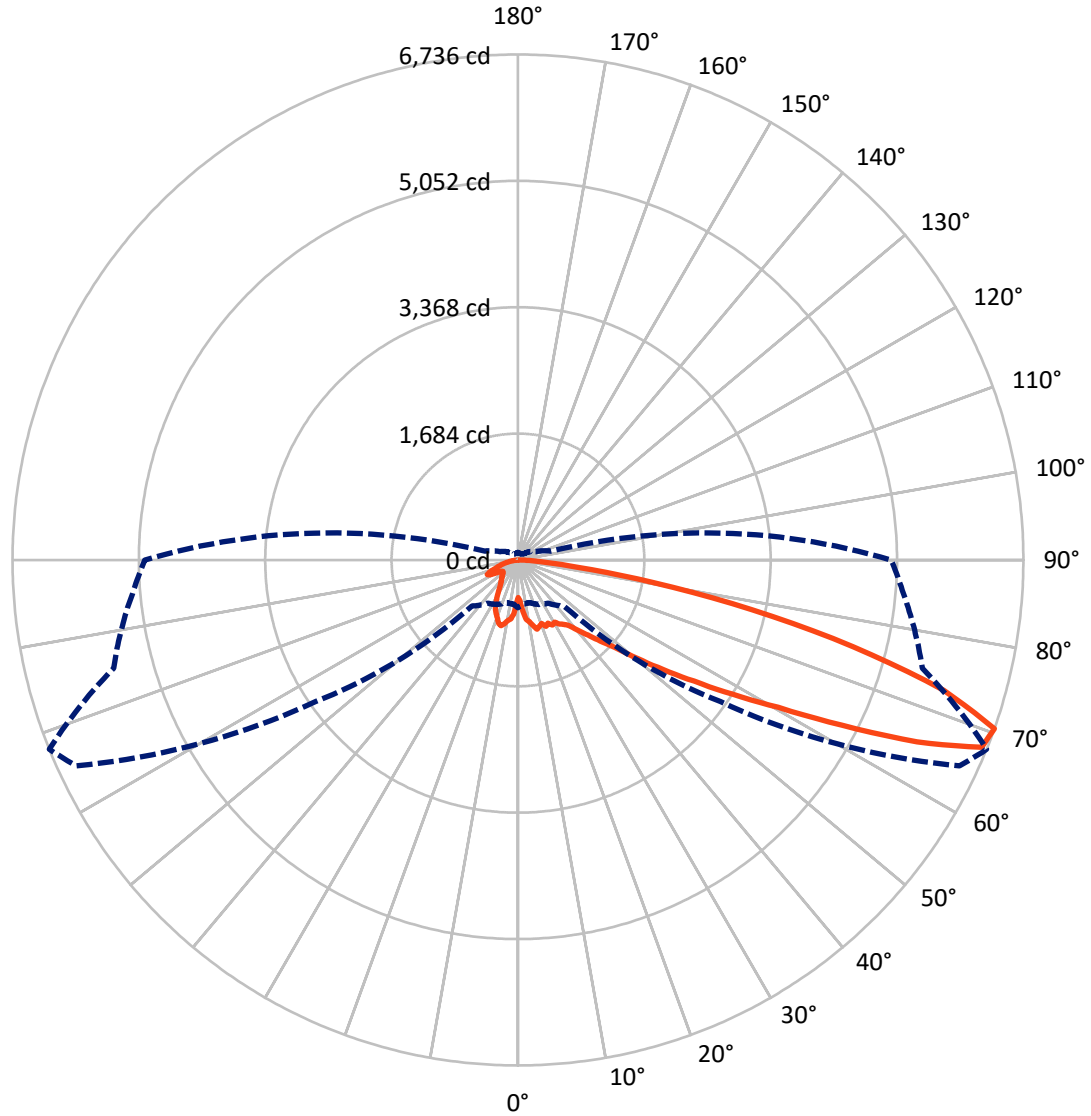
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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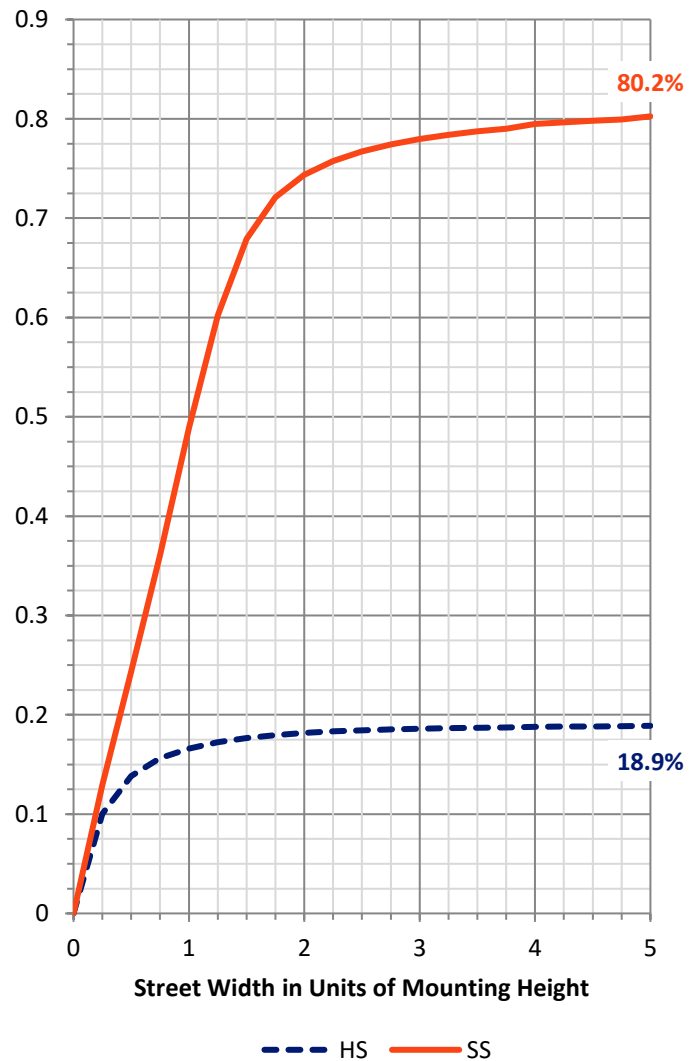
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1242.7	0.0	1242.7
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	5266.3	0.0	5266.3
	% Fixture	80.9	0.0	80.9
Total	Lumens	6509.0	0.0	6509.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	1.0
10°-20°	217.2	3.3
20°-30°	330.5	5.1
30°-40°	504.8	7.8
40°-50°	867.9	13.3
50°-60°	1436.6	22.1
60°-70°	1771.1	27.2
70°-80°	1137.7	17.5
80°-90°	176.5	2.7
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°	6509.0	100.0
0°-180°	6509.0	100.0



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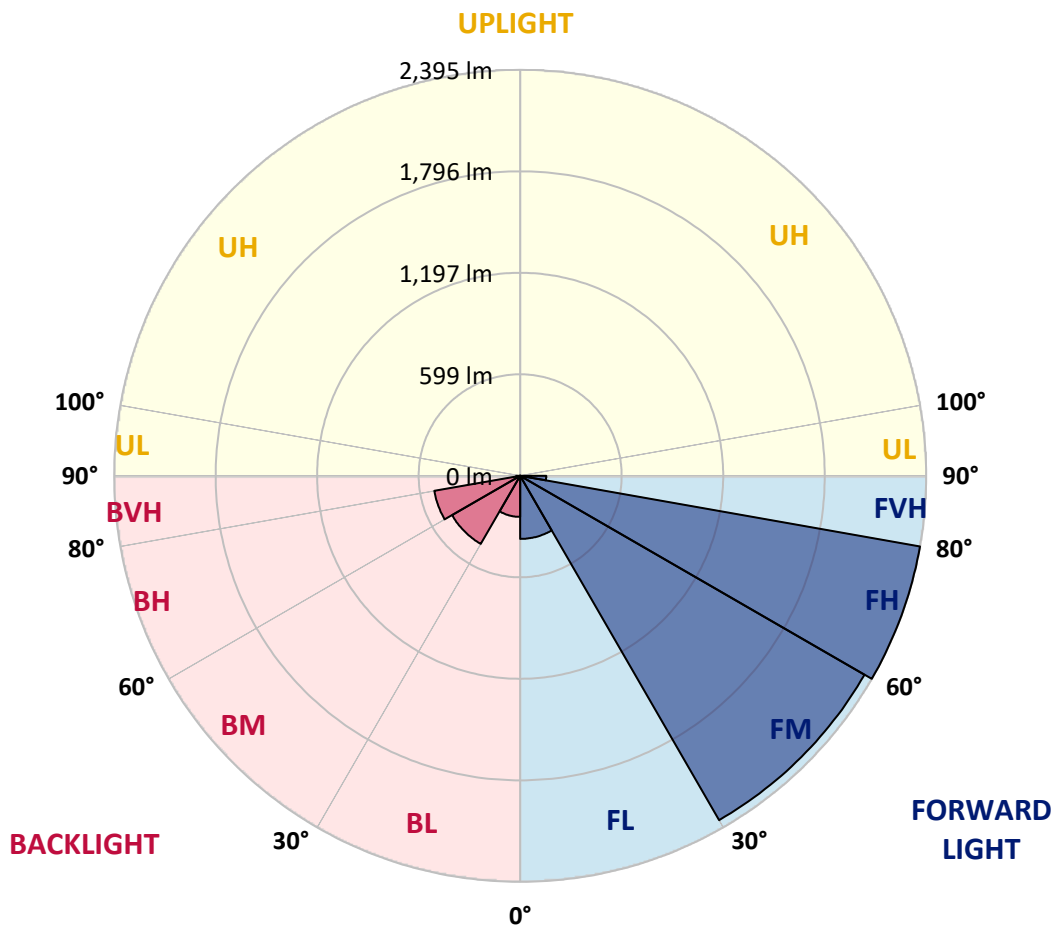
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	372.2	5.7			
FM	(30°-60°)	2345.4	36.0			
FH	(60°-80°)	2394.8	36.8			G2/5000
FVH	(80°-90°)	153.8	2.4			G2/225
BL	(0°-30°)	242.2	3.7	B1/500		
BM	(30°-60°)	463.9	7.1	B1/1000		
BH	(60°-80°)	514.1	7.9	B2/1000		G2/1000
BVH	(80°-90°)	22.7	0.3			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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	499.1	499.1	499.1	499.1	499.1	499.1	499.1	499.1	499.1	499.1	499.1
2.5°	573.4	550.3	526.9	538.3	556.5	572.6	569.4	571.3	549.2	546.2	604.2
5°	675.6	635.8	635.0	635.5	637.2	618.7	663.9	687.3	692.5	716.5	773.4
7.5°	711.0	694.9	678.6	686.8	666.1	668.0	723.5	784.6	799.0	816.4	894.3
10°	703.7	688.4	693.3	694.7	698.5	729.3	764.9	823.5	835.8	891.3	911.5
12.5°	704.7	702.0	724.9	725.7	766.6	821.9	836.0	890.0	894.9	935.8	1019.9
15°	742.1	760.9	748.1	754.9	762.8	829.0	849.4	926.8	956.2	1008.8	1072.0
17.5°	814.8	820.2	781.8	771.8	797.6	817.8	864.4	897.9	928.7	1075.5	1162.7
20°	831.7	846.4	800.6	748.6	803.4	831.4	863.8	879.1	903.1	1085.3	1209.0
22.5°	904.2	873.6	818.3	773.1	791.1	818.3	841.8	899.2	962.2	1057.3	1255.3
25°	945.3	927.6	878.3	829.8	814.5	815.3	860.6	912.1	933.8	1098.4	1264.6
27.5°	1044.7	1016.4	905.5	896.3	838.8	794.1	863.6	943.7	981.8	1066.2	1309.8
30°	1169.2	1147.7	1002.2	990.0	902.2	824.3	901.7	967.1	961.6	1087.2	1341.1
32.5°	1270.0	1306.0	1159.1	1062.4	1000.0	925.4	889.7	963.0	1017.2	1136.0	1394.2
35°	1413.8	1447.6	1281.4	1216.1	1080.7	972.3	973.3	1019.1	1052.6	1192.9	1453.6
37.5°	1662.8	1633.1	1499.4	1396.1	1309.5	1147.7	1099.2	1083.1	1110.1	1262.7	1569.9
40°	1842.4	1817.3	1659.8	1601.0	1432.4	1338.4	1205.4	1190.2	1237.9	1334.6	1665.0
42.5°	2055.1	2010.4	1863.9	1815.4	1639.1	1469.7	1335.7	1344.4	1367.5	1470.2	1793.6
45°	2271.7	2163.3	2080.2	2076.4	1958.7	1724.7	1544.6	1537.5	1538.3	1669.9	1938.0
47.5°	2443.6	2346.1	2251.0	2205.8	2146.4	2165.7	1848.1	1765.0	1739.9	1871.0	2154.5
50°	2559.9	2447.7	2340.1	2329.4	2488.0	2592.3	2133.0	2044.2	2059.7	2158.6	2443.3
52.5°	2562.4	2429.1	2316.9	2391.3	2764.8	2914.0	2623.9	2375.7	2425.3	2492.6	2820.1
55°	2384.2	2246.1	2173.1	2342.5	2872.9	3295.7	3313.7	2907.0	2849.8	2874.5	3270.4
57.5°	2008.5	1869.1	1826.6	2029.5	2667.8	3663.7	4146.7	3541.7	3373.9	3270.4	3731.8
60°	1511.9	1391.2	1364.8	1494.2	2211.8	3555.6	4821.2	4331.7	3989.8	3712.5	4194.7
62.5°	1133.8	1047.2	1007.4	1025.9	1530.4	3203.9	5264.2	5329.8	4845.8	4195.2	4646.9
65°	921.3	851.3	815.9	791.9	951.8	2477.4	5184.1	6170.0	5845.5	4702.2	4998.9
67.5°	769.6	707.5	691.1	714.5	752.4	1437.3	4557.5	6639.9	6662.0	5202.3	5204.5
70°	638.8	592.8	586.8	653.3	703.1	867.4	3291.9	6492.2	6735.8	5577.5	5156.3
72.5°	493.6	468.8	468.0	572.3	698.5	739.3	1960.3	5608.5	5935.7	5457.6	4684.5
75°	342.4	325.3	338.3	470.5	682.4	750.0	1118.8	4368.5	4613.4	4644.2	3752.5
77.5°	235.6	221.2	235.4	340.2	609.4	767.9	782.7	3158.7	3185.9	3114.3	2149.4
80°	164.0	153.9	164.8	240.8	474.3	760.0	666.3	1988.6	1824.6	1389.9	688.1
82.5°	101.6	98.6	110.6	171.6	334.0	691.4	631.5	1026.2	783.5	383.6	245.7
85°	53.4	49.0	64.3	112.0	208.9	542.7	591.7	468.3	302.4	136.2	98.6
87.5°	15.8	14.2	24.8	45.2	88.5	243.3	338.6	198.6	112.8	40.0	30.8
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°	499.1	499.1	499.1	499.1	499.1	499.1	499.1	499.1	499.1	499.1	499.1
2.5°	608.3	605.3	565.0	570.2	578.9	581.1	580.8	566.1	550.6	593.9	592.5
5°	774.8	747.8	727.6	723.3	698.5	673.7	682.4	679.4	675.6	695.2	697.7
7.5°	894.6	857.3	833.9	773.7	716.5	666.9	682.7	687.6	677.8	713.2	723.8
10°	926.2	896.8	871.5	794.1	762.5	733.6	690.8	642.1	635.5	615.1	617.6
12.5°	1007.7	1003.6	917.2	849.1	808.0	750.5	658.2	599.0	548.4	550.8	536.1
15°	1072.0	1074.1	970.3	875.0	764.7	677.0	568.3	494.7	442.7	432.3	421.7
17.5°	1158.3	1154.0	974.7	843.9	704.2	575.6	442.4	369.4	360.7	366.7	357.4
20°	1195.9	1157.5	946.9	766.9	609.7	437.2	334.3	295.6	312.5	336.4	337.0
22.5°	1229.7	1164.0	932.5	704.7	483.8	317.9	268.3	261.2	281.1	313.6	316.3
25°	1228.3	1194.3	906.6	642.1	375.1	248.2	233.2	238.4	262.1	295.8	297.8
27.5°	1290.2	1171.1	839.3	559.8	282.5	212.5	216.3	225.8	237.0	269.1	275.4
30°	1289.6	1214.2	805.5	459.8	226.9	194.8	204.6	212.8	222.0	251.4	255.0
32.5°	1320.1	1186.1	785.1	357.7	203.5	190.4	192.9	201.0	214.4	234.3	236.7
35°	1356.9	1218.0	719.7	284.1	194.8	186.6	188.5	193.1	205.4	223.7	226.1
37.5°	1474.9	1224.0	693.8	239.5	194.2	185.0	184.7	187.2	201.0	217.7	225.0
40°	1520.9	1278.7	618.4	223.7	192.3	185.0	181.2	182.5	194.0	215.2	220.9
42.5°	1631.2	1297.0	562.5	218.2	192.3	181.7	175.7	177.9	191.2	210.0	219.0
45°	1744.8	1322.9	496.1	217.1	192.1	181.4	170.0	174.9	185.8	201.6	211.4
47.5°	1906.6	1416.0	429.6	213.8	189.9	182.8	168.6	168.4	177.9	191.5	200.8
50°	2170.6	1561.5	378.1	209.8	190.1	181.7	165.9	162.1	168.4	180.3	189.3
52.5°	2538.1	1809.4	358.0	207.6	188.0	177.3	161.3	155.3	158.8	168.4	177.1
55°	2964.7	2144.2	377.8	207.6	183.6	170.5	154.7	147.7	149.6	156.1	164.5
57.5°	3463.2	2560.2	474.0	204.6	178.2	162.4	146.8	138.7	139.2	144.9	152.6
60°	3983.8	3024.9	689.5	202.1	174.3	153.4	137.6	129.1	128.3	133.8	140.6
62.5°	4505.2	3453.7	916.1	207.9	173.3	145.7	127.8	119.3	119.0	123.9	129.7
65°	4919.9	3746.8	972.5	231.0	180.3	137.0	117.7	109.8	109.2	113.3	119.6
67.5°	5123.3	3789.3	738.8	259.9	195.3	128.9	107.9	100.5	100.0	104.3	109.8
70°	4972.7	3498.9	456.0	262.9	194.5	119.3	97.8	91.5	90.4	95.1	99.2
72.5°	4415.3	3060.6	346.5	232.6	168.4	105.7	87.7	82.3	80.6	84.7	88.5
75°	3543.9	2430.0	277.6	187.7	132.7	89.1	77.6	72.5	70.6	74.4	77.6
77.5°	2064.4	1367.0	203.0	146.6	100.2	72.7	66.2	61.6	59.4	63.5	65.9
80°	671.2	455.5	127.5	105.2	73.3	56.9	53.7	50.4	48.2	50.9	51.8
82.5°	241.1	169.4	70.6	64.6	48.8	40.9	40.6	38.7	36.0	37.0	37.0
85°	106.8	77.4	42.0	34.6	29.1	21.8	25.6	24.2	21.5	21.0	20.2
87.5°	30.0	25.6	15.3	11.7	9.5	3.5	8.2	7.4	6.0	5.4	3.8
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)