

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: P596770

Luminaire Tested: **MSA-SA4B-827-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596770
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-827-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13912 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

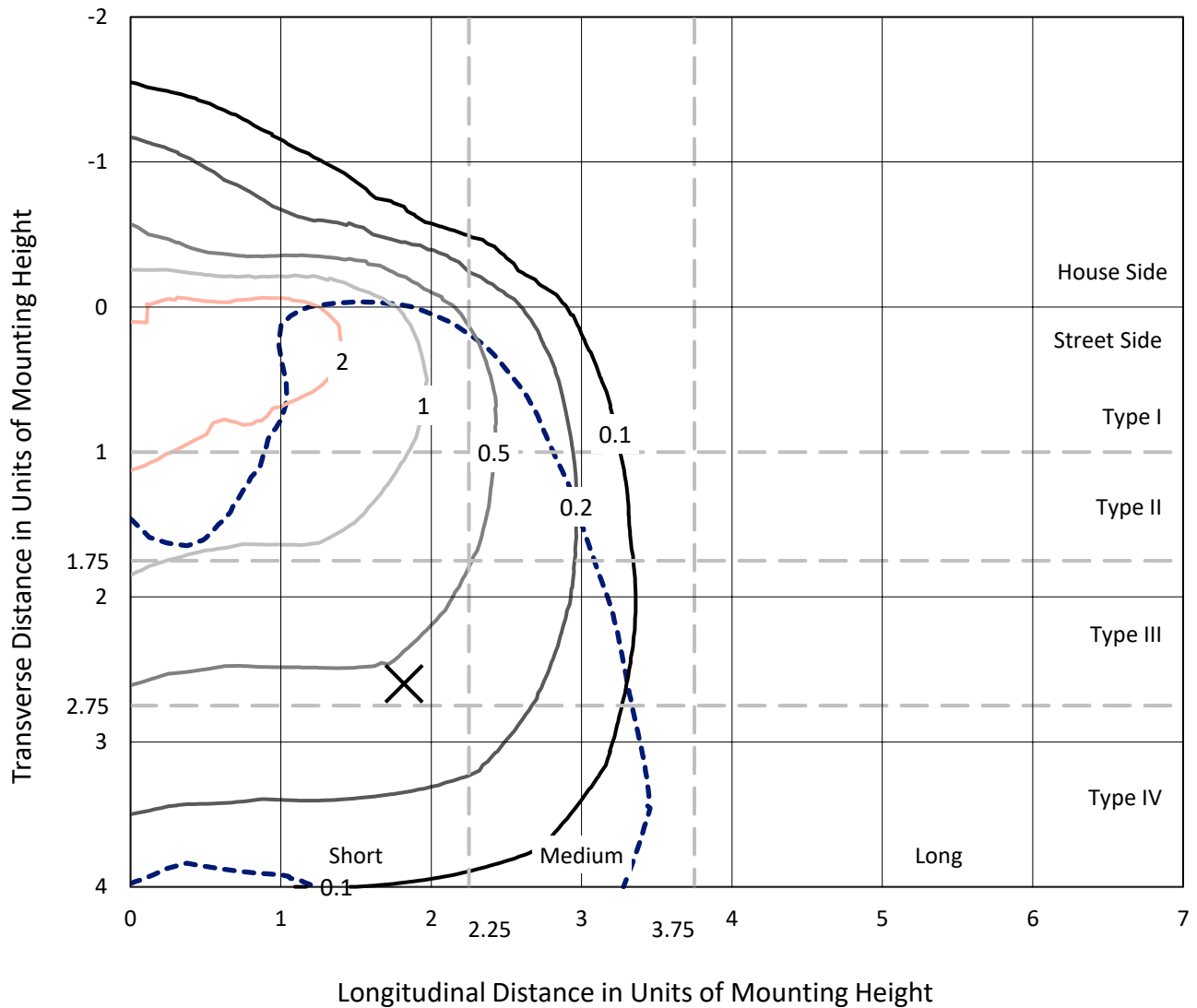
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

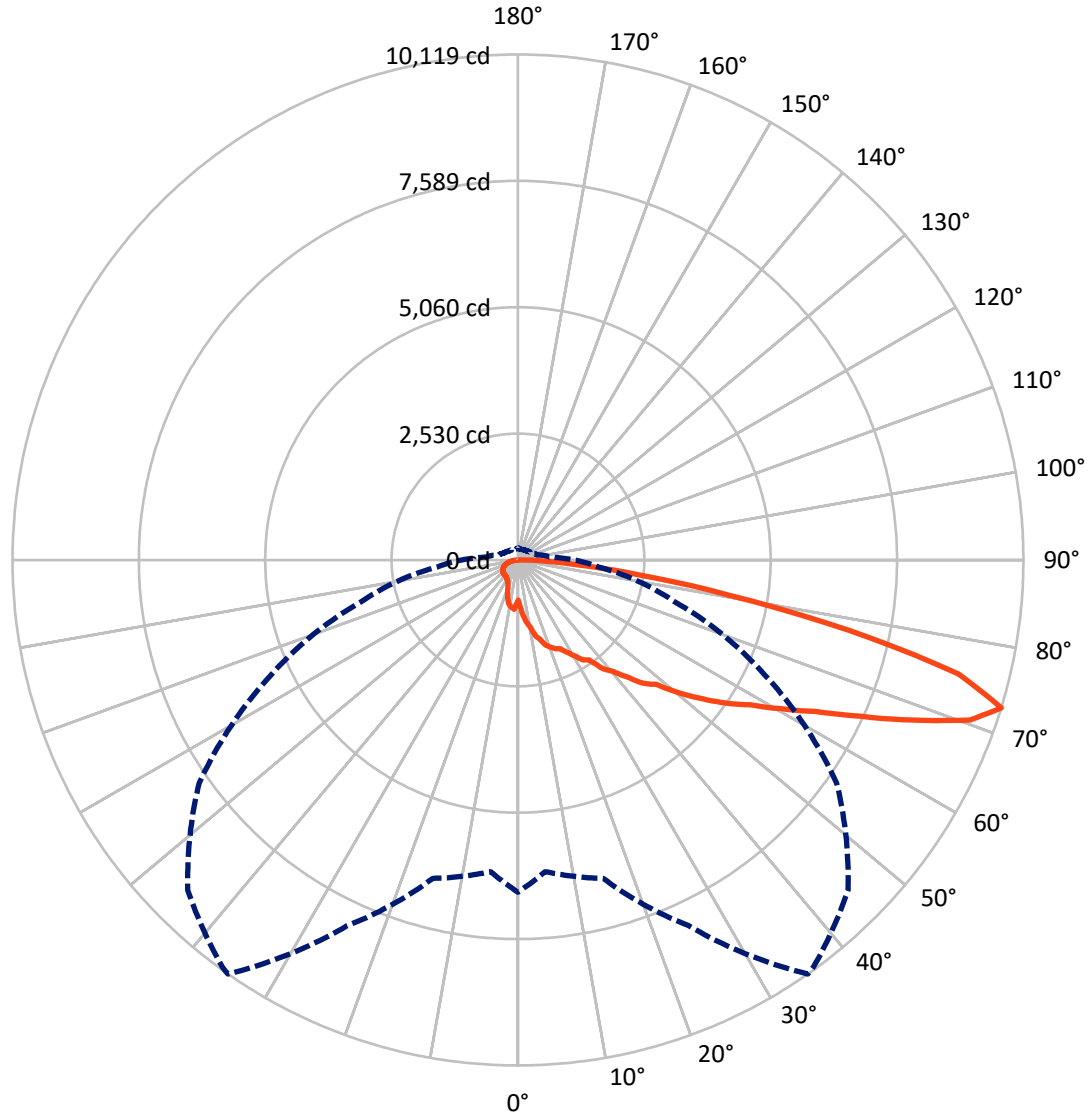
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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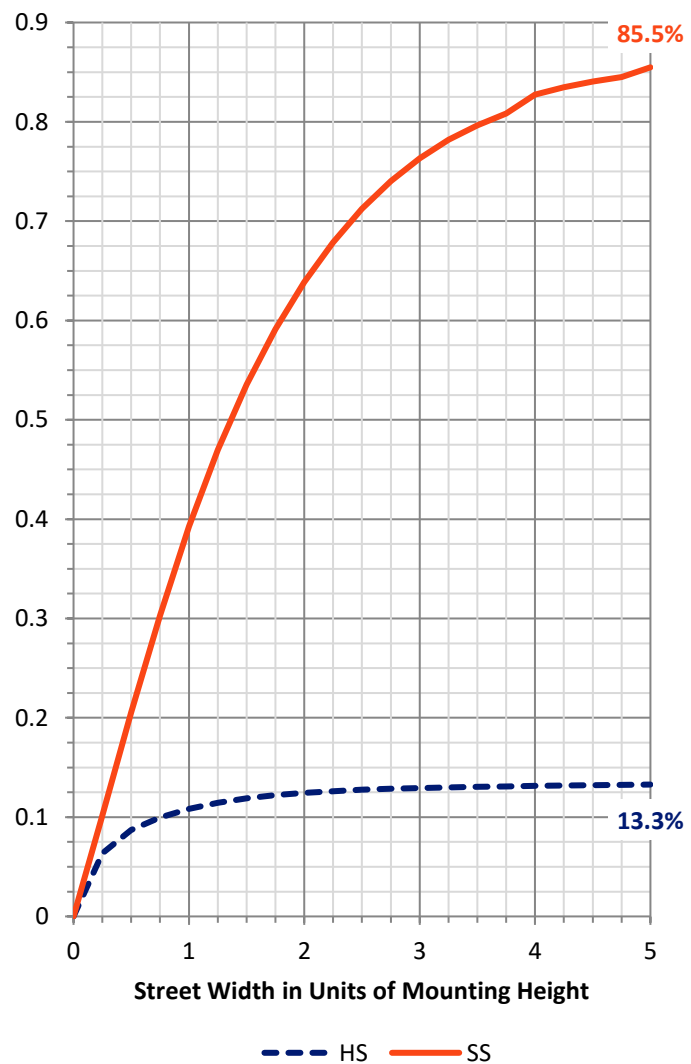
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1866.9	0.0	1866.9
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	12045.1	0.0	12045.1
	% Fixture	86.6	0.0	86.6
Total	Lumens	13912.0	0.0	13912.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.9	0.8
10°-20°	376.4	2.7
20°-30°	654.0	4.7
30°-40°	1093.1	7.9
40°-50°	1897.1	13.6
50°-60°	2868.0	20.6
60°-70°	3715.5	26.7
70°-80°	2741.6	19.7
80°-90°	459.5	3.3
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°	13912.0	100.0
0°-180°	13912.0	100.0

Coefficient of Utilization



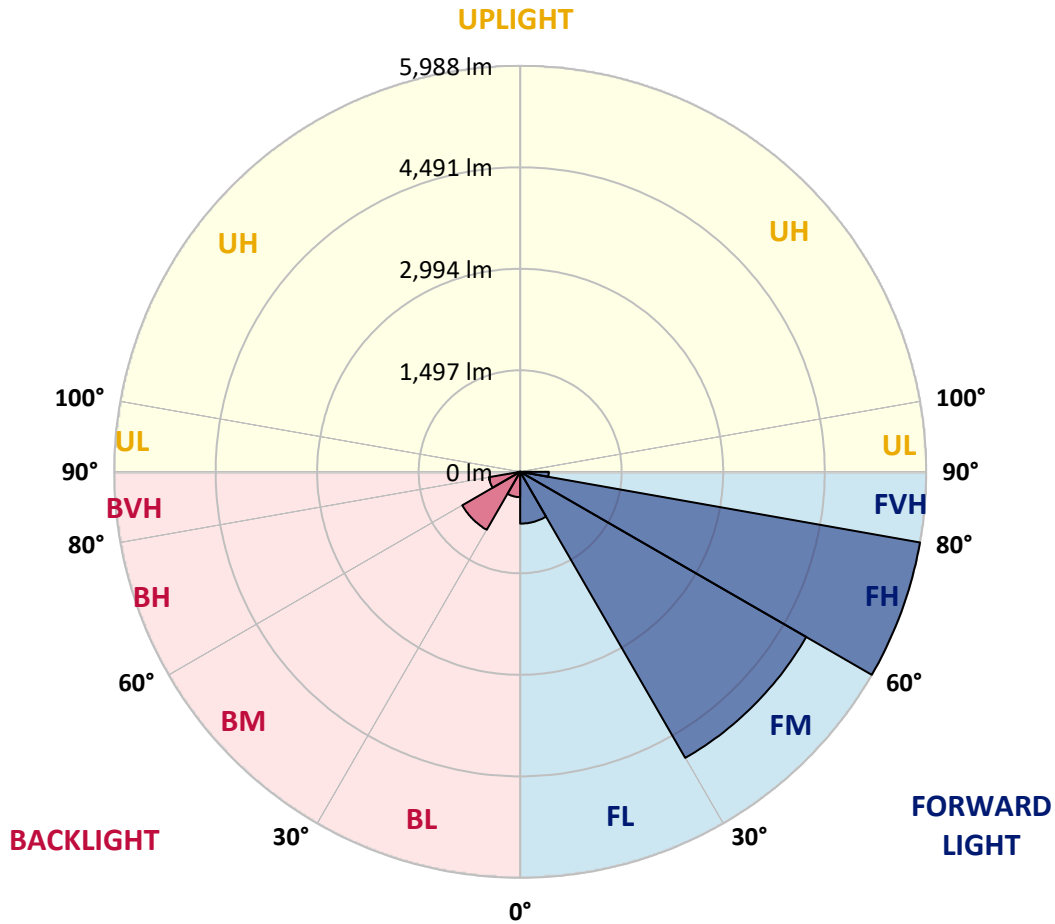
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	764.1	5.5			
FM (30°-60°)	4871.5	35.0			
FH (60°-80°)	5987.6	43.0			G3/7500
FVH (80°-90°)	421.9	3.0			G3/500
BL (0°-30°)	373.2	2.7	B1/500		
BM (30°-60°)	986.7	7.1	B1/1000		
BH (60°-80°)	469.4	3.4	B1/500		G1/500
BVH (80°-90°)	37.6	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0
2.5°	1002.9	954.8	913.2	911.5	950.1	964.9	959.0	945.9	930.5	897.8	969.1
5°	1256.4	1187.6	1174.5	1159.1	1124.0	1133.5	1076.5	1119.9	1133.5	1165.0	1212.5
7.5°	1406.1	1365.7	1334.2	1321.2	1260.6	1253.5	1211.3	1273.1	1299.2	1295.0	1365.7
10°	1464.9	1428.0	1430.4	1387.7	1368.1	1376.4	1381.1	1382.3	1398.4	1411.4	1375.8
12.5°	1495.1	1509.4	1561.6	1532.6	1557.5	1567.6	1617.5	1566.4	1568.2	1501.1	1537.9
15°	1647.7	1683.4	1653.1	1651.9	1644.2	1660.8	1703.6	1669.1	1695.8	1674.5	1627.0
17.5°	1831.8	1842.5	1784.3	1760.6	1791.4	1786.1	1775.4	1780.8	1714.2	1837.8	1779.6
20°	1888.2	1930.4	1853.8	1760.6	1862.7	1876.4	1874.0	1850.8	1736.8	1914.9	1858.5
22.5°	2052.1	1995.1	1934.5	1875.2	1927.4	1935.1	1922.1	1866.8	1828.8	1896.5	1941.1
25°	2126.3	2112.7	2035.5	2028.4	1970.8	1943.4	1966.0	1950.0	1912.6	2033.1	1983.8
27.5°	2296.2	2280.1	2102.6	2175.6	2091.9	2084.8	1965.4	2018.9	2056.3	2047.4	2121.0
30°	2488.5	2506.9	2247.5	2320.5	2223.7	2210.6	2090.7	2158.4	2183.9	2192.2	2284.3
32.5°	2702.3	2752.8	2495.1	2435.1	2383.4	2392.3	2290.8	2167.3	2266.5	2460.6	2500.4
35°	2933.9	2954.7	2684.5	2594.2	2459.4	2449.9	2451.7	2467.2	2567.5	2789.0	2819.9
37.5°	3362.0	3265.8	3028.9	2800.3	2755.1	2666.7	2726.6	2774.1	2874.5	3214.1	3343.6
40°	3625.6	3554.4	3193.4	3060.9	2936.3	2944.6	3056.8	3056.2	3293.1	3643.4	3841.2
42.5°	3869.7	3791.9	3451.7	3318.6	3200.5	3229.6	3261.6	3318.1	3772.3	4337.0	4427.2
45°	4066.2	3895.8	3651.2	3621.5	3524.1	3485.5	3621.5	3711.7	4345.3	4898.1	4950.4
47.5°	4199.8	4059.7	3820.4	3794.3	3722.4	3816.8	4187.9	4246.1	4789.4	5461.6	5457.4
50°	4402.9	4211.1	3995.0	3981.3	4183.8	4234.3	4686.7	4680.8	5221.7	5929.5	5831.5
52.5°	4636.8	4395.2	4160.6	4307.3	4616.1	4641.0	5033.5	5193.2	5693.8	6380.8	6124.9
55°	4905.8	4635.7	4408.8	4604.8	5064.4	4990.7	5388.0	5778.1	6284.6	6856.4	6336.8
57.5°	5238.9	4911.2	4727.7	5025.8	5473.5	5538.8	5895.7	6386.7	6760.2	7152.1	6491.2
60°	5590.5	5205.7	5037.6	5321.5	6046.5	6121.3	6470.4	6892.6	7293.4	7430.6	6462.1
62.5°	5925.9	5509.7	5357.7	5708.0	6681.8	6867.1	7124.8	7393.8	7737.0	7498.3	6110.0
65°	6299.4	5882.6	5787.0	6312.5	7543.4	7727.5	8064.2	7983.4	7889.0	7258.4	5527.5
67.5°	6694.9	6271.5	6289.3	7013.8	8559.4	8590.8	9108.0	8571.2	7710.3	6623.0	4549.6
70°	6907.5	6474.0	6657.5	7761.3	9593.1	9548.0	9653.7	8729.2	6981.7	5235.4	3135.8
72.5°	6649.8	6263.2	6599.3	8076.0	10119.2	10070.5	9347.3	7791.6	5458.6	3255.7	1625.8
75°	5630.2	5257.3	5771.6	7199.0	9109.8	9154.9	7954.9	5794.1	3125.1	1309.3	675.1
77.5°	3825.7	3633.4	4073.9	5366.0	6766.7	6922.9	5902.2	3388.1	1312.3	542.1	408.5
80°	2021.8	1930.4	2255.8	3091.2	4284.7	4401.1	3470.7	1687.5	672.2	350.9	291.5
82.5°	1098.5	1059.9	1234.5	1589.6	2434.5	2536.0	1799.8	1121.1	453.1	219.7	178.1
85°	738.1	723.2	839.0	853.9	1151.3	1184.6	942.9	863.4	272.0	107.5	117.6
87.5°	369.3	354.5	441.8	390.1	439.4	440.0	432.3	551.0	68.9	35.6	21.4
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°	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0	804.0
2.5°	970.2	949.5	877.6	877.0	887.7	880.6	885.9	856.8	844.4	901.4	898.4
5°	1206.0	1143.6	1083.7	1062.9	1038.5	985.7	988.6	989.2	980.3	1014.2	1016.6
7.5°	1344.3	1269.5	1214.3	1103.8	1017.1	949.5	958.4	968.5	958.4	1003.5	1020.1
10°	1364.5	1305.1	1239.2	1116.3	1058.7	997.6	935.8	881.2	874.6	853.9	860.4
12.5°	1484.5	1435.2	1297.4	1162.6	1095.5	1001.7	888.9	826.5	774.3	783.2	766.6
15°	1583.0	1548.0	1382.9	1206.6	1046.2	929.9	809.9	724.4	677.5	672.2	655.5
17.5°	1716.6	1666.7	1390.6	1176.3	982.7	843.2	707.8	611.0	590.8	582.5	574.2
20°	1780.8	1691.1	1362.7	1081.3	908.5	739.9	606.8	523.7	517.8	532.6	529.7
22.5°	1836.6	1711.3	1337.8	1023.7	792.7	635.3	538.0	483.3	476.8	495.8	499.4
25°	1869.2	1768.9	1310.5	964.9	720.9	557.6	486.3	455.4	456.6	481.6	478.6
27.5°	2016.5	1789.1	1241.6	895.4	638.3	500.0	461.4	445.3	438.8	473.2	476.2
30°	2109.1	1920.9	1226.2	821.8	577.2	457.8	438.8	432.3	431.1	472.7	475.6
32.5°	2281.3	1964.8	1233.3	741.6	521.9	444.7	422.2	421.6	433.5	473.2	478.0
35°	2520.0	2150.1	1198.8	695.9	491.7	424.6	409.1	413.9	434.1	477.4	483.9
37.5°	2985.5	2324.7	1209.5	653.2	481.6	418.0	405.6	408.5	441.2	488.1	505.9
40°	3354.3	2641.1	1192.9	631.8	467.9	416.8	397.8	409.7	440.6	494.0	510.1
42.5°	3888.7	2893.5	1194.7	610.4	467.3	412.1	396.6	410.9	439.4	488.7	510.7
45°	4347.1	3119.7	1220.2	597.9	461.4	419.8	394.9	412.7	431.7	469.7	494.0
47.5°	4722.9	3372.1	1246.3	586.1	459.0	426.9	393.1	400.2	418.6	448.3	470.3
50°	5029.3	3549.6	1279.6	583.7	459.0	423.4	388.3	387.7	403.2	426.9	447.7
52.5°	5268.0	3674.9	1302.2	586.7	459.0	409.7	382.4	377.6	387.1	404.4	425.1
55°	5440.8	3713.5	1283.8	594.4	458.4	397.2	371.7	367.6	372.3	384.2	403.8
57.5°	5510.3	3612.0	1173.9	580.7	458.4	388.3	358.6	353.9	358.6	367.6	387.1
60°	5336.3	3285.4	1015.4	545.7	449.5	376.5	343.8	340.8	348.0	355.7	374.7
62.5°	4899.9	2851.3	846.1	504.1	431.1	366.4	329.5	330.1	341.4	352.1	371.1
65°	4221.8	2326.4	705.4	462.0	407.9	350.3	314.7	318.9	334.9	349.1	368.1
67.5°	3322.2	1723.7	593.8	421.0	375.3	324.2	298.1	299.3	310.5	324.2	342.6
70°	2220.7	1096.7	488.1	372.9	332.5	290.4	272.5	268.4	265.4	277.3	293.3
72.5°	1126.4	647.8	400.8	318.9	286.2	253.5	239.9	229.2	220.9	228.0	240.5
75°	590.2	453.1	323.6	264.8	236.3	215.5	205.4	191.2	185.3	189.4	198.3
77.5°	417.4	354.5	261.9	209.6	192.4	171.0	172.8	157.9	153.2	155.6	165.1
80°	320.6	280.9	201.3	158.5	148.4	127.7	133.6	124.7	118.8	117.6	124.7
82.5°	218.5	211.4	143.1	111.0	103.9	89.1	97.4	93.8	86.1	81.3	84.9
85°	147.3	140.1	87.3	64.1	61.2	46.3	59.4	57.0	50.5	43.3	43.9
87.5°	25.5	46.9	24.9	16.0	14.8	5.3	13.7	13.1	11.9	5.9	4.8
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)