

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: P596721

Luminaire Tested: **MSA-SA3D-827-U-SL2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596721
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-827-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 11993 lumens
Efficiency: N/A
Efficacy: 62.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

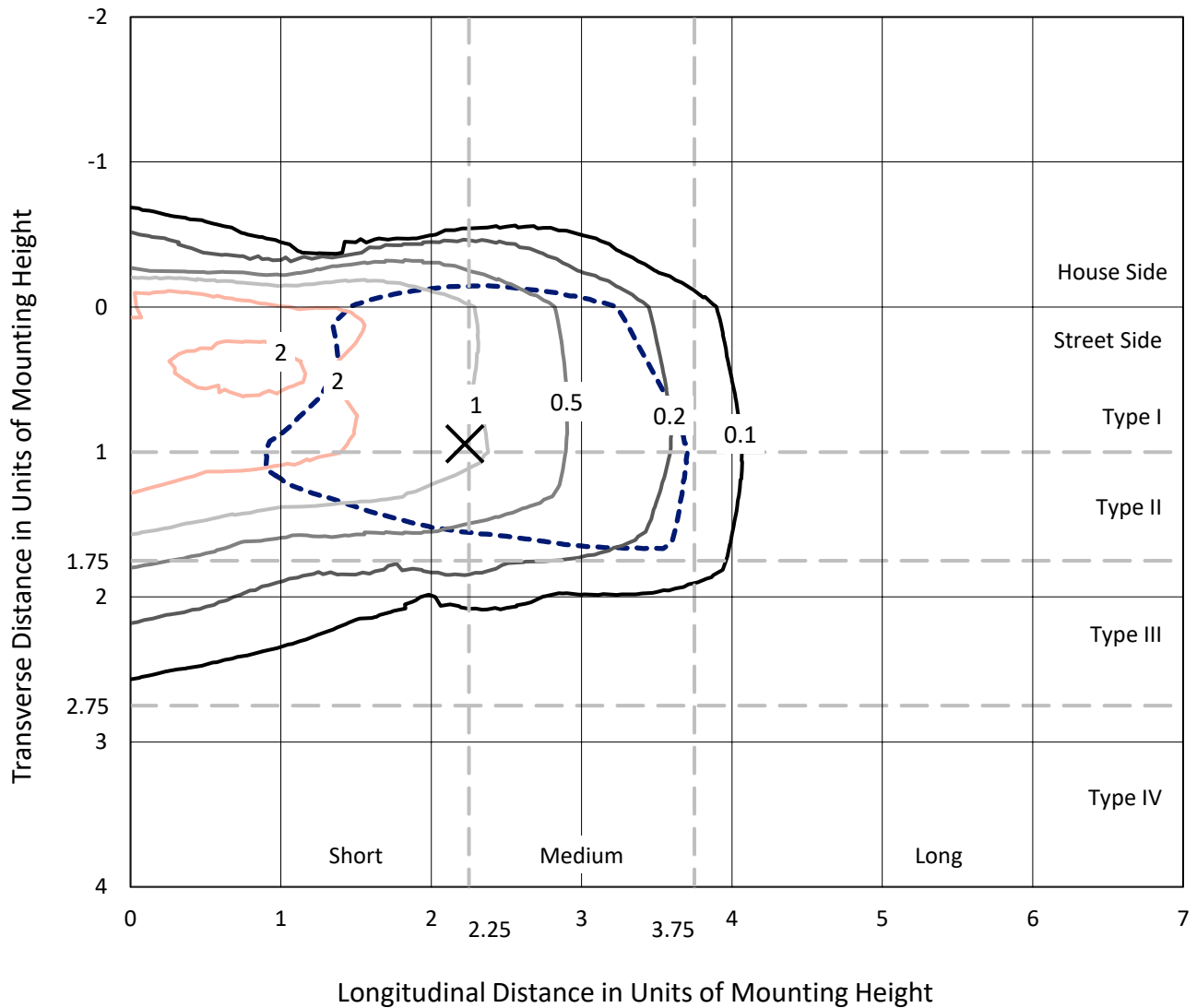
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

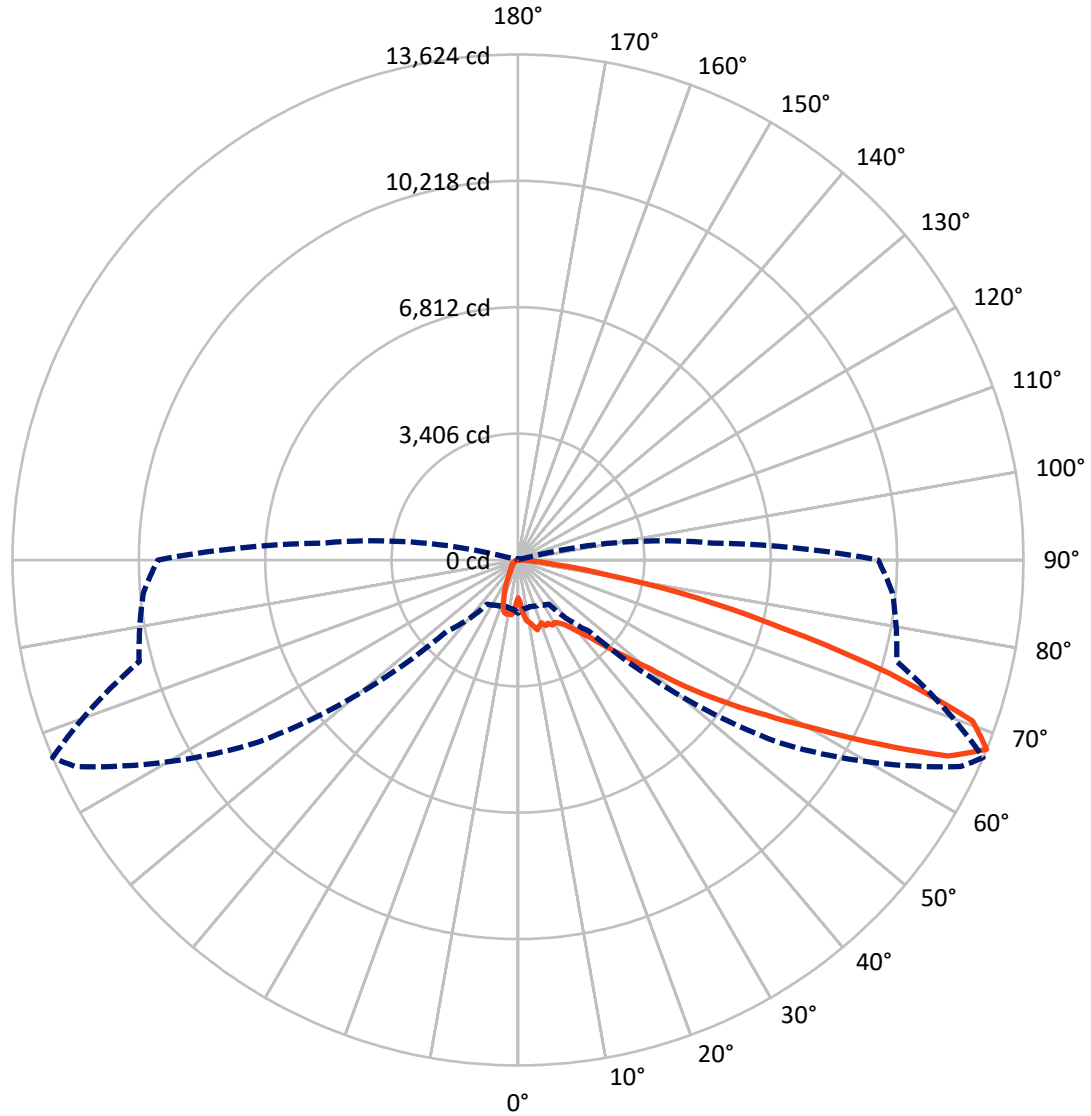
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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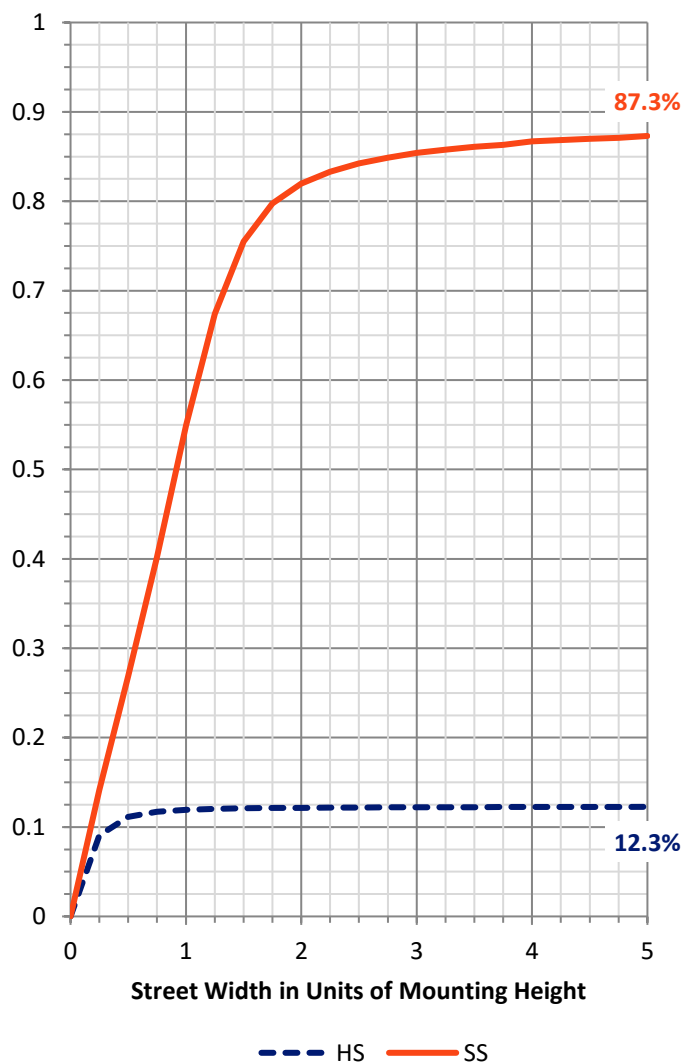
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1483.2	0.0	1483.2
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	10509.8	0.0	10509.8
	% Fixture	87.6	0.0	87.6
Total	Lumens	11993.0	0.0	11993.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.2	1.1
10°-20°	379.4	3.2
20°-30°	594.6	5.0
30°-40°	958.7	8.0
40°-50°	1761.6	14.7
50°-60°	2975.1	24.8
60°-70°	3289.1	27.4
70°-80°	1721.5	14.4
80°-90°	184.9	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°	11993.0	100.0
0°-180°	11993.0	100.0

Coefficient of Utilization



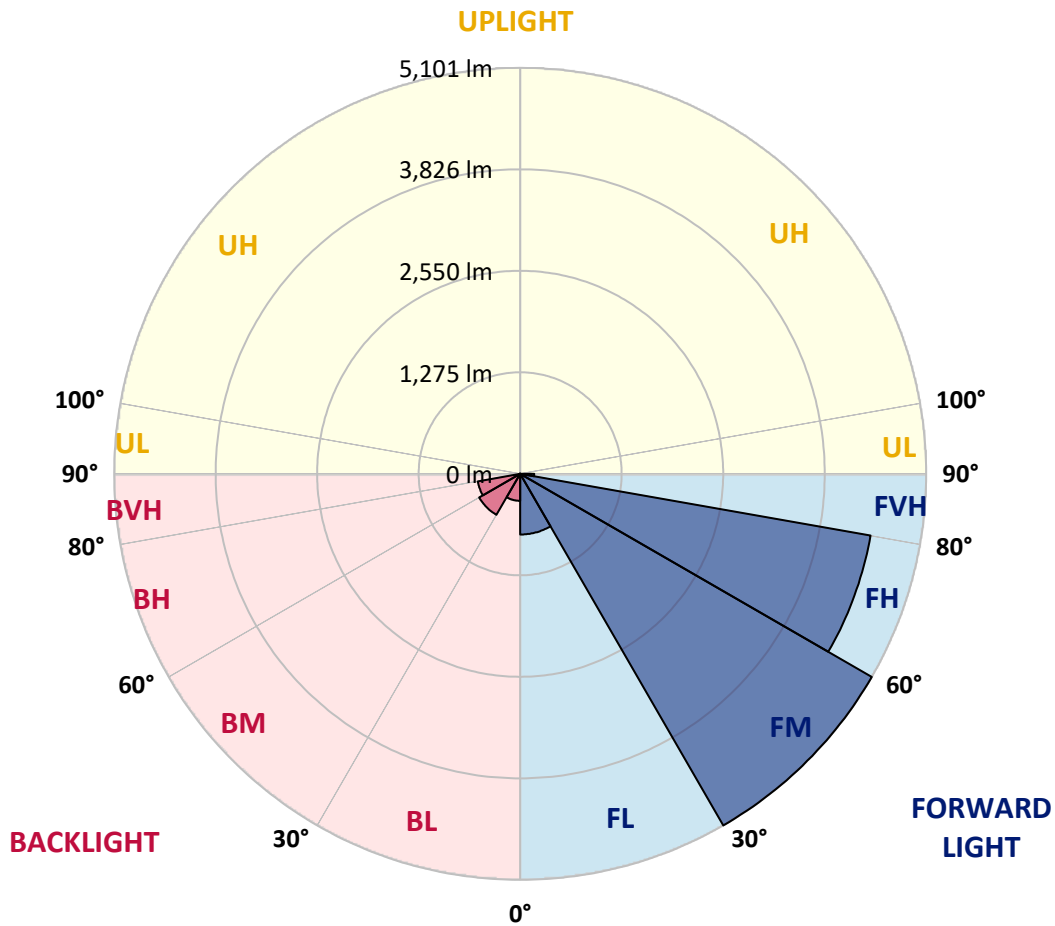
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	762.6	6.4			
FM (30°-60°)	5100.7	42.5			
FH (60°-80°)	4469.6	37.3			G2/5000
FVH (80°-90°)	177.0	1.5			G2/225
BL (0°-30°)	339.6	2.8	B1/500		
BM (30°-60°)	594.7	5.0	B1/1000		
BH (60°-80°)	541.0	4.5	B2/1000		G2/1000
BVH (80°-90°)	7.9	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5
2.5°	1205.8	1165.0	1095.7	1115.8	1155.9	1189.4	1173.6	1142.5	1143.1	1111.5	1225.3
5°	1402.9	1348.2	1308.0	1322.0	1320.2	1319.0	1393.8	1422.4	1434.6	1486.9	1564.1
7.5°	1459.5	1440.0	1398.1	1410.8	1368.9	1371.9	1503.3	1627.4	1646.9	1679.1	1816.6
10°	1437.6	1399.9	1415.1	1415.1	1415.7	1483.8	1572.0	1690.7	1714.4	1838.5	1853.1
12.5°	1413.9	1415.7	1475.9	1465.0	1547.7	1670.0	1699.8	1833.0	1821.5	1929.2	2089.2
15°	1502.1	1548.3	1509.4	1524.6	1532.5	1676.1	1724.1	1901.2	1952.3	2088.6	2192.6
17.5°	1653.6	1659.7	1578.7	1556.8	1614.0	1654.8	1751.5	1836.7	1870.8	2228.5	2375.7
20°	1680.9	1719.9	1637.8	1511.2	1632.3	1688.2	1755.8	1796.5	1811.1	2271.7	2479.1
22.5°	1845.8	1802.6	1671.2	1575.1	1609.8	1670.6	1712.6	1835.5	1923.1	2190.2	2578.3
25°	1930.4	1918.8	1793.5	1711.4	1676.1	1671.2	1767.3	1860.4	1888.4	2274.7	2602.6
27.5°	2133.0	2106.8	1864.1	1853.7	1737.5	1635.3	1769.2	1936.5	1988.8	2195.0	2693.9
30°	2408.6	2398.8	2075.8	2069.1	1884.1	1700.4	1867.7	1983.3	1951.7	2235.8	2754.7
32.5°	2686.0	2765.1	2434.7	2246.1	2107.4	1939.5	1839.7	1968.7	2025.3	2335.0	2866.7
35°	3021.2	3078.4	2742.0	2605.1	2296.6	2051.5	2025.3	2108.0	2132.4	2453.0	2993.8
37.5°	3607.7	3521.3	3234.7	3001.7	2839.9	2451.2	2322.2	2256.5	2313.1	2613.0	3253.6
40°	4040.8	3986.1	3633.2	3493.9	3121.6	2894.1	2557.0	2495.6	2558.8	2777.2	3434.3
42.5°	4563.4	4449.7	4117.5	4023.2	3639.9	3201.3	2859.4	2880.7	2841.1	3101.5	3751.3
45°	5036.2	4779.4	4594.5	4615.8	4411.4	3818.8	3363.7	3353.4	3320.5	3571.2	4084.7
47.5°	5354.3	5129.8	4949.8	4890.8	4866.4	4904.7	4092.6	3908.8	3884.5	4064.6	4609.7
50°	5525.3	5279.5	5056.8	5069.0	5563.0	5934.7	4844.5	4583.5	4592.6	4780.6	5327.6
52.5°	5410.3	5132.3	4897.4	5125.6	6103.3	6621.6	6089.3	5465.1	5676.8	5628.7	6290.6
55°	4879.2	4637.7	4471.0	4879.2	6162.3	7360.8	7621.8	6791.9	6744.5	6635.0	7272.6
57.5°	3985.5	3777.4	3674.6	4105.3	5516.8	7956.4	9161.0	8291.6	7887.0	7428.3	8087.8
60°	2969.5	2816.2	2709.1	2936.6	4346.9	7377.8	10169.0	9704.9	9236.4	8193.0	8820.3
62.5°	2199.3	2074.6	1960.8	1981.5	2993.2	6345.4	10556.0	11202.1	10933.2	9000.3	9511.4
65°	1755.2	1641.4	1561.7	1516.1	1853.7	4773.9	10017.6	12429.2	12739.4	9760.8	10010.3
67.5°	1433.3	1337.2	1297.7	1350.0	1454.0	2721.3	8579.4	13173.8	13624.0	10567.5	10133.1
70°	1166.3	1087.2	1082.9	1224.1	1339.0	1659.0	6310.7	12659.7	12998.6	10705.0	9396.4
72.5°	812.8	778.1	833.5	1033.6	1326.9	1381.6	3624.1	10476.3	10488.4	9454.8	7728.8
75°	459.9	454.5	542.1	824.4	1292.2	1367.6	2020.4	7403.4	7408.8	7150.9	5354.3
77.5°	253.1	236.7	315.7	557.3	1109.7	1336.0	1303.1	5055.0	4925.4	3979.4	2445.7
80°	116.8	110.1	171.0	357.1	811.6	1263.6	1044.6	2778.5	2505.3	1296.5	596.8
82.5°	48.1	45.6	78.5	229.4	512.9	1017.8	880.3	1232.6	989.2	246.4	184.3
85°	8.5	9.1	32.2	138.7	287.2	469.1	713.6	585.3	430.1	68.1	101.0
87.5°	0.0	0.0	6.7	33.5	69.4	128.4	289.6	163.7	112.5	20.1	29.8
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°	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5
2.5°	1247.8	1237.4	1132.8	1137.7	1145.0	1138.3	1137.1	1107.9	1081.1	1169.3	1168.1
5°	1578.1	1504.5	1432.1	1404.1	1343.9	1264.8	1265.4	1240.5	1214.9	1250.8	1250.8
7.5°	1813.6	1712.0	1620.1	1456.5	1297.1	1152.9	1140.1	1106.0	1067.1	1113.9	1123.1
10°	1868.3	1780.1	1661.5	1421.2	1270.3	1129.8	975.2	848.1	789.1	761.7	756.8
12.5°	2036.9	1971.1	1705.9	1440.0	1222.8	985.0	731.9	581.0	478.2	470.3	459.3
15°	2149.4	2103.2	1749.7	1393.2	1022.1	708.2	459.9	352.9	311.5	307.8	302.4
17.5°	2324.0	2243.7	1707.7	1244.1	799.4	467.2	309.1	278.6	283.5	294.5	285.9
20°	2395.2	2238.2	1616.5	1028.2	561.5	313.3	268.3	251.9	264.6	275.0	270.1
22.5°	2468.2	2254.0	1535.5	847.5	366.9	259.2	239.1	230.6	231.8	242.1	242.7
25°	2467.6	2297.8	1441.9	660.1	273.2	230.6	216.0	205.0	200.8	208.1	206.2
27.5°	2587.4	2247.3	1270.9	489.7	240.3	206.2	192.2	178.9	163.7	171.0	171.0
30°	2588.0	2329.5	1151.7	351.6	220.2	183.7	171.6	150.9	133.2	139.3	139.9
32.5°	2656.8	2258.3	1041.5	268.9	204.4	170.3	143.6	124.7	114.4	118.0	118.0
35°	2735.3	2319.1	872.4	237.3	188.6	151.5	122.9	107.7	99.8	102.8	102.8
37.5°	2994.4	2306.4	755.0	220.8	178.3	136.9	111.9	94.9	91.3	93.1	95.5
40°	3088.1	2397.0	595.6	211.1	161.2	123.5	98.6	85.8	80.9	82.1	82.7
42.5°	3326.6	2417.1	475.8	203.2	146.0	107.1	87.6	78.5	72.4	72.4	74.2
45°	3590.0	2467.6	378.4	196.5	133.2	96.1	79.1	71.8	62.7	61.4	63.9
47.5°	3971.5	2661.0	308.4	183.1	118.0	89.4	73.0	62.1	54.8	52.3	54.8
50°	4609.7	2989.6	272.6	166.7	107.1	84.0	64.5	52.9	47.5	44.4	46.2
52.5°	5510.1	3557.2	253.7	151.5	97.3	75.4	57.8	46.2	40.8	38.3	39.5
55°	6510.3	4208.2	244.6	136.3	88.8	66.3	50.5	40.8	35.9	32.9	33.5
57.5°	7435.0	4820.2	235.4	121.7	80.3	59.0	44.4	35.9	31.0	28.0	28.6
60°	8346.3	5308.7	213.5	104.6	72.4	52.9	38.9	31.0	28.0	24.3	24.3
62.5°	9152.4	5600.7	181.9	90.6	65.1	46.8	34.7	28.0	25.6	21.9	21.9
65°	9701.2	5614.1	146.6	77.9	57.2	40.2	30.4	26.2	23.7	19.5	18.9
67.5°	9709.1	5249.1	117.4	69.4	50.5	35.3	27.4	24.9	21.9	18.3	17.0
70°	8690.1	4336.5	97.9	60.8	43.8	31.0	23.7	23.7	21.3	17.6	15.8
72.5°	6951.3	3313.8	82.1	52.9	38.9	26.8	21.9	22.5	20.7	17.6	15.8
75°	4672.3	1900.6	68.1	45.0	34.1	22.5	21.3	21.9	21.3	17.6	15.2
77.5°	2151.8	605.3	52.9	37.1	29.2	18.9	20.7	20.7	19.5	15.8	13.4
80°	484.9	149.1	38.3	27.4	23.7	14.0	18.9	17.0	15.2	11.0	7.9
82.5°	176.4	45.6	23.1	17.0	14.6	5.5	12.2	12.2	11.0	7.9	4.9
85°	101.0	23.7	12.8	11.0	7.9	2.4	6.7	7.3	6.1	5.5	2.4
87.5°	32.9	5.5	6.1	6.7	6.1	1.2	2.4	2.4	1.8	1.2	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)