

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: P596633

Luminaire Tested: **MSA-SA2D-827-U-SL2-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596633  
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-SA2D-827-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 8126 lumens  
Efficiency: N/A  
Efficacy: 63.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

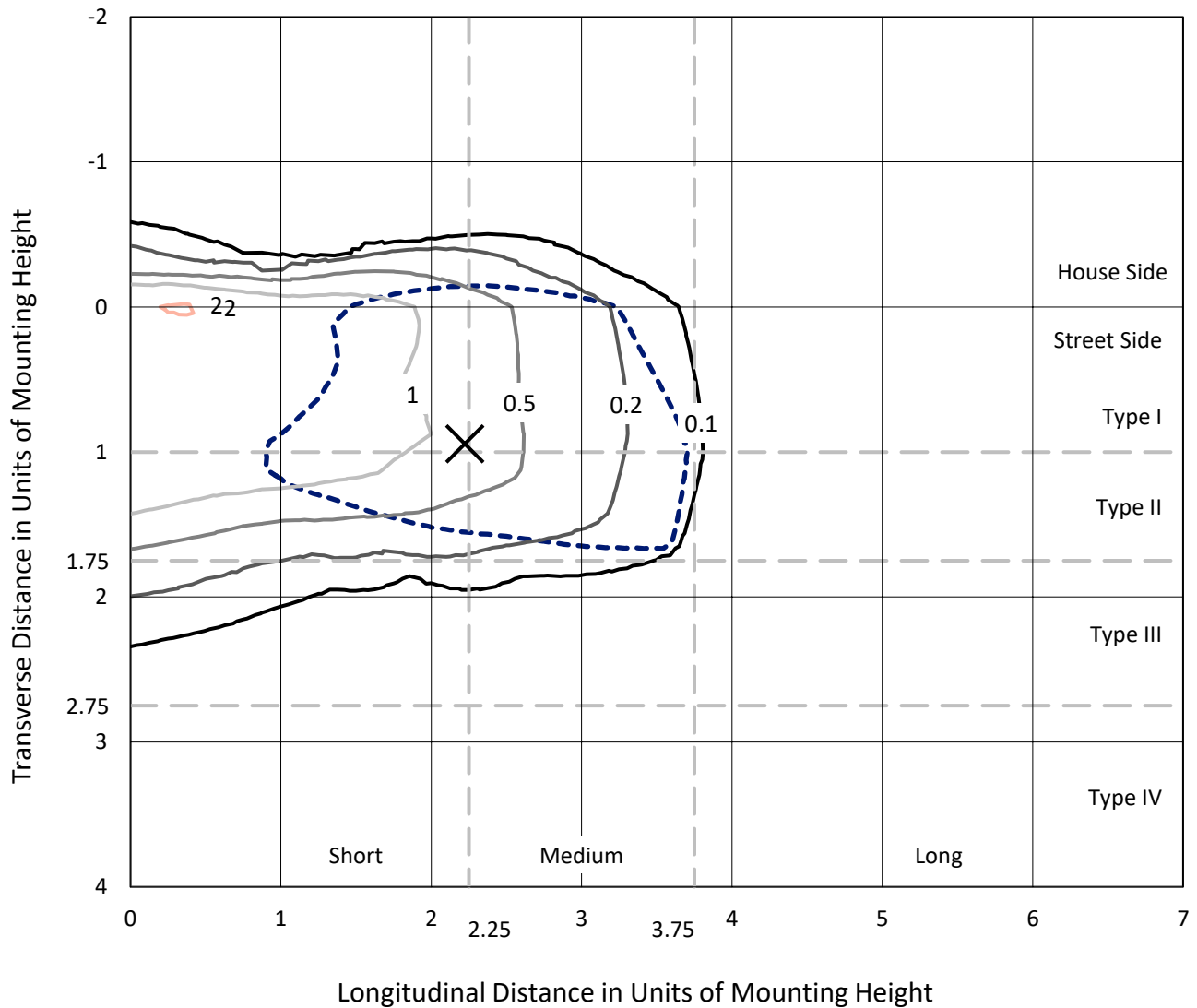
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P596633  
 CATALOG NUMBER: MSA-SA2D-827-U-SL2-HSS

### Iso-Footcandle Lines of Horizontal Illumination

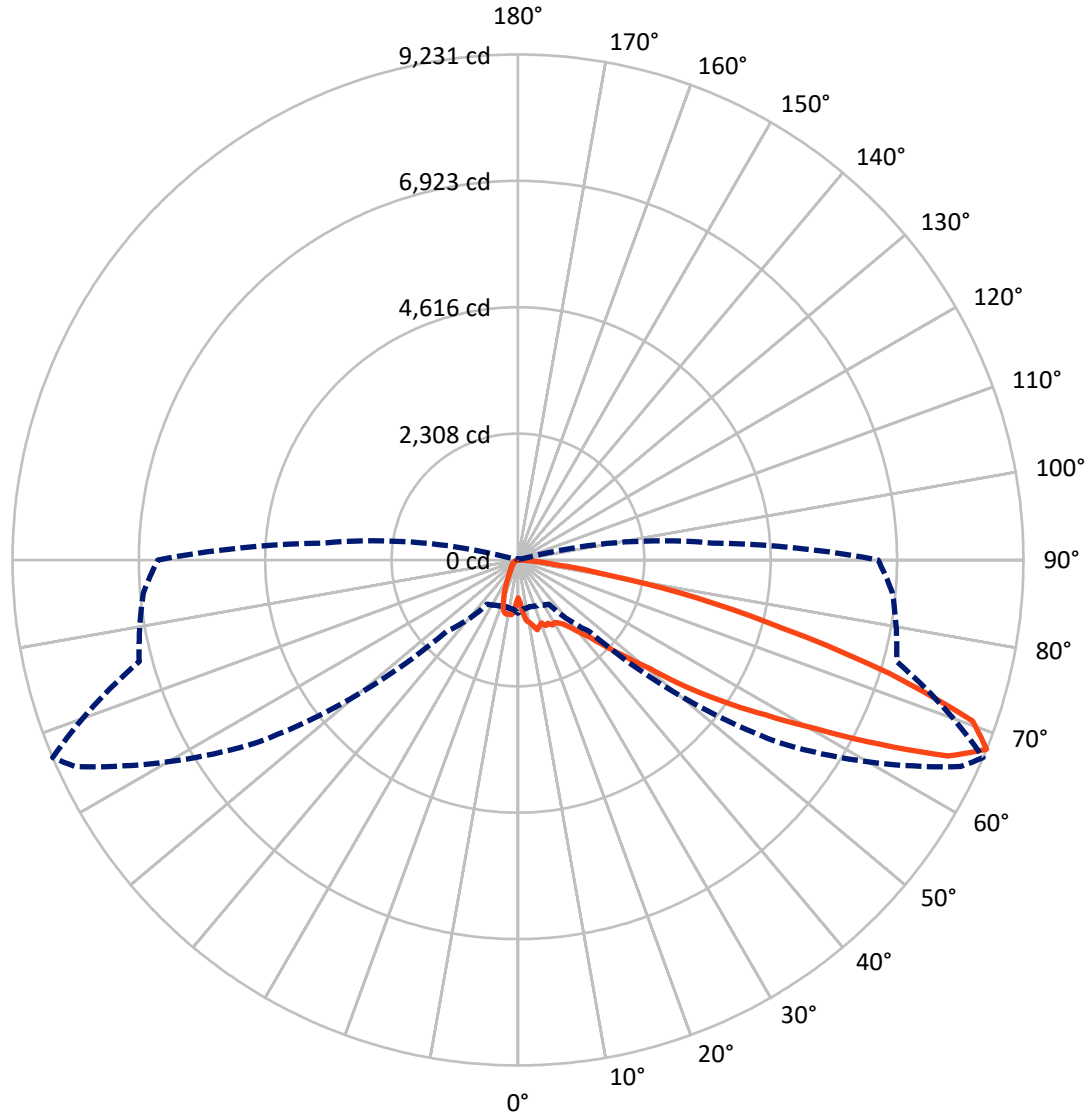
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc  
 Type II - Short - N/A

REPORT NUMBER: P596633  
CATALOG NUMBER: MSA-SA2D-827-U-SL2-HSS

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P596633

CATALOG NUMBER: MSA-SA2D-827-U-SL2-HSS

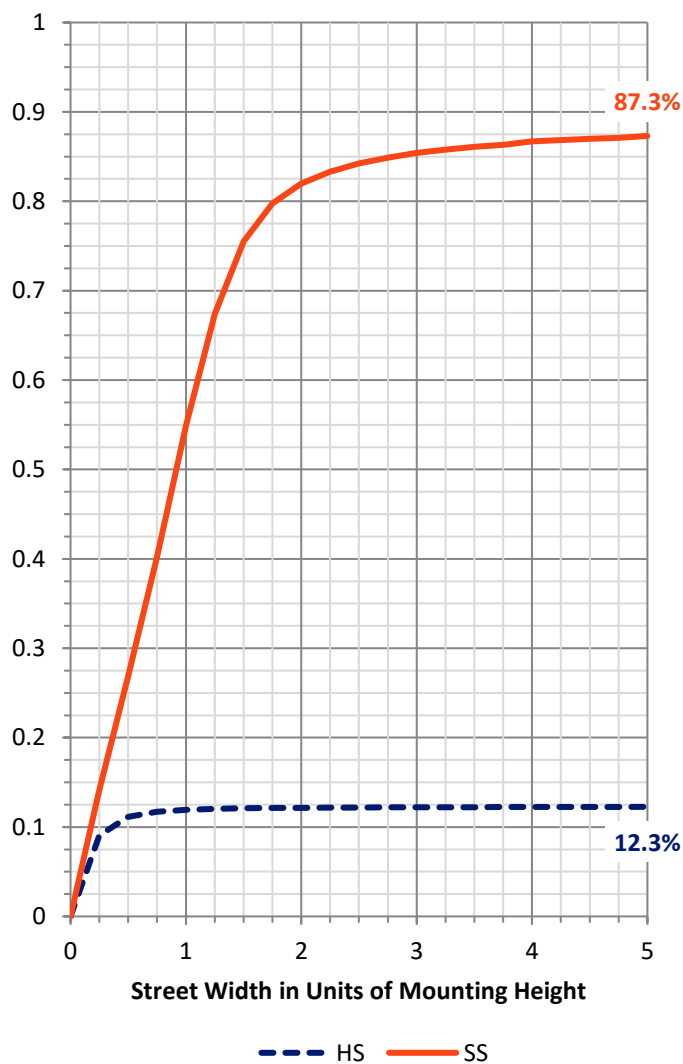
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1004.9	0.0	1004.9
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	7121.0	0.0	7121.0
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	8126.0	0.0	8126.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.9	1.1
10°-20°	257.1	3.2
20°-30°	402.9	5.0
30°-40°	649.6	8.0
40°-50°	1193.6	14.7
50°-60°	2015.8	24.8
60°-70°	2228.6	27.4
70°-80°	1166.4	14.4
80°-90°	125.3	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°	8126.0	100.0
0°-180°	8126.0	100.0

**Coefficient of Utilization**

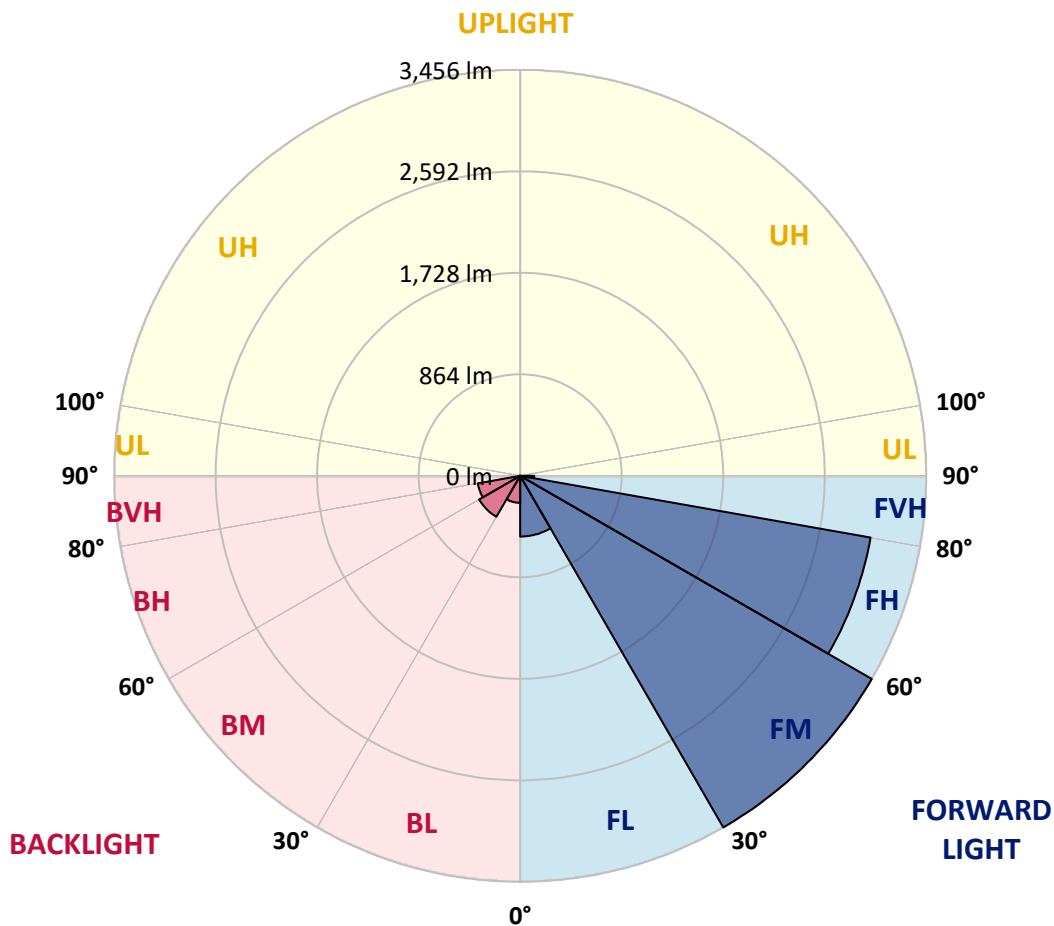


REPORT NUMBER: P596633  
 CATALOG NUMBER: MSA-SA2D-827-U-SL2-HSS

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	516.7	6.4			
FM (30°-60°)	3456.0	42.5			
FH (60°-80°)	3028.4	37.3			G2/5000
FVH (80°-90°)	119.9	1.5			G2/225
BL (0°-30°)	230.1	2.8	B1/500		
BM (30°-60°)	402.9	5.0	B1/1000		
BH (60°-80°)	366.6	4.5	B1/500		G1/500
BVH (80°-90°)	5.3	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type II Short





REPORT NUMBER: P596633

CATALOG NUMBER: MSA-SA2D-827-U-SL2-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	692.1	692.1	692.1	692.1	692.1	692.1	692.1	692.1	692.1	692.1	692.1
2.5°	817.0	789.4	742.4	756.0	783.2	805.9	795.2	774.1	774.6	753.1	830.2
5°	950.6	913.5	886.3	895.7	894.5	893.7	944.4	963.8	972.0	1007.5	1059.8
7.5°	988.9	975.7	947.3	955.9	927.5	929.5	1018.6	1102.7	1115.9	1137.7	1230.9
10°	974.1	948.5	958.8	958.8	959.2	1005.4	1065.2	1145.5	1161.6	1245.7	1255.6
12.5°	958.0	959.2	1000.0	992.6	1048.7	1131.5	1151.7	1242.0	1234.2	1307.1	1415.5
15°	1017.8	1049.1	1022.7	1033.0	1038.4	1135.6	1168.2	1288.2	1322.8	1415.1	1485.6
17.5°	1120.4	1124.5	1069.7	1054.9	1093.6	1121.2	1186.8	1244.5	1267.6	1509.9	1609.7
20°	1138.9	1165.3	1109.7	1023.9	1106.0	1143.9	1189.6	1217.3	1227.2	1539.2	1679.8
22.5°	1250.7	1221.4	1132.4	1067.2	1090.7	1131.9	1160.4	1243.6	1303.0	1484.0	1747.0
25°	1308.0	1300.1	1215.2	1159.6	1135.6	1132.4	1197.5	1260.6	1279.5	1541.3	1763.5
27.5°	1445.2	1427.5	1263.0	1256.0	1177.3	1108.0	1198.7	1312.1	1347.5	1487.3	1825.3
30°	1632.0	1625.4	1406.5	1401.9	1276.6	1152.1	1265.5	1343.8	1322.4	1514.9	1866.5
32.5°	1819.9	1873.5	1649.7	1521.9	1427.9	1314.1	1246.5	1333.9	1372.3	1582.1	1942.4
35°	2047.1	2085.8	1857.8	1765.1	1556.1	1390.0	1372.3	1428.3	1444.8	1662.0	2028.5
37.5°	2444.4	2385.9	2191.7	2033.9	1924.2	1660.8	1573.4	1528.9	1567.2	1770.5	2204.5
40°	2737.9	2700.8	2461.7	2367.3	2115.1	1960.9	1732.5	1690.9	1733.8	1881.8	2326.9
42.5°	3092.0	3014.9	2789.9	2726.0	2466.3	2169.1	1937.4	1951.8	1925.0	2101.5	2541.7
45°	3412.3	3238.4	3113.0	3127.5	2989.0	2587.5	2279.1	2272.1	2249.9	2419.7	2767.6
47.5°	3627.9	3475.8	3353.8	3313.8	3297.3	3323.3	2773.0	2648.5	2632.0	2754.0	3123.3
50°	3743.7	3577.2	3426.3	3434.6	3769.3	4021.1	3282.5	3105.6	3111.8	3239.2	3609.8
52.5°	3665.8	3477.4	3318.3	3472.9	4135.3	4486.5	4125.8	3702.9	3846.4	3813.8	4262.3
55°	3306.0	3142.3	3029.4	3306.0	4175.3	4987.4	5164.2	4602.0	4569.8	4495.6	4927.6
57.5°	2700.4	2559.4	2489.8	2781.6	3738.0	5390.9	6207.1	5618.1	5343.9	5033.1	5480.0
60°	2012.0	1908.1	1835.6	1989.8	2945.3	4998.9	6890.2	6575.6	6258.2	5551.3	5976.3
62.5°	1490.2	1405.6	1328.6	1342.6	2028.1	4299.4	7152.3	7590.1	7407.9	6098.3	6444.6
65°	1189.2	1112.2	1058.2	1027.2	1256.0	3234.6	6787.5	8421.5	8631.8	6613.6	6782.6
67.5°	971.2	906.0	879.3	914.7	985.2	1843.8	5813.0	8926.1	9231.1	7160.2	6865.8
70°	790.2	736.6	733.7	829.4	907.3	1124.1	4275.9	8577.8	8807.4	7253.3	6366.6
72.5°	550.7	527.2	564.7	700.4	899.0	936.1	2455.6	7098.3	7106.6	6406.2	5236.8
75°	311.6	307.9	367.3	558.5	875.5	926.7	1369.0	5016.2	5019.9	4845.2	3627.9
77.5°	171.5	160.4	213.9	377.6	751.9	905.2	883.0	3425.1	3337.3	2696.3	1657.1
80°	79.1	74.6	115.8	242.0	549.9	856.2	707.8	1882.6	1697.5	878.4	404.4
82.5°	32.6	30.9	53.2	155.4	347.5	689.6	596.5	835.1	670.3	166.9	124.9
85°	5.8	6.2	21.8	94.0	194.6	317.8	483.5	396.5	291.4	46.2	68.4
87.5°	0.0	0.0	4.5	22.7	47.0	87.0	196.2	110.9	76.3	13.6	20.2
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: P596633  
 CATALOG NUMBER: MSA-SA2D-827-U-SL2-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	692.1	692.1	692.1	692.1	692.1	692.1	692.1	692.1	692.1	692.1	692.1
2.5°	845.5	838.4	767.5	770.8	775.8	771.3	770.4	750.6	732.5	792.3	791.5
5°	1069.3	1019.4	970.4	951.4	910.6	857.0	857.4	840.5	823.2	847.5	847.5
7.5°	1228.8	1160.0	1097.7	986.8	878.8	781.1	772.5	749.4	723.0	754.8	760.9
10°	1265.9	1206.1	1125.8	962.9	860.7	765.5	660.8	574.6	534.6	516.1	512.8
12.5°	1380.1	1335.6	1155.8	975.7	828.6	667.4	495.9	393.7	324.0	318.6	311.2
15°	1456.4	1425.0	1185.5	944.0	692.5	479.8	311.6	239.1	211.1	208.6	204.9
17.5°	1574.7	1520.2	1157.1	843.0	541.6	316.6	209.4	188.8	192.1	199.5	193.7
20°	1622.9	1516.5	1095.3	696.6	380.5	212.3	181.8	170.7	179.3	186.3	183.0
22.5°	1672.4	1527.3	1040.4	574.2	248.6	175.6	162.0	156.2	157.1	164.1	164.5
25°	1671.9	1556.9	976.9	447.3	185.1	156.2	146.3	138.9	136.0	141.0	139.7
27.5°	1753.1	1522.7	861.1	331.8	162.8	139.7	130.3	121.2	110.9	115.8	115.8
30°	1753.6	1578.4	780.3	238.3	149.2	124.5	116.2	102.2	90.3	94.4	94.8
32.5°	1800.1	1530.1	705.7	182.2	138.5	115.4	97.3	84.5	77.5	80.0	80.0
35°	1853.3	1571.4	591.1	160.8	127.8	102.6	83.3	73.0	67.6	69.7	69.7
37.5°	2028.9	1562.7	511.6	149.6	120.8	92.7	75.8	64.3	61.8	63.1	64.7
40°	2092.4	1624.1	403.6	143.0	109.2	83.7	66.8	58.1	54.8	55.6	56.1
42.5°	2254.0	1637.7	322.4	137.7	98.9	72.5	59.4	53.2	49.1	49.1	50.3
45°	2432.5	1671.9	256.4	133.1	90.3	65.1	53.6	48.6	42.5	41.6	43.3
47.5°	2690.9	1803.0	209.0	124.1	80.0	60.6	49.5	42.0	37.1	35.5	37.1
50°	3123.3	2025.6	184.7	112.9	72.5	56.9	43.7	35.9	32.2	30.1	31.3
52.5°	3733.4	2410.2	171.9	102.6	66.0	51.1	39.2	31.3	27.6	26.0	26.8
55°	4411.1	2851.3	165.7	92.3	60.2	44.9	34.2	27.6	24.3	22.3	22.7
57.5°	5037.7	3266.0	159.5	82.4	54.4	40.0	30.1	24.3	21.0	19.0	19.4
60°	5655.2	3597.0	144.7	70.9	49.1	35.9	26.4	21.0	19.0	16.5	16.5
62.5°	6201.3	3794.8	123.3	61.4	44.1	31.7	23.5	19.0	17.3	14.8	14.8
65°	6573.2	3803.9	99.3	52.8	38.7	27.2	20.6	17.7	16.1	13.2	12.8
67.5°	6578.5	3556.6	79.6	47.0	34.2	23.9	18.5	16.9	14.8	12.4	11.5
70°	5888.1	2938.3	66.4	41.2	29.7	21.0	16.1	16.1	14.4	12.0	10.7
72.5°	4710.0	2245.3	55.6	35.9	26.4	18.1	14.8	15.3	14.0	12.0	10.7
75°	3165.8	1287.8	46.2	30.5	23.1	15.3	14.4	14.8	14.4	12.0	10.3
77.5°	1458.0	410.2	35.9	25.1	19.8	12.8	14.0	14.0	13.2	10.7	9.1
80°	328.5	101.0	26.0	18.5	16.1	9.5	12.8	11.5	10.3	7.4	5.4
82.5°	119.5	30.9	15.7	11.5	9.9	3.7	8.2	8.2	7.4	5.4	3.3
85°	68.4	16.1	8.7	7.4	5.4	1.6	4.5	4.9	4.1	3.7	1.6
87.5°	22.3	3.7	4.1	4.5	4.1	0.8	1.6	1.6	1.2	0.8	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)