

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: P401037

Luminaire Tested: **ENT-SA1A-830-U-SL3-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401037
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-4)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-830-U-SL3-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1820 lumens
Efficiency: N/A
Efficacy: 90.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G1

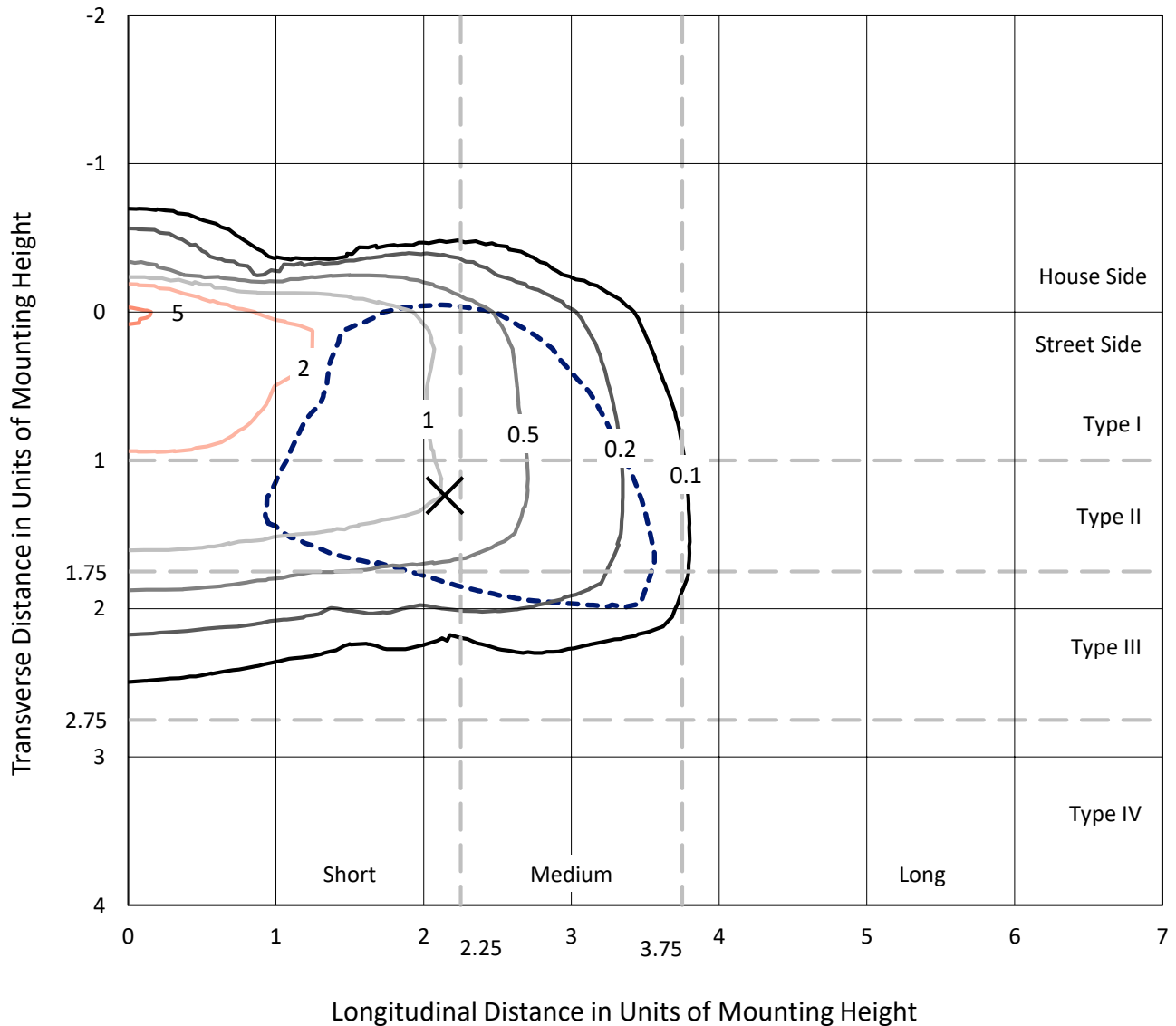
Input Watts (W): 20.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P401037
 CATALOG NUMBER: ENT-SA1A-830-U-SL3-HSS

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

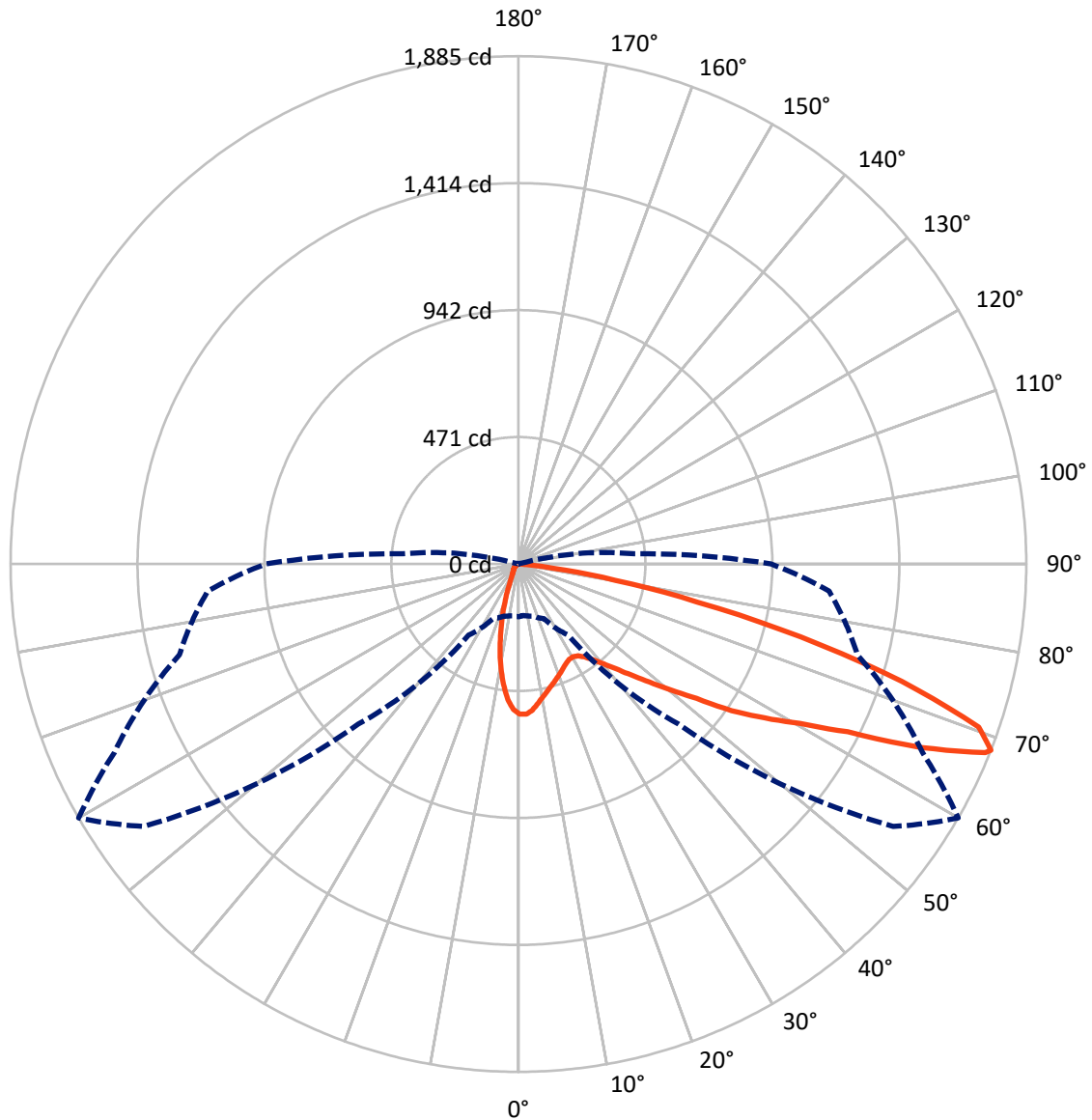


Based on 10 foot mounting height. Maximum calculated value = 5.6 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P401037

CATALOG NUMBER: ENT-SA1A-830-U-SL3-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P401037

CATALOG NUMBER: ENT-SA1A-830-U-SL3-HSS

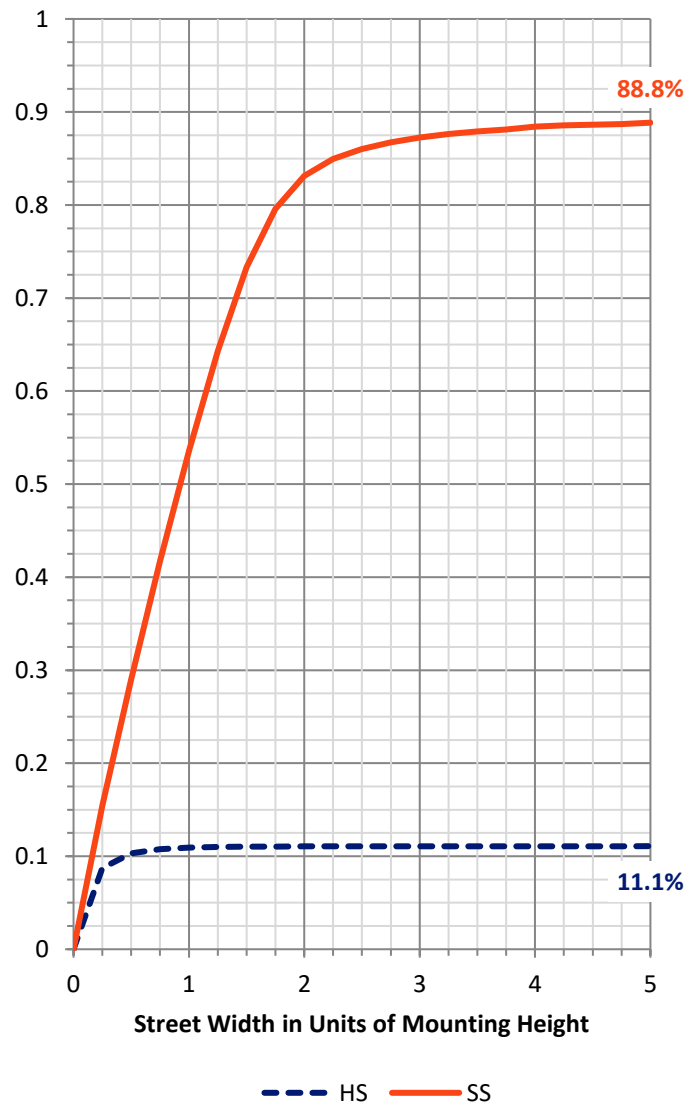
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	203.5	0.0	203.5
	% Fixture	11.2	0.0	11.2
Street Side	Lumens	1616.5	0.0	1616.5
	% Fixture	88.8	0.0	88.8
Total	Lumens	1820.0	0.0	1820.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.2	2.5
10°-20°	92.2	5.1
20°-30°	121.4	6.7
30°-40°	167.5	9.2
40°-50°	253.9	14.0
50°-60°	409.8	22.5
60°-70°	486.8	26.7
70°-80°	229.5	12.6
80°-90°	13.7	0.8
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°	1820.0	100.0
0°-180°	1820.0	100.0



REPORT NUMBER: P401037

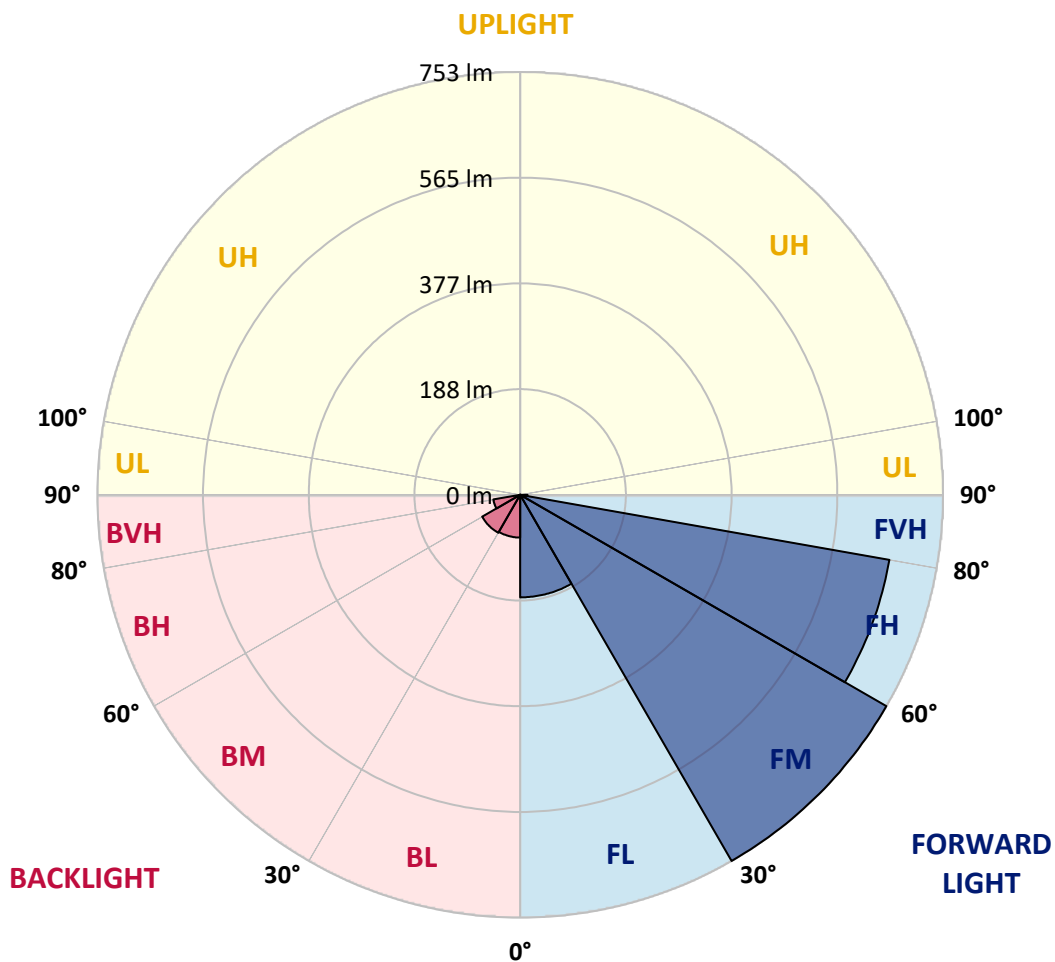
CATALOG NUMBER: ENT-SA1A-830-U-SL3-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	182.7	10.0			
FM	(30°-60°)	753.0	41.4			
FH	(60°-80°)	667.7	36.7			G1/1800
FVH	(80°-90°)	13.1	0.7			G1/100
BL	(0°-30°)	76.1	4.2	B0/110		
BM	(30°-60°)	78.2	4.3	B0/220		
BH	(60°-80°)	48.5	2.7	B0/110		G0/110
BVH	(80°-90°)	0.6	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type III Short





REPORT NUMBER: P401037

CATALOG NUMBER: ENT-SA1A-830-U-SL3-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	552.1	550.9	554.3	555.2	556.2	558.0	557.7	558.0	558.3	557.7	554.0
5°	514.5	516.6	519.7	523.7	527.7	537.0	540.7	544.4	546.9	548.7	545.3
7.5°	477.4	481.7	484.2	491.6	497.8	507.4	515.4	521.9	528.1	534.8	531.5
10°	447.8	449.3	451.5	458.3	467.5	482.0	492.5	500.6	508.0	519.4	516.6
12.5°	418.7	419.7	424.0	431.4	441.0	458.9	472.8	482.0	490.4	504.6	504.9
15°	397.4	397.7	400.5	407.3	418.4	437.6	455.5	465.7	477.4	494.7	495.6
17.5°	383.5	383.2	383.8	388.2	398.7	416.9	438.5	450.5	464.4	486.7	487.6
20°	379.2	378.6	377.4	376.4	382.9	398.7	423.1	436.3	452.7	480.8	481.1
22.5°	382.9	381.7	378.9	373.7	375.5	385.7	406.1	422.1	442.2	477.7	475.6
25°	391.9	391.9	388.2	379.8	375.5	377.7	394.0	409.5	431.7	476.2	471.5
27.5°	406.7	406.1	401.1	392.5	384.5	378.6	386.6	401.1	424.0	478.0	469.7
30°	424.6	422.8	417.5	411.3	401.4	388.8	388.2	399.0	420.3	483.9	470.9
32.5°	441.6	441.6	439.4	433.6	424.0	407.3	397.7	406.4	424.9	493.5	474.9
35°	462.6	462.3	462.9	460.7	452.4	434.8	419.4	423.7	439.1	509.5	484.5
37.5°	479.3	479.6	484.8	488.5	484.8	466.3	450.2	450.2	463.2	533.6	500.9
40°	495.6	496.2	506.1	516.9	517.9	503.0	487.6	487.3	494.7	563.3	526.2
42.5°	510.5	512.9	527.1	545.7	556.5	546.6	535.2	531.5	535.2	608.0	567.3
45°	526.2	531.1	550.9	577.8	595.4	595.7	591.4	587.0	588.9	658.4	622.2
47.5°	546.6	552.1	576.8	609.9	643.2	651.9	655.9	654.4	649.4	722.0	693.3
50°	579.6	584.9	608.0	645.1	690.8	722.0	732.8	734.6	728.2	792.4	773.9
52.5°	635.8	638.9	660.5	689.9	741.1	799.5	827.9	828.2	813.7	874.8	860.9
55°	696.0	704.1	729.4	763.4	816.2	881.6	952.7	960.4	915.6	947.1	924.6
57.5°	697.0	704.7	746.7	811.8	922.4	1009.2	1072.5	1078.0	1028.3	1005.2	984.5
60°	623.5	627.5	685.9	781.3	960.4	1181.2	1209.0	1200.6	1107.4	1065.1	1059.5
62.5°	440.0	441.9	511.1	636.8	876.4	1263.3	1416.8	1372.0	1219.8	1153.4	1171.9
65°	277.0	276.1	304.8	405.2	651.9	1182.4	1673.7	1641.0	1426.4	1263.9	1259.6
67.5°	204.4	199.5	207.2	238.4	372.4	928.3	1721.0	1868.6	1623.1	1309.9	1183.6
68°	196.1	191.8	199.8	223.9	322.1	840.3	1698.1	1884.9	1654.3	1302.5	1157.7
70°	166.4	162.4	169.2	187.4	224.2	545.3	1498.3	1812.4	1682.7	1239.5	1020.3
72.5°	118.3	120.4	138.3	160.9	189.9	279.8	1103.4	1488.4	1447.4	1102.4	776.3
75°	70.1	74.1	97.6	129.7	174.5	184.7	711.8	1082.0	1062.0	763.4	420.6
77.5°	24.7	26.2	48.5	86.5	143.9	146.4	396.5	680.3	632.7	311.9	124.1
80°	9.0	9.0	17.9	48.2	92.9	111.8	210.6	363.2	249.8	80.9	34.3
82.5°	1.5	1.5	4.0	16.4	41.1	59.6	97.9	129.1	74.1	17.9	17.0
85°	0.0	0.0	0.0	0.0	0.6	0.6	28.7	29.0	13.6	2.5	7.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.6	0.6	0.6	0.9
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: P401037

CATALOG NUMBER: ENT-SA1A-830-U-SL3-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	552.4	551.8	548.4	542.3	537.0	528.4	526.8	518.5	515.4	512.9	515.4
5°	542.9	539.5	528.1	514.2	495.3	473.1	460.1	442.2	438.5	428.6	434.5
7.5°	527.1	519.4	498.1	468.1	433.6	399.6	373.7	348.6	327.3	319.9	317.8
10°	510.5	499.6	463.8	417.5	367.5	315.3	276.7	240.6	220.5	201.6	201.0
12.5°	494.7	478.3	426.5	361.9	292.1	230.1	180.0	142.0	118.3	105.3	108.7
15°	482.0	460.1	388.8	306.3	218.0	148.2	101.9	77.5	69.2	65.2	65.8
17.5°	469.7	440.7	352.3	248.3	155.3	91.4	66.1	57.7	55.3	54.3	53.7
20°	458.6	421.8	314.1	195.8	102.5	63.3	54.3	51.6	50.6	50.0	50.0
22.5°	447.5	402.1	275.8	145.1	70.1	51.9	48.8	47.6	46.9	46.0	46.0
25°	437.3	382.9	237.5	101.6	53.7	46.3	44.2	42.9	41.7	40.8	40.8
27.5°	429.5	368.4	202.0	72.0	45.1	41.7	39.5	37.4	35.8	34.6	34.6
30°	424.6	354.2	167.7	54.3	40.1	37.1	34.3	31.5	29.0	27.5	27.2
32.5°	421.8	342.5	135.9	44.5	35.8	32.4	29.0	25.9	23.2	21.3	21.3
35°	423.1	333.2	104.1	37.7	32.4	28.4	24.7	21.0	18.5	17.0	16.7
37.5°	431.1	327.9	77.5	33.4	29.0	24.7	21.0	17.3	14.8	13.6	13.3
40°	446.2	329.2	59.0	30.3	26.6	21.6	17.3	14.2	12.0	10.8	10.8
42.5°	476.8	338.1	46.6	27.8	23.8	18.5	14.5	11.7	9.9	9.0	8.6
45°	517.2	355.1	38.3	25.6	21.0	15.7	12.4	9.9	8.0	7.1	7.1
47.5°	578.4	382.3	33.0	23.5	18.2	13.3	10.2	8.0	6.2	5.6	5.2
50°	649.1	420.3	29.0	21.0	16.1	11.1	8.6	6.2	4.9	4.0	4.0
52.5°	721.4	462.6	26.2	18.8	13.9	9.6	6.8	4.6	3.4	2.8	2.8
55°	787.8	498.1	23.5	17.0	11.7	8.0	5.6	3.7	2.5	1.9	1.9
57.5°	852.0	530.5	20.4	14.8	9.6	6.5	4.3	2.8	1.9	1.2	1.2
60°	932.6	572.5	17.6	12.7	7.7	5.2	3.4	2.2	1.2	0.9	0.6
62.5°	1029.9	603.1	14.8	10.2	6.2	4.0	2.5	1.5	0.9	0.3	0.3
65°	1065.7	562.6	12.4	8.3	4.9	3.1	1.9	1.2	0.6	0.3	0.3
67.5°	965.6	453.3	9.9	6.5	3.7	2.2	1.5	0.9	0.6	0.3	0.3
68°	937.8	431.1	9.6	6.2	3.4	2.2	1.2	0.9	0.3	0.3	0.0
70°	791.8	346.2	7.7	4.6	2.8	1.9	1.2	0.6	0.3	0.3	0.0
72.5°	587.0	238.7	5.6	3.1	1.9	1.2	0.9	0.6	0.3	0.3	0.0
75°	309.7	92.9	4.3	2.5	1.5	1.2	0.9	0.9	0.6	0.3	0.3
77.5°	88.9	29.3	3.4	1.9	1.5	1.5	1.5	1.2	1.2	0.9	0.6
80°	25.9	9.6	2.2	1.2	1.5	1.5	1.9	1.5	1.5	1.2	1.2
82.5°	13.9	3.7	1.2	0.9	0.9	1.2	1.5	1.2	0.9	0.6	0.3
85°	5.9	1.2	0.9	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.3
87.5°	0.3	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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)