

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: P188982

Luminaire Tested: **ABB-B1-LED-D1-A-8030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P188982
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P34805)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ABB-B1-LED-D1-A-8030
Description: ARBOR OUTDOOR ARCHITECTURAL BOLLARD
80 CRI, 3000K LEDS AND ASYMMETRIC OPTIC, GRAPHITE METALLIC PAINTED FINISH
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 377.9 lumens
Efficiency: N/A
Efficacy: 34.4 lumens/watt
Luminous Opening: Circular (Dia: 4.75' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G0

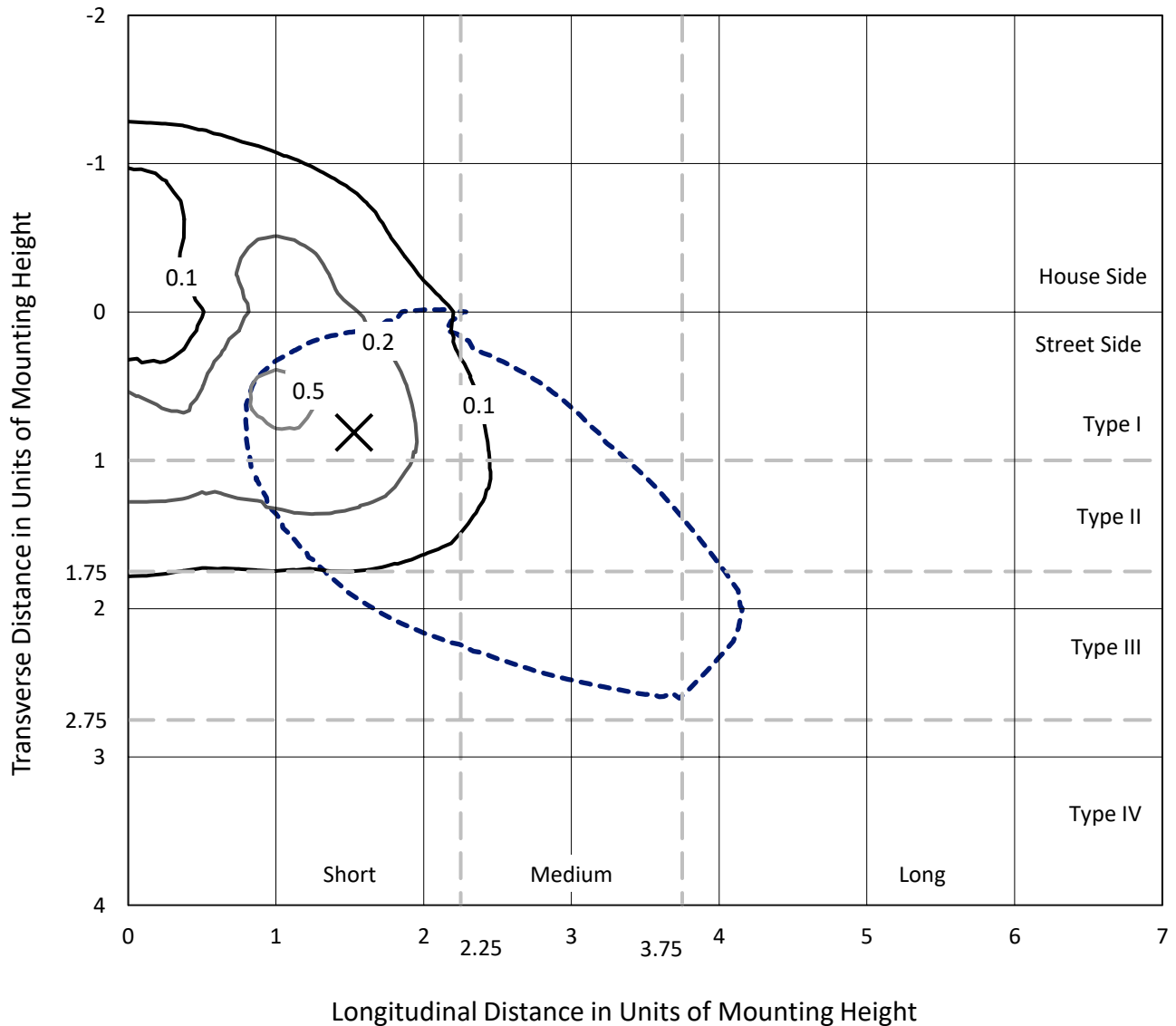
Input Watts (W): 11
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

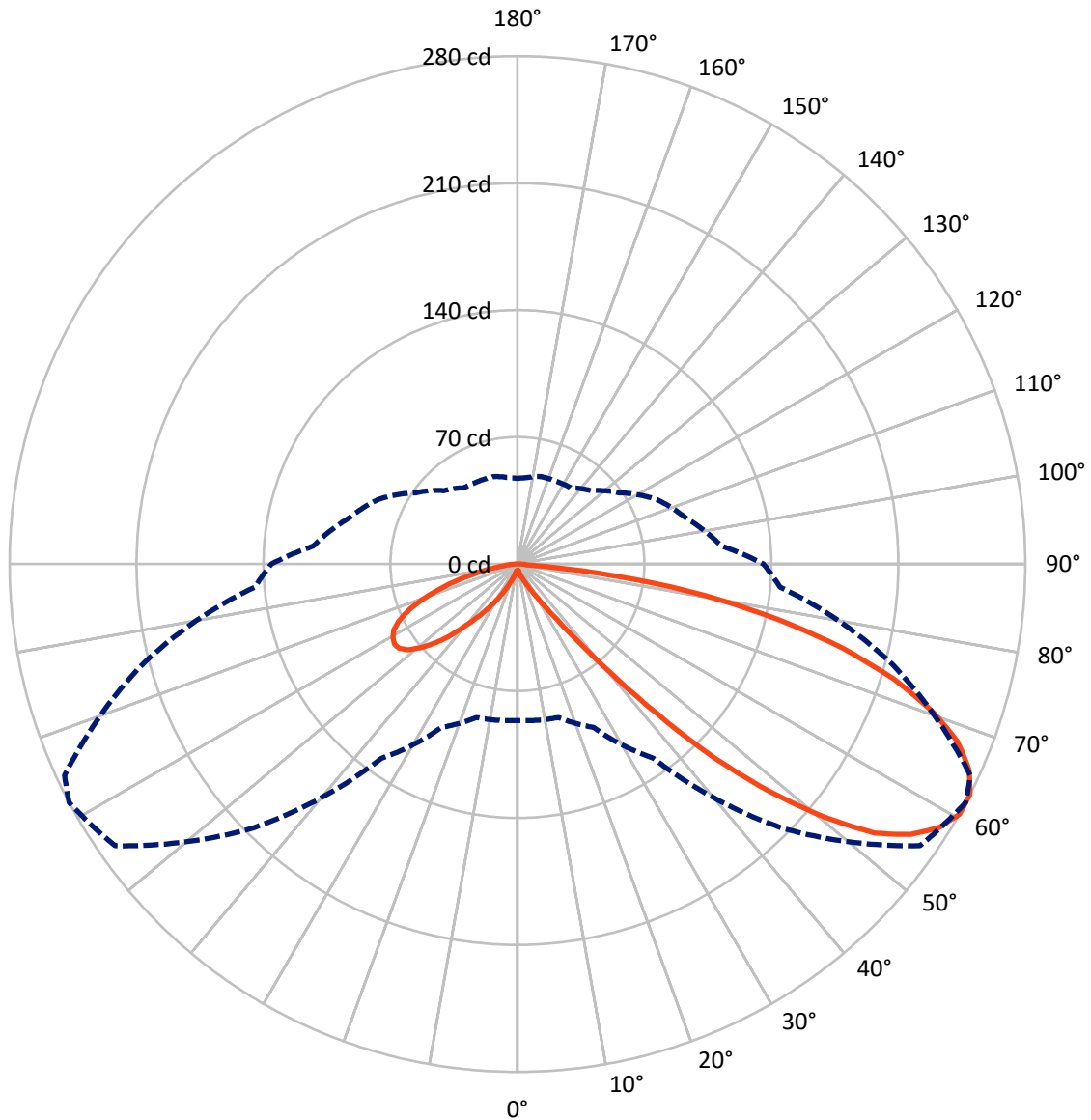
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 0.6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 62-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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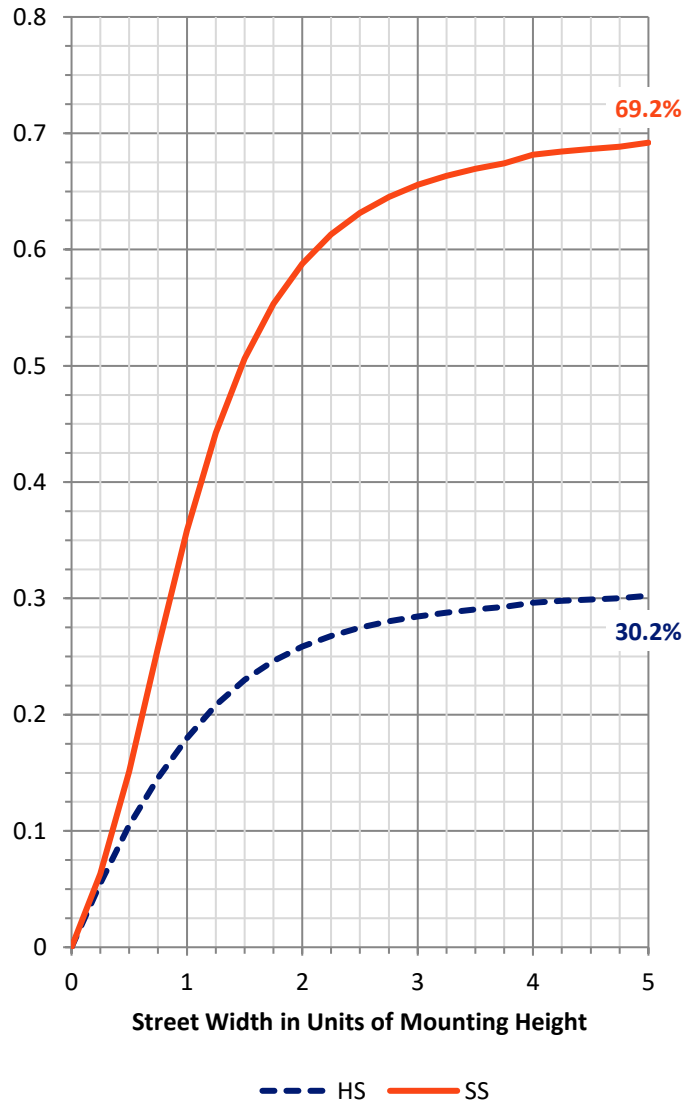
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	115.5	0.0	115.5
	% Fixture	30.6	0.0	30.6
Street Side	Lumens	262.4	0.0	262.4
	% Fixture	69.4	0.0	69.4
Total	Lumens	377.9	0.0	377.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.4	0.1
10°-20°	2.1	0.5
20°-30°	6.6	1.7
30°-40°	19.5	5.2
40°-50°	55.9	14.8
50°-60°	100.0	26.5
60°-70°	110.1	29.1
70°-80°	71.6	18.9
80°-90°	11.6	3.1
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°	377.9	100.0
0°-180°	377.9	100.0



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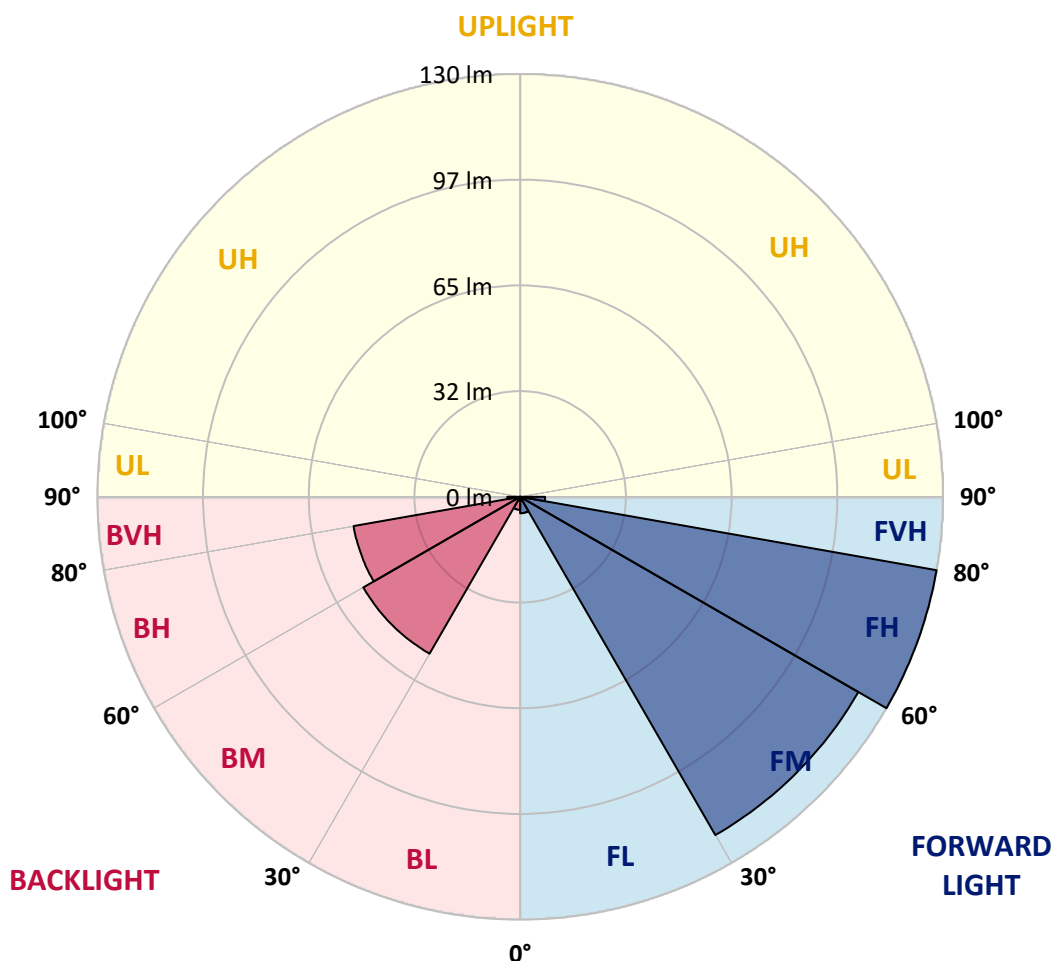
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	5.1	1.3			
FM	(30°-60°)	119.9	31.7			
FH	(60°-80°)	129.8	34.3			G0/660
FVH	(80°-90°)	7.7	2.0			G0/10
BL	(0°-30°)	4.0	1.1	B0/110		
BM	(30°-60°)	55.6	14.7	B0/220		
BH	(60°-80°)	51.9	13.7	B0/110		G0/110
BVH	(80°-90°)	3.9	1.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G0

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62°	65°	75°	85°
0°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
2.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
5°	3.6	3.6	3.6	3.6	4.1	4.1	4.1	3.6	3.6	3.6	3.6
7.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.1	4.1	4.1	4.1
10°	5.0	5.0	5.4	5.4	5.4	5.4	5.0	5.0	5.0	4.5	4.5
12.5°	6.8	6.8	6.8	6.8	6.3	6.3	5.9	5.9	5.4	5.4	5.4
15°	8.2	8.6	8.6	8.2	7.7	7.2	6.8	6.8	6.3	6.3	6.3
17.5°	10.9	10.9	10.4	10.0	9.1	8.6	8.2	7.7	7.7	7.2	7.2
20°	14.0	14.0	12.7	11.3	10.9	10.0	9.5	9.1	9.1	8.6	8.6
22.5°	18.1	17.7	15.4	13.6	12.7	11.8	11.3	11.3	10.9	10.4	10.0
25°	22.6	22.2	19.0	16.3	14.9	14.0	14.0	13.6	13.1	12.7	12.2
27.5°	28.1	27.2	23.1	19.5	17.2	17.2	17.2	16.8	16.8	15.9	14.9
30°	33.5	32.6	28.1	23.1	20.8	21.3	21.7	21.3	21.3	19.9	18.1
32.5°	39.0	38.5	33.5	28.1	25.4	26.7	28.1	28.1	28.1	25.4	22.6
35°	44.4	43.9	39.9	34.0	30.8	34.9	38.5	37.6	37.1	33.5	29.0
37.5°	50.3	50.3	47.1	40.3	38.1	46.7	52.5	53.0	52.5	44.8	37.1
40°	56.6	56.6	54.4	48.9	47.6	63.0	75.2	77.0	75.6	63.0	48.0
42.5°	63.4	63.4	62.1	58.0	58.9	85.2	108.3	112.3	108.3	86.1	60.7
45°	70.7	70.7	70.7	67.5	72.0	106.9	146.8	152.7	149.0	110.5	77.5
47.5°	76.1	76.6	78.8	75.6	86.1	129.6	179.4	187.5	182.6	134.1	92.9
50°	82.4	82.9	84.3	83.8	99.7	153.6	211.1	218.8	214.3	156.7	107.8
52.5°	87.0	87.0	89.7	90.1	111.0	175.8	238.7	246.0	241.0	180.3	122.3
55°	88.8	89.7	91.5	95.1	121.4	191.6	257.3	262.7	260.0	198.4	133.2
57.5°	88.3	88.8	90.6	96.9	126.8	202.0	268.2	273.6	270.9	210.2	140.9
60°	86.1	86.5	87.4	99.2	130.5	205.2	270.4	279.5	275.0	213.8	145.0
62.5°	82.0	81.5	81.5	100.1	130.0	202.9	272.2	279.5	275.0	212.5	144.5
65°	74.7	74.7	73.4	100.6	125.0	196.6	266.4	273.2	269.5	204.8	139.1
67.5°	66.6	65.7	63.4	98.3	118.7	182.6	253.7	261.4	256.8	190.7	130.9
70°	54.4	55.3	53.0	92.9	106.9	162.2	233.7	241.9	237.8	171.7	118.2
72.5°	42.6	42.1	43.0	82.4	93.8	139.5	209.7	216.5	212.5	147.2	104.2
75°	30.8	30.4	34.0	69.8	78.8	112.8	176.7	184.8	179.8	121.9	86.1
77.5°	19.9	19.0	24.9	52.5	60.2	83.3	141.3	146.3	143.6	90.6	66.6
80°	10.9	11.3	15.4	33.5	39.0	53.5	99.7	104.6	99.2	58.9	44.8
82.5°	6.8	6.3	7.2	12.2	16.3	25.8	52.1	56.2	52.1	26.3	20.8
85°	3.6	3.2	3.2	3.2	3.2	3.6	4.5	5.0	4.5	3.6	3.6
87.5°	2.7	2.7	2.7	2.3	2.7	2.7	3.2	3.2	3.2	2.7	2.7
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°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
2.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.5	4.5	4.5
5°	3.6	3.2	3.2	3.6	3.6	3.6	3.6	4.1	4.1	4.1	4.1
7.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.5	4.5	4.5	4.5
10°	4.5	4.5	4.5	4.5	4.5	5.0	5.0	5.0	5.0	5.0	5.0
12.5°	5.4	5.4	5.4	5.4	5.9	5.9	5.9	5.9	5.9	5.4	5.4
15°	6.3	6.3	6.3	6.3	6.8	7.2	6.8	6.8	6.3	5.9	5.9
17.5°	7.2	7.2	7.7	7.7	8.2	8.2	7.7	7.7	6.8	6.8	6.3
20°	8.6	8.6	9.1	9.5	10.0	10.0	9.1	8.2	7.7	7.2	7.2
22.5°	10.0	10.0	10.9	11.8	11.8	11.3	10.0	9.1	8.2	7.7	7.7
25°	11.8	12.2	13.6	14.9	14.5	12.7	11.3	10.0	8.6	8.2	8.2
27.5°	14.5	14.9	16.8	18.1	17.2	14.9	12.7	10.9	9.5	9.1	9.1
30°	18.1	18.6	21.3	22.6	20.4	16.8	14.0	11.8	10.4	9.5	9.5
32.5°	22.6	23.6	26.7	27.2	24.0	19.0	16.3	13.6	11.8	10.9	10.4
35°	28.5	29.9	33.5	32.6	28.1	22.6	18.6	15.9	13.6	12.2	11.8
37.5°	36.2	37.6	40.3	38.5	32.6	26.3	21.7	18.6	15.9	14.0	14.0
40°	46.2	47.1	49.4	44.8	37.6	31.3	26.3	22.2	19.5	18.1	18.1
42.5°	58.4	58.9	59.3	52.5	43.9	36.7	31.7	28.5	24.5	23.6	23.1
45°	71.1	70.2	69.8	61.2	50.3	41.7	37.6	34.0	30.8	29.4	29.4
47.5°	82.9	81.1	79.7	68.4	56.6	47.6	41.7	38.1	35.8	35.3	35.3
50°	96.0	91.1	87.4	75.2	61.6	51.6	45.8	42.6	40.3	39.9	40.3
52.5°	107.4	99.7	93.8	81.1	66.1	55.3	48.5	45.8	44.4	43.9	43.9
55°	117.8	105.5	97.4	84.7	68.9	57.1	50.7	48.0	47.6	46.2	46.2
57.5°	127.7	109.6	98.3	85.6	69.3	58.0	51.6	49.4	48.9	47.6	47.1
60°	135.4	112.8	96.5	84.3	68.4	57.1	51.2	50.3	49.8	47.6	47.1
62.5°	141.8	114.6	91.5	81.5	66.6	55.7	49.8	49.8	49.4	47.1	46.7
65°	141.8	115.5	84.3	76.1	62.5	53.0	47.1	48.9	48.0	45.3	44.8
67.5°	137.7	113.7	74.7	68.4	56.6	48.5	44.4	46.2	45.3	43.0	42.6
70°	127.7	106.5	63.9	58.9	49.4	43.0	40.8	42.1	41.7	39.0	39.0
72.5°	112.3	95.6	54.4	48.0	40.8	37.6	35.8	37.6	37.1	34.4	34.9
75°	93.3	79.7	43.9	36.7	32.2	30.8	30.4	31.7	30.8	29.9	29.9
77.5°	71.6	60.2	32.6	25.8	23.6	24.0	24.0	25.4	24.5	24.0	24.5
80°	44.8	38.5	20.8	16.8	16.3	17.2	17.2	18.6	18.6	18.1	17.7
82.5°	19.0	14.9	10.4	9.5	9.5	10.4	10.4	11.3	11.8	11.8	11.8
85°	3.2	3.2	4.1	4.1	4.5	4.1	4.1	4.5	5.0	5.9	5.9
87.5°	2.3	2.3	2.7	3.2	3.2	3.2	3.2	3.2	3.6	4.5	4.5
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)