

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: P400871

Luminaire Tested: **ENT-SA1-830-U-T4W-HSS-XXB**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400871
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-18)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1-830-U-T4W-HSS-XXB
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 457 lumens
Efficiency: N/A
Efficacy: 35.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B0 - U0 - G0

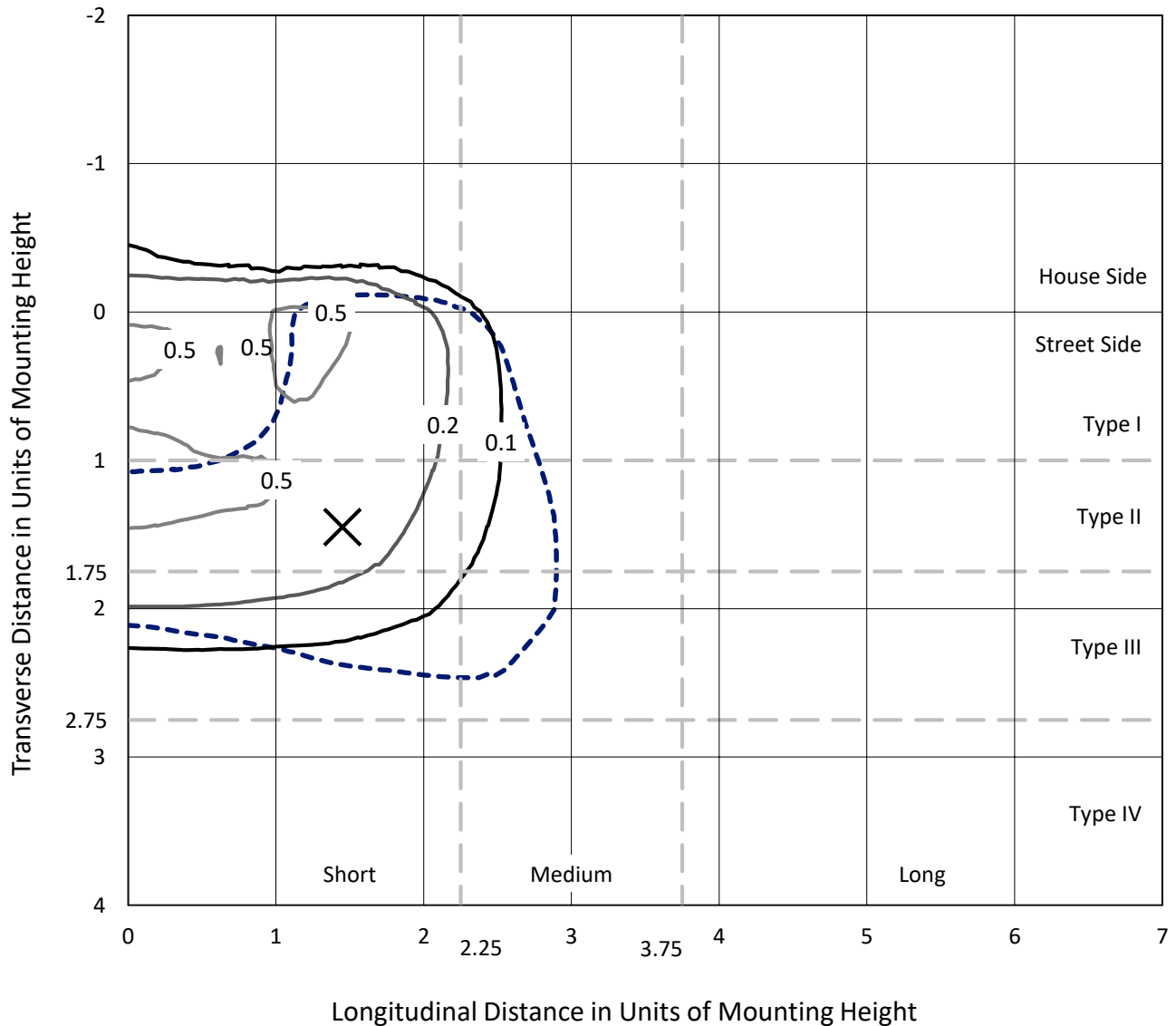
Input Watts (W): 13
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

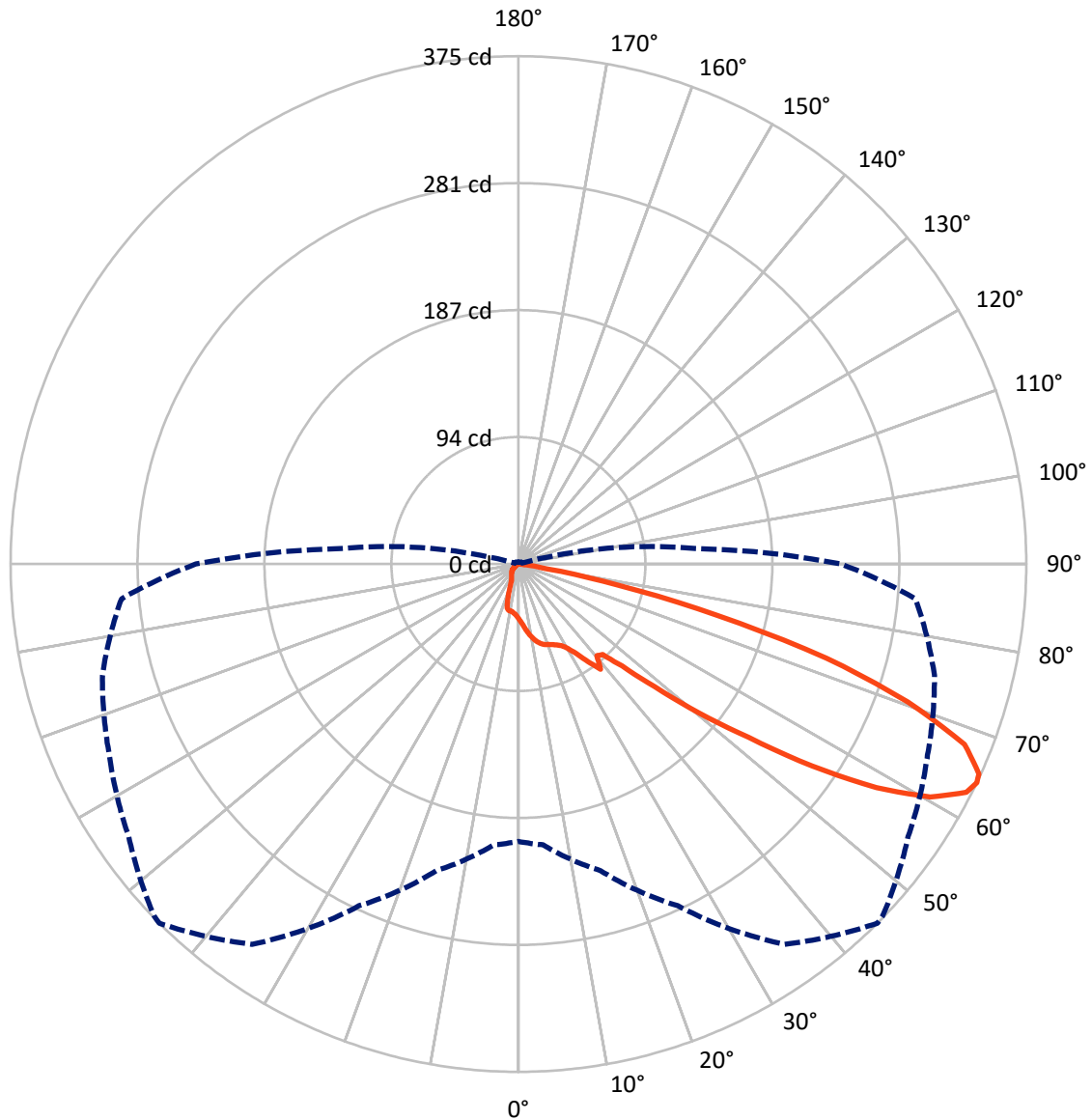
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 0.6 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

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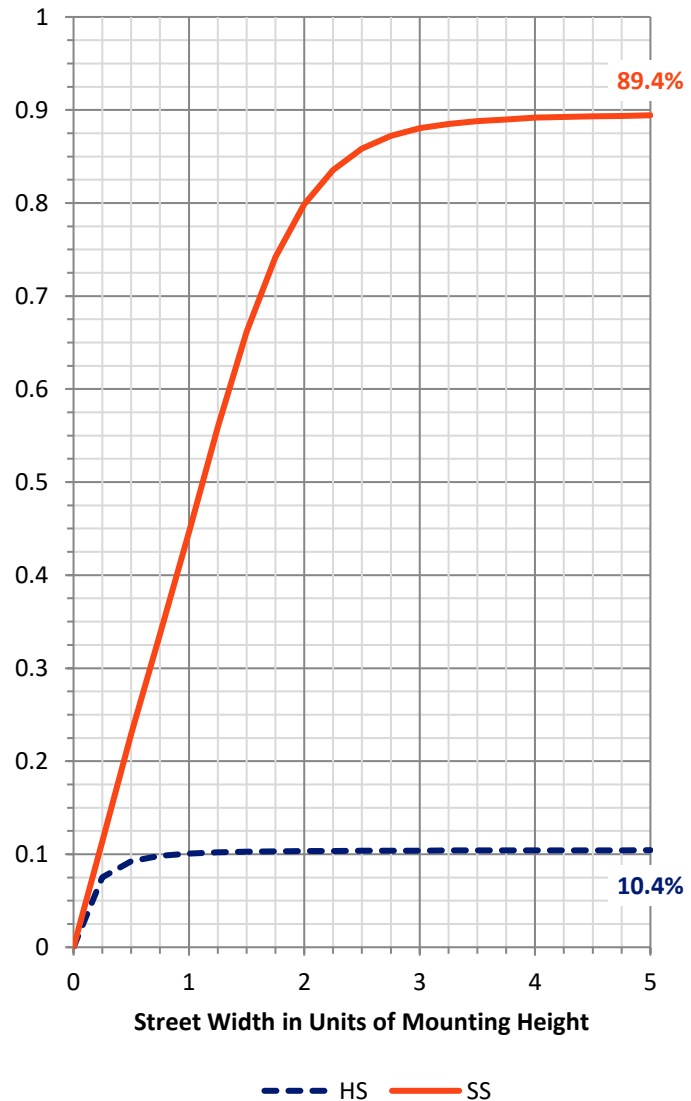
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	48.2	0.0	48.2
	% Fixture	10.6	0.0	10.6
Street Side	Lumens	408.8	0.0	408.8
	% Fixture	89.4	0.0	89.4
Total	Lumens	457.0	0.0	457.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.1	0.9
10°-20°	12.8	2.8
20°-30°	20.9	4.6
30°-40°	33.1	7.2
40°-50°	63.1	13.8
50°-60°	130.0	28.5
60°-70°	145.2	31.8
70°-80°	45.9	10.0
80°-90°	1.9	0.4
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°	457.0	100.0
0°-180°	457.0	100.0



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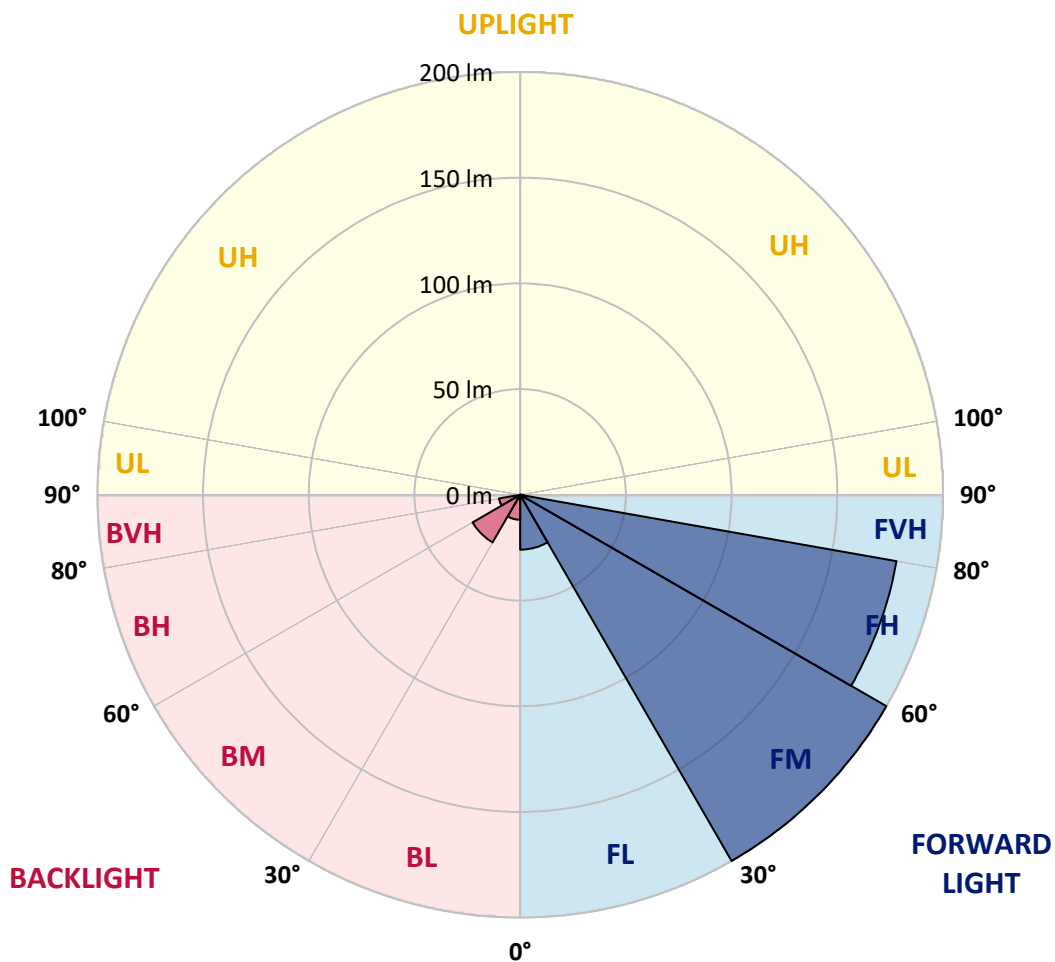
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	26.0	5.7			
FM (30°-60°)	200.2	43.8			
FH (60°-80°)	180.9	39.6			G0/660
FVH (80°-90°)	1.6	0.4			G0/10
BL (0°-30°)	11.8	2.6	B0/110		
BM (30°-60°)	26.0	5.7	B0/220		
BH (60°-80°)	10.2	2.2	B0/110		G0/110
BVH (80°-90°)	0.2	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-G0

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5
2.5°	44.7	44.9	44.6	44.3	43.9	43.3	43.4	42.6	42.0	41.6	40.9
5°	50.4	50.3	49.7	49.0	48.2	47.0	46.9	45.6	44.3	42.9	41.6
7.5°	56.1	55.8	55.3	54.3	52.8	51.3	50.9	49.1	47.2	45.1	42.9
10°	60.8	60.6	60.0	58.9	57.1	54.9	54.9	52.4	49.9	47.4	44.7
12.5°	64.6	64.5	63.8	62.4	60.3	58.3	58.0	55.8	53.1	50.1	46.8
15°	67.0	66.8	66.0	64.5	62.6	60.8	60.5	58.5	55.9	52.5	48.7
17.5°	67.6	67.4	66.8	65.4	64.0	62.5	62.1	60.3	58.1	54.6	50.7
20°	67.3	67.0	66.6	65.5	64.4	63.3	63.2	61.8	59.9	57.0	52.8
22.5°	66.6	66.3	66.0	65.2	64.6	64.6	64.4	63.6	62.4	59.8	55.9
25°	66.4	66.1	65.9	65.3	65.2	66.1	66.0	65.9	65.4	63.2	59.1
27.5°	67.9	67.8	67.2	66.3	66.7	68.2	68.3	68.7	68.4	67.0	63.9
30°	73.1	72.7	71.3	69.3	70.5	72.4	72.7	74.1	74.2	74.4	70.1
32.5°	80.1	79.4	77.1	74.7	75.4	78.9	79.0	81.2	85.8	82.9	73.5
35°	85.0	84.2	80.6	79.3	82.8	88.4	89.2	93.6	94.0	83.5	73.3
37.5°	98.7	97.4	90.9	82.9	86.3	98.5	99.4	98.6	91.3	82.7	77.0
40°	117.0	115.8	109.9	96.6	87.0	88.9	89.3	91.6	93.0	88.8	89.0
42.5°	140.8	139.2	133.2	116.9	97.9	91.2	92.1	96.9	106.0	108.0	118.3
45°	165.1	164.2	158.1	140.5	117.8	107.2	107.7	113.5	129.9	142.5	151.2
47.5°	188.9	189.0	183.8	168.9	146.7	135.0	134.5	142.1	162.8	171.8	180.7
50°	222.4	222.2	212.9	203.7	186.3	172.5	171.6	175.9	195.8	199.1	212.9
52.5°	260.6	260.4	246.4	242.0	234.7	212.4	214.7	211.1	225.4	231.4	250.9
55°	278.7	277.1	271.2	276.7	285.4	263.0	262.6	248.7	259.9	265.0	283.2
57.5°	276.8	277.5	283.1	301.3	329.9	311.2	311.7	285.8	292.3	295.5	308.8
60°	266.5	266.9	280.1	310.4	352.1	348.9	347.1	320.5	316.2	314.9	321.3
62.5°	236.9	237.0	258.4	297.3	351.9	370.7	368.9	344.9	331.5	323.2	311.6
64°	204.6	207.9	234.1	278.1	342.4	374.5	373.5	350.8	332.9	317.6	293.8
65°	178.1	183.1	214.7	261.0	331.7	373.2	372.1	349.8	331.0	307.2	275.4
67.5°	121.5	124.1	152.5	205.4	290.9	354.8	354.5	336.3	310.2	265.3	216.1
70°	71.7	73.6	94.6	143.4	223.5	304.8	309.4	302.9	257.5	190.6	137.6
72.5°	22.3	23.4	41.7	79.6	146.5	237.5	243.5	238.8	187.5	119.1	76.3
75°	8.4	8.7	13.8	34.6	72.9	151.8	153.7	159.2	114.2	62.9	33.4
77.5°	4.6	4.7	6.8	13.0	32.1	74.6	76.3	75.6	60.7	29.7	10.6
80°	2.3	2.4	3.3	5.7	12.5	21.1	25.0	33.0	21.4	14.6	3.4
82.5°	0.8	0.7	1.5	2.6	4.2	5.7	6.4	9.1	9.0	8.0	1.2
85°	0.0	0.0	0.1	0.1	0.1	0.2	0.2	1.1	2.3	2.6	0.3
87.5°	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
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°	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5
2.5°	40.5	40.3	39.7	39.1	38.7	38.2	38.1	37.7	37.6	37.6	37.6
5°	40.9	40.4	39.3	38.3	37.5	36.7	36.3	36.0	35.7	35.6	35.6
7.5°	41.9	41.1	39.3	37.9	36.6	35.6	35.1	34.8	34.5	34.5	34.5
10°	43.3	42.1	39.8	37.9	36.3	35.1	34.3	33.8	33.5	33.4	33.5
12.5°	45.0	43.5	40.7	38.3	36.5	34.9	33.3	30.2	28.2	27.1	26.9
15°	46.7	44.9	41.6	38.9	36.8	33.3	27.3	22.6	19.4	18.5	18.3
17.5°	48.5	46.6	42.9	39.8	35.8	26.8	19.4	15.5	14.9	15.1	15.1
20°	50.8	48.5	44.3	40.7	30.8	19.1	14.2	13.7	13.9	14.2	14.2
22.5°	53.4	51.0	46.3	40.2	23.5	13.9	13.0	13.1	13.2	13.6	13.6
25°	56.8	54.3	48.3	36.2	16.4	12.2	12.3	12.4	12.6	13.0	13.1
27.5°	61.8	58.8	50.9	30.4	12.4	11.3	11.4	11.7	11.9	12.4	12.4
30°	67.3	63.5	53.1	23.4	10.8	10.4	10.5	10.7	11.2	11.5	11.7
32.5°	69.6	66.3	53.6	16.0	10.0	9.6	9.4	9.7	10.0	10.4	10.5
35°	70.9	69.5	51.5	11.6	9.4	8.9	8.5	8.4	8.5	8.8	8.8
37.5°	77.4	76.4	47.3	9.9	8.8	8.3	7.8	7.3	7.1	7.1	7.1
40°	89.7	87.6	41.8	9.1	8.3	7.7	7.0	6.3	5.7	5.4	5.4
42.5°	117.0	106.5	34.0	8.6	7.8	7.1	6.0	5.1	4.4	4.2	4.2
45°	146.3	129.8	25.5	8.2	7.2	6.4	5.1	4.0	3.4	3.2	3.2
47.5°	174.6	147.0	17.9	7.7	6.6	5.6	4.2	3.2	2.8	2.7	2.7
50°	204.2	162.0	12.5	7.1	6.0	4.8	3.4	2.6	2.4	2.4	2.4
52.5°	233.0	173.1	9.1	6.4	5.2	4.0	2.9	2.4	2.2	2.2	2.2
55°	254.8	177.4	7.0	5.7	4.4	3.4	2.6	2.3	2.1	2.0	2.0
57.5°	269.4	173.8	5.7	4.7	3.7	3.0	2.4	2.1	1.9	1.8	1.8
60°	269.0	161.9	4.5	3.8	3.0	2.5	2.2	1.9	1.7	1.7	1.7
62.5°	253.2	142.7	3.6	3.0	2.5	2.2	1.9	1.7	1.6	1.5	1.4
64°	237.8	130.8	3.0	2.6	2.3	2.0	1.7	1.6	1.4	1.2	1.2
65°	221.1	119.4	2.8	2.4	2.0	1.8	1.7	1.5	1.2	1.0	1.0
67.5°	168.1	88.4	2.3	1.8	1.6	1.5	1.3	1.1	0.9	0.7	0.7
70°	109.2	57.2	1.9	1.5	1.3	1.3	1.2	1.0	0.7	0.6	0.5
72.5°	55.9	28.5	1.6	1.2	1.1	1.1	1.0	0.8	0.6	0.5	0.4
75°	23.7	11.6	1.3	1.0	1.0	0.9	0.8	0.7	0.5	0.4	0.4
77.5°	8.3	4.4	1.2	1.0	0.8	0.7	0.7	0.7	0.7	0.6	0.5
80°	2.8	1.7	0.8	0.8	0.9	1.0	1.0	0.9	1.0	0.8	0.6
82.5°	1.1	0.6	0.3	0.3	0.6	0.7	0.8	0.8	0.8	0.6	0.5
85°	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3
87.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	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)