

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: P400869

Luminaire Tested: **ENT-SA1-830-U-T4FT-HSS-XXB**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400869
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-16)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1-830-U-T4FT-HSS-XXB
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 434 lumens
Efficiency: N/A
Efficacy: 33.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G0

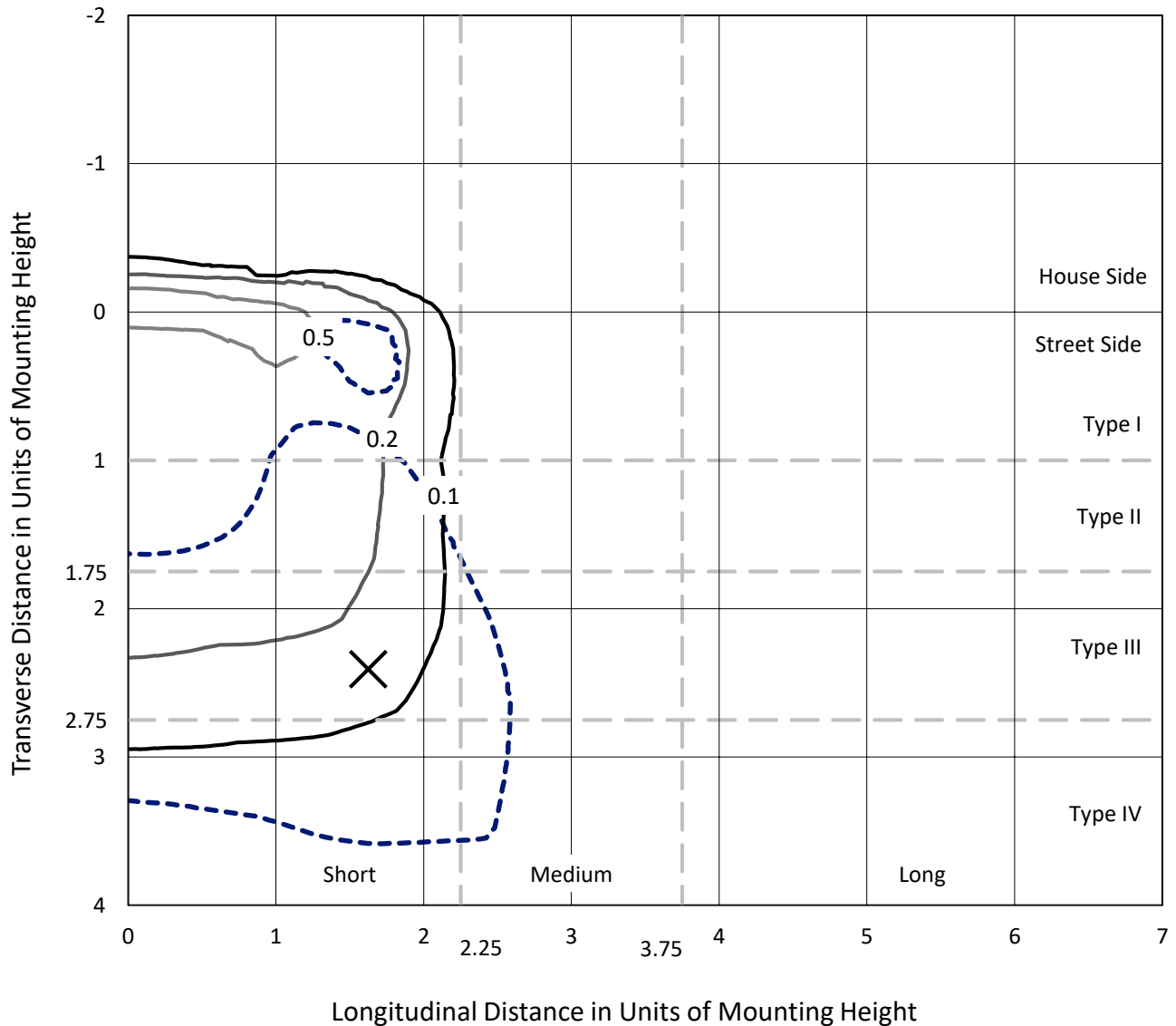
Input Watts (W): 13
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

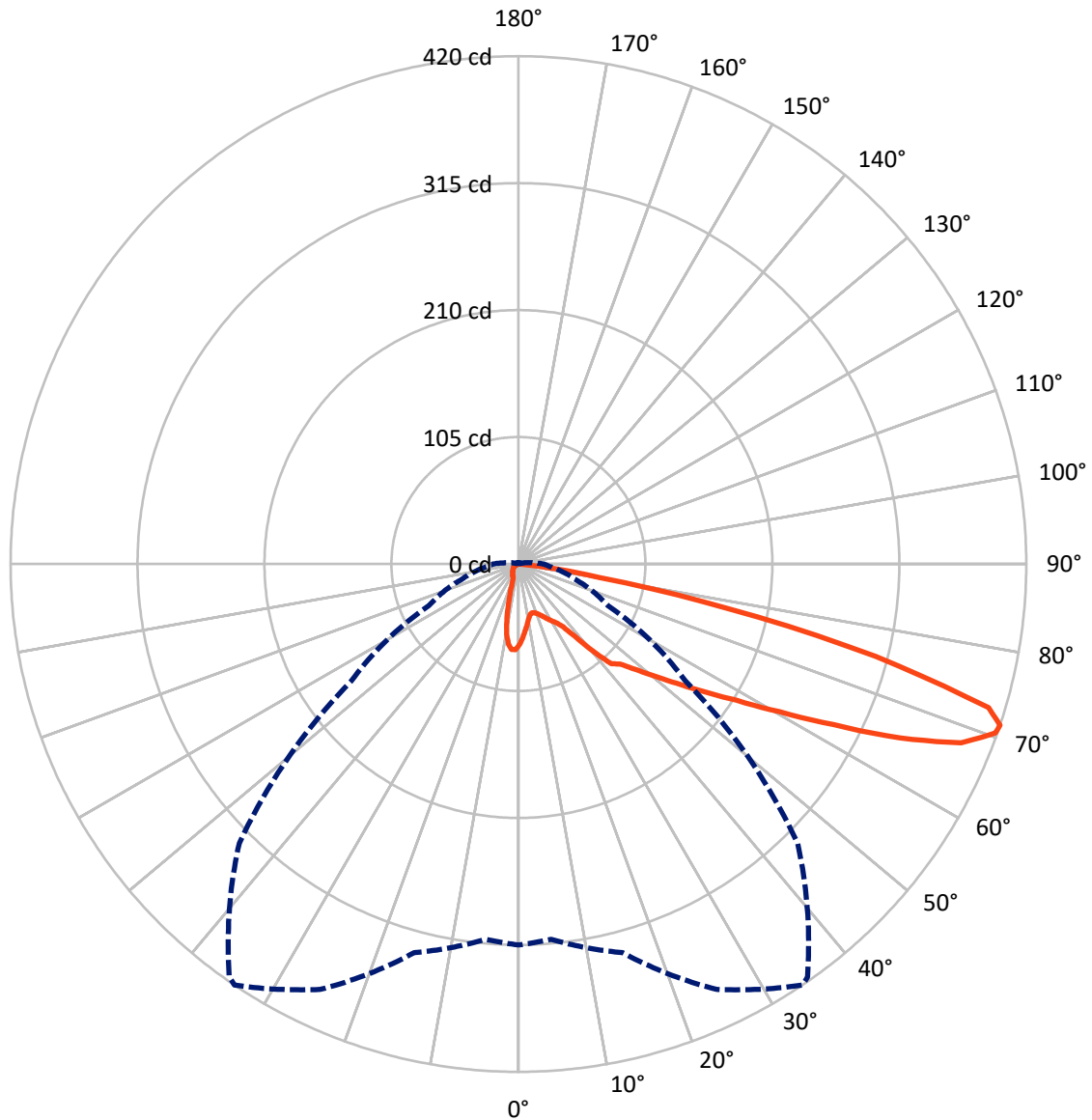
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 0.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 34-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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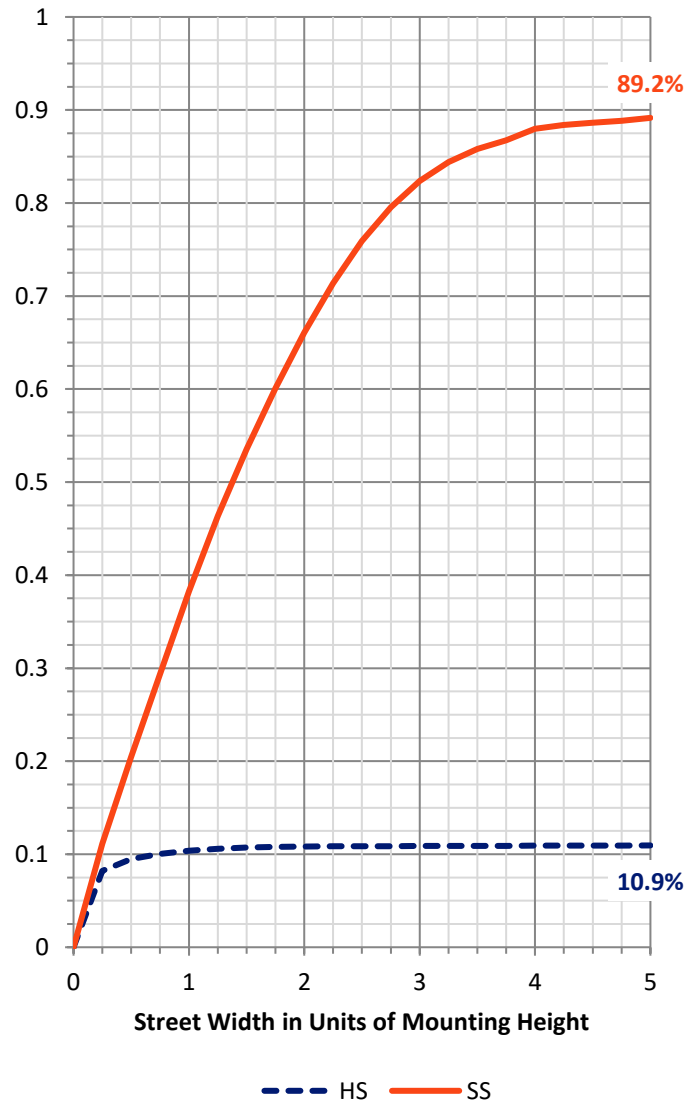
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	48.0	0.0	48.0
	% Fixture	11.1	0.0	11.1
Street Side	Lumens	386.0	0.0	386.0
	% Fixture	88.9	0.0	88.9
Total	Lumens	434.0	0.0	434.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.9	1.4
10°-20°	13.6	3.1
20°-30°	20.3	4.7
30°-40°	33.9	7.8
40°-50°	61.2	14.1
50°-60°	97.0	22.4
60°-70°	130.4	30.0
70°-80°	69.2	15.9
80°-90°	2.6	0.6
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°	434.0	100.0
0°-180°	434.0	100.0



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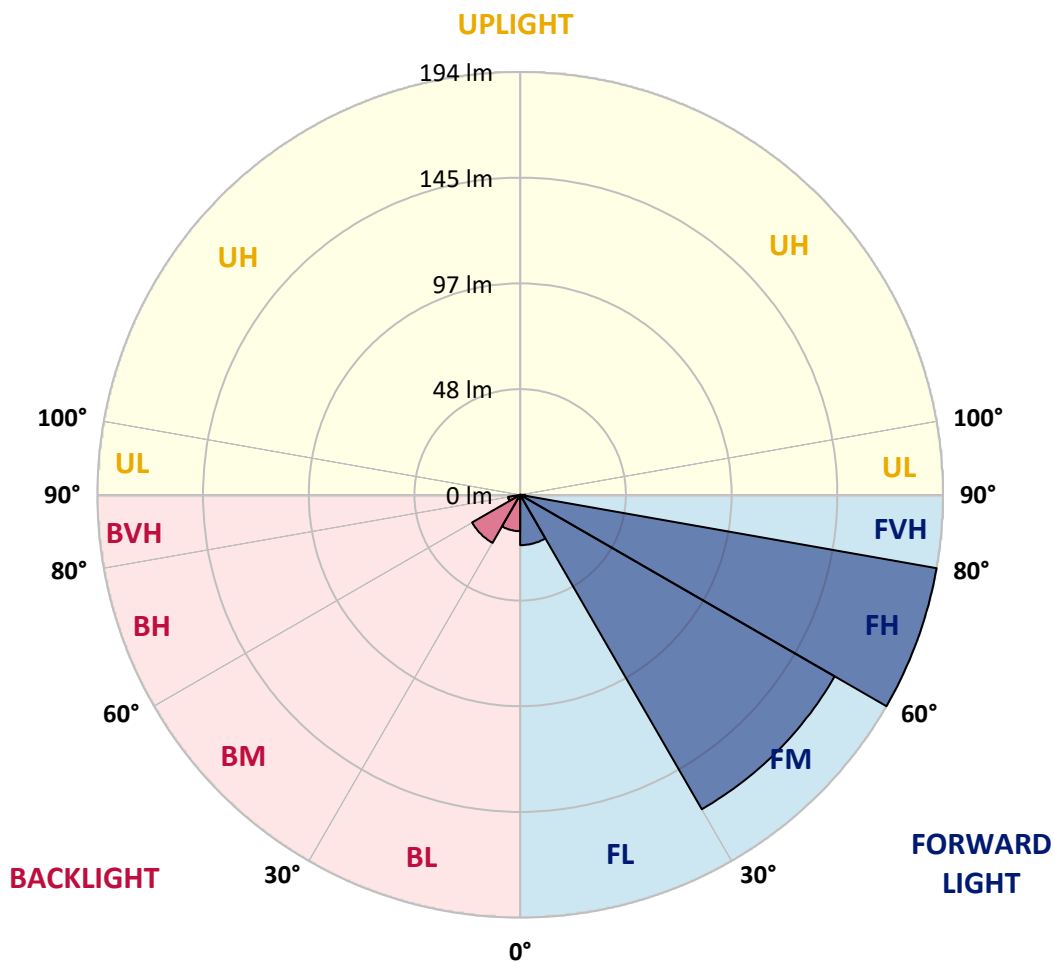
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	23.1	5.3			
FM	(30°-60°)	166.6	38.4			
FH	(60°-80°)	194.0	44.7			G0/660
FVH	(80°-90°)	2.3	0.5			G0/10
BL	(0°-30°)	16.7	3.8	B0/110		
BM	(30°-60°)	25.5	5.9	B0/220		
BH	(60°-80°)	5.6	1.3	B0/110		G0/110
BVH	(80°-90°)	0.2	0.1			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2
2.5°	61.2	60.5	61.1	61.5	61.8	62.1	62.6	63.6	64.6	65.9	66.5
5°	53.4	53.8	54.1	55.1	56.0	56.2	57.8	59.8	62.2	64.6	66.7
7.5°	47.0	47.0	47.8	49.3	50.9	51.0	53.9	56.4	59.9	63.7	67.1
10°	42.0	42.2	42.8	44.2	46.3	46.7	49.9	53.4	57.8	62.6	67.4
12.5°	40.3	40.2	40.2	41.2	42.9	43.3	46.9	51.0	56.2	62.1	68.3
15°	41.4	41.1	40.5	40.7	41.7	42.2	45.3	49.5	55.2	62.0	69.8
17.5°	43.0	42.7	41.5	41.2	42.3	42.8	45.4	49.0	54.9	62.5	71.5
20°	45.0	44.7	42.9	42.5	43.6	44.0	46.7	49.8	55.1	63.3	73.9
22.5°	47.9	47.5	44.9	44.4	45.6	45.9	48.8	51.7	56.1	64.9	77.1
25°	51.4	50.9	47.6	47.0	48.3	48.7	51.6	54.3	57.8	67.0	81.2
27.5°	55.2	54.6	51.2	49.8	51.4	51.9	54.6	57.6	60.4	69.6	86.6
30°	58.7	58.0	54.7	53.1	54.7	55.0	58.2	61.5	64.5	74.0	94.5
32.5°	68.4	66.6	61.5	57.0	58.0	58.5	62.5	67.7	72.1	79.4	104.7
35°	82.8	81.4	75.2	67.3	63.7	63.8	68.9	75.5	77.5	85.5	117.3
37.5°	96.8	95.6	90.1	82.8	75.9	76.1	77.0	83.4	85.7	96.3	132.7
40°	112.0	110.1	105.7	98.9	94.1	92.9	88.7	93.1	98.3	109.8	149.6
42.5°	119.1	117.2	112.7	113.2	112.6	110.6	102.2	108.4	114.1	129.4	168.1
45°	130.7	127.2	117.9	118.6	117.9	118.0	120.1	129.1	134.1	150.1	189.1
47.5°	141.5	137.5	127.7	127.0	130.0	131.6	142.9	153.7	154.2	168.1	205.6
50°	151.4	148.4	139.5	139.5	145.1	146.9	169.3	179.3	170.5	182.0	218.5
52.5°	164.5	160.3	152.3	155.1	163.8	165.4	195.7	201.7	182.2	194.5	228.6
55°	176.6	174.3	168.4	172.6	186.0	190.1	222.6	218.9	190.5	205.7	233.4
57.5°	196.4	194.2	192.7	194.9	212.7	217.9	249.7	231.1	196.9	213.1	231.2
60°	229.5	227.3	222.6	224.6	247.9	250.5	271.1	243.5	199.5	215.2	222.3
62.5°	270.4	267.7	260.1	269.3	292.7	292.6	293.2	250.0	196.3	209.0	198.9
65°	307.2	303.5	299.6	318.4	346.8	342.8	316.7	250.8	186.1	179.1	153.8
67.5°	334.1	332.6	334.7	364.1	394.7	390.8	339.5	240.0	154.9	129.3	95.0
70°	333.0	330.0	343.8	390.7	418.5	415.2	338.6	197.2	103.3	68.5	39.8
71°	315.0	311.5	332.6	388.1	419.9	416.8	326.4	168.7	81.7	48.3	26.2
72.5°	243.4	253.9	287.5	360.1	406.4	402.5	293.2	129.2	51.7	28.0	13.2
75°	103.0	108.7	170.6	257.1	304.9	302.9	197.6	59.7	23.8	12.6	5.1
77.5°	26.5	26.1	52.3	110.3	177.5	180.7	91.1	20.5	12.4	9.0	2.9
80°	5.1	5.6	14.9	38.3	67.8	69.6	29.7	9.0	8.3	7.1	1.5
82.5°	0.5	0.6	2.6	11.8	22.7	22.0	6.5	3.4	5.1	4.8	0.7
85°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	1.2	1.3	0.2
87.5°	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2
2.5°	67.1	67.9	68.7	69.3	69.9	70.0	70.9	70.7	71.0	71.1	71.0
5°	67.9	68.9	70.6	71.4	71.8	71.2	71.0	70.0	69.7	69.2	68.8
7.5°	68.7	70.0	71.9	72.4	71.2	68.9	67.1	64.7	62.5	61.1	61.3
10°	69.7	71.3	72.9	71.8	68.6	64.2	59.1	53.8	49.2	47.5	48.1
12.5°	70.9	72.9	73.6	70.5	64.4	55.4	46.1	38.2	33.4	30.5	30.1
15°	72.7	74.7	74.0	68.4	57.6	43.6	32.0	24.0	19.3	17.9	17.1
17.5°	75.0	76.9	74.0	64.6	47.9	31.2	19.4	14.5	13.1	12.7	12.8
20°	77.8	79.6	73.6	59.0	36.9	19.2	13.0	12.0	12.0	12.0	11.9
22.5°	81.5	82.5	73.1	51.5	25.4	13.0	11.5	11.4	11.5	11.5	11.5
25°	86.1	85.9	72.1	42.5	16.0	11.1	11.0	11.0	11.1	11.1	11.1
27.5°	92.1	90.2	70.5	31.8	11.3	10.3	10.5	10.6	10.8	11.0	11.0
30°	100.4	96.0	67.8	21.5	9.6	9.5	9.8	10.4	10.6	10.8	10.8
32.5°	109.4	101.9	63.2	13.8	8.8	8.7	9.1	9.8	10.5	10.7	10.7
35°	120.7	108.3	56.3	9.9	8.3	8.1	8.4	9.1	10.2	10.7	10.7
37.5°	132.7	115.1	46.3	8.4	7.8	7.6	7.8	8.4	9.6	10.5	10.6
40°	145.4	121.1	34.8	7.8	7.2	7.1	7.2	7.8	8.7	10.0	10.3
42.5°	158.2	126.1	24.3	7.1	6.8	6.6	6.8	7.1	8.0	9.1	9.3
45°	172.3	131.7	16.2	6.6	6.4	6.3	6.4	6.7	7.3	7.9	8.0
47.5°	182.6	133.7	11.1	6.0	5.9	6.0	6.1	6.3	6.6	6.7	6.6
50°	189.4	132.7	8.0	5.4	5.5	5.7	5.7	5.8	5.8	5.6	5.5
52.5°	194.3	128.8	6.2	4.6	5.1	5.4	5.4	5.2	5.1	4.7	4.6
55°	194.9	120.2	4.9	4.0	4.6	5.1	5.0	4.6	4.3	3.9	3.9
57.5°	188.2	107.1	4.0	3.4	4.0	4.4	4.3	3.9	3.5	3.2	3.2
60°	177.5	93.7	3.4	2.9	3.3	3.7	3.5	3.2	2.8	2.5	2.5
62.5°	157.7	80.5	2.8	2.4	2.7	3.0	2.9	2.6	2.2	2.0	1.9
65°	120.9	61.2	2.1	1.8	2.1	2.4	2.3	2.0	1.7	1.5	1.4
67.5°	72.6	36.8	1.7	1.4	1.7	1.9	1.7	1.5	1.2	1.0	1.0
70°	30.7	15.8	1.3	1.0	1.2	1.5	1.4	1.2	1.0	0.9	0.9
71°	20.9	11.2	1.1	1.0	1.1	1.4	1.3	1.1	1.0	0.9	0.9
72.5°	10.7	5.7	1.0	0.8	1.0	1.2	1.2	1.0	0.9	0.9	0.9
75°	3.8	2.4	0.8	0.7	0.9	0.9	1.0	1.0	1.0	1.0	0.9
77.5°	2.2	1.5	0.7	0.7	0.7	0.8	1.0	1.0	1.1	1.1	1.0
80°	1.2	0.8	0.4	0.5	0.7	0.8	1.0	1.0	1.2	1.2	1.1
82.5°	0.6	0.3	0.1	0.3	0.4	0.7	0.8	0.9	1.0	1.0	1.0
85°	0.1	0.0	0.0	0.1	0.3	0.3	0.5	0.7	0.9	0.9	0.8
87.5°	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.6	0.7	0.6
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)