

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: P401945

Luminaire Tested: **ENT-SA1F-830-U-T2-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401945
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-12)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-830-U-T2-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4682 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B0 - U0 - G1

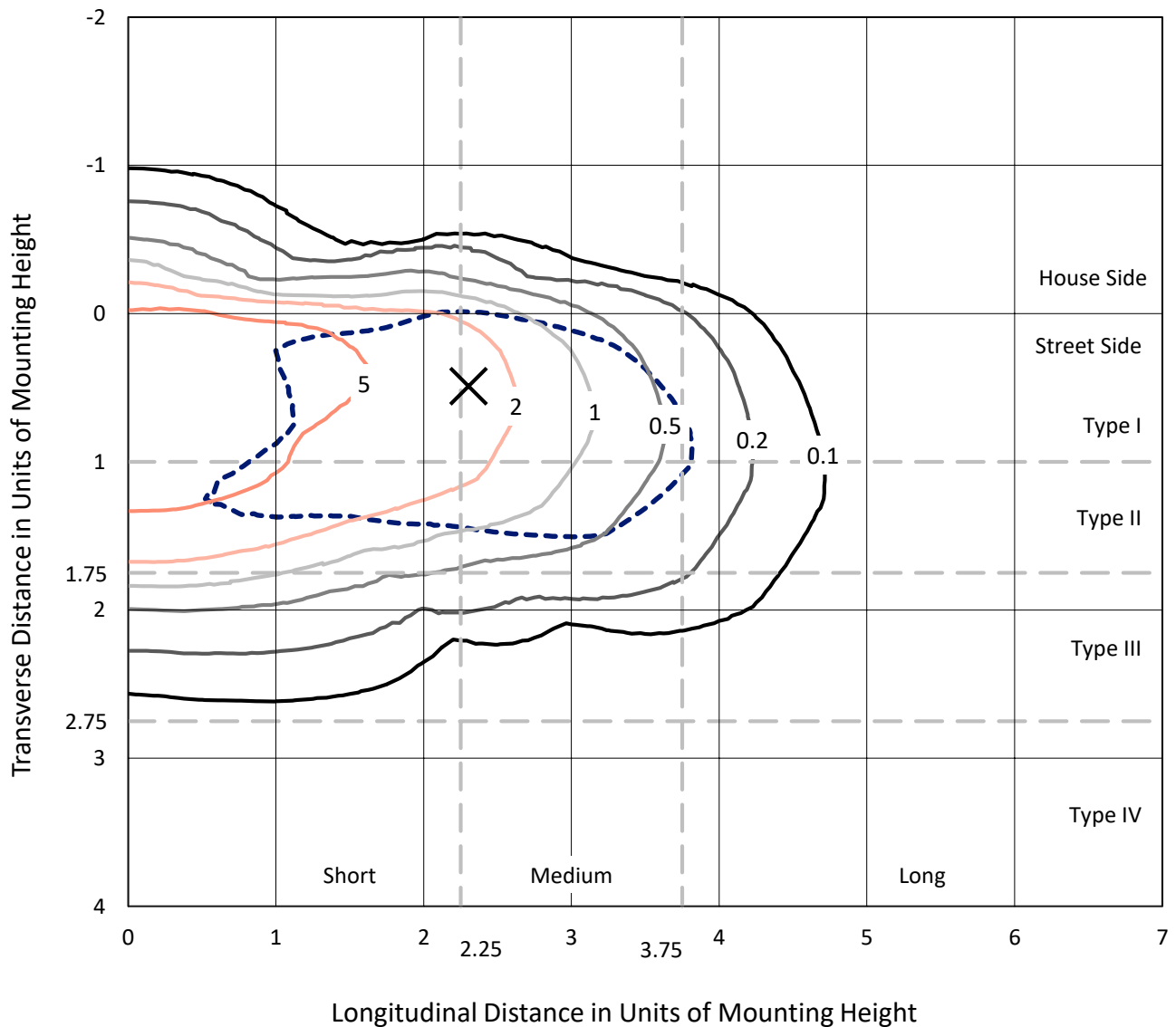
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

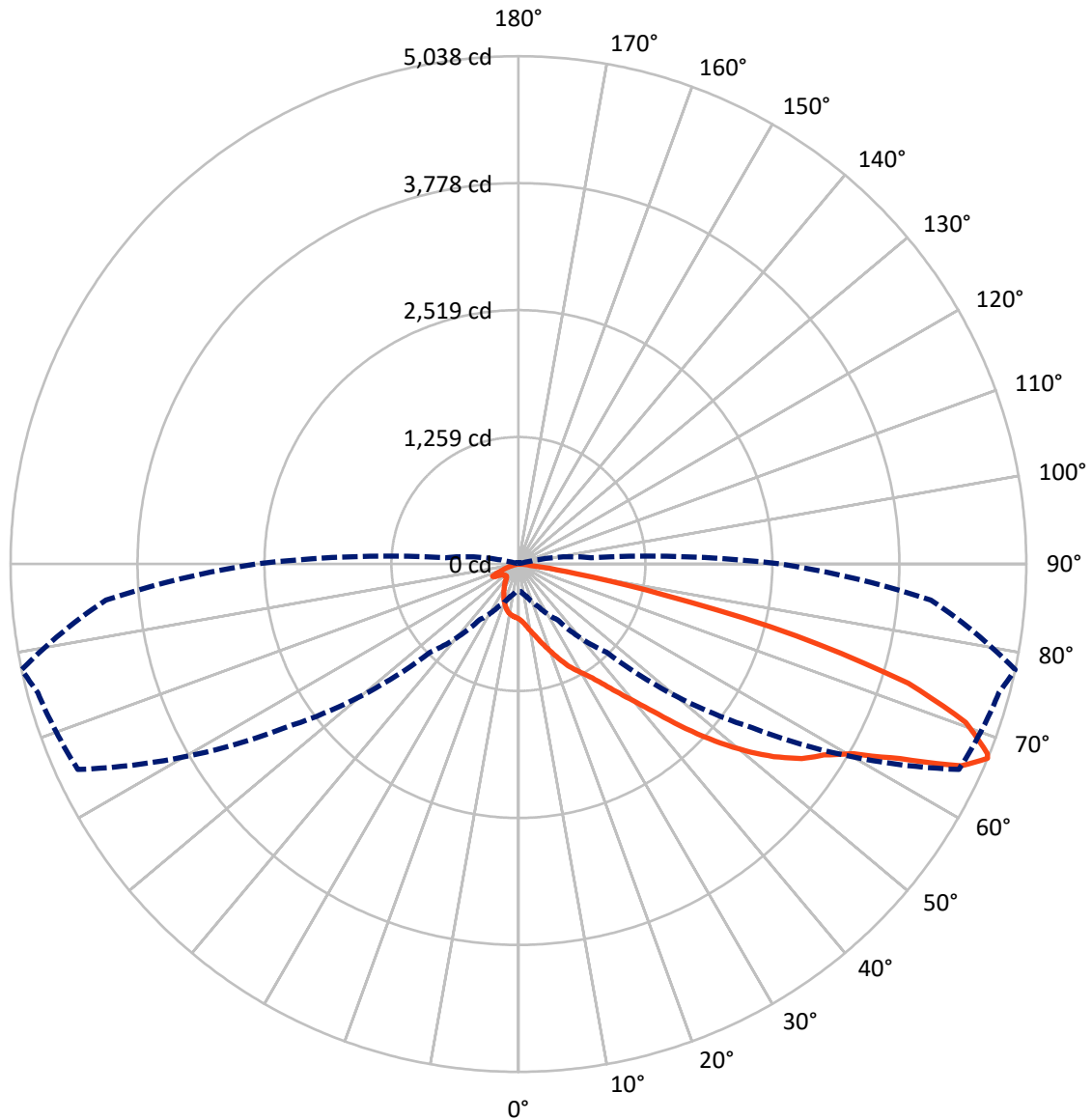


Based on 10 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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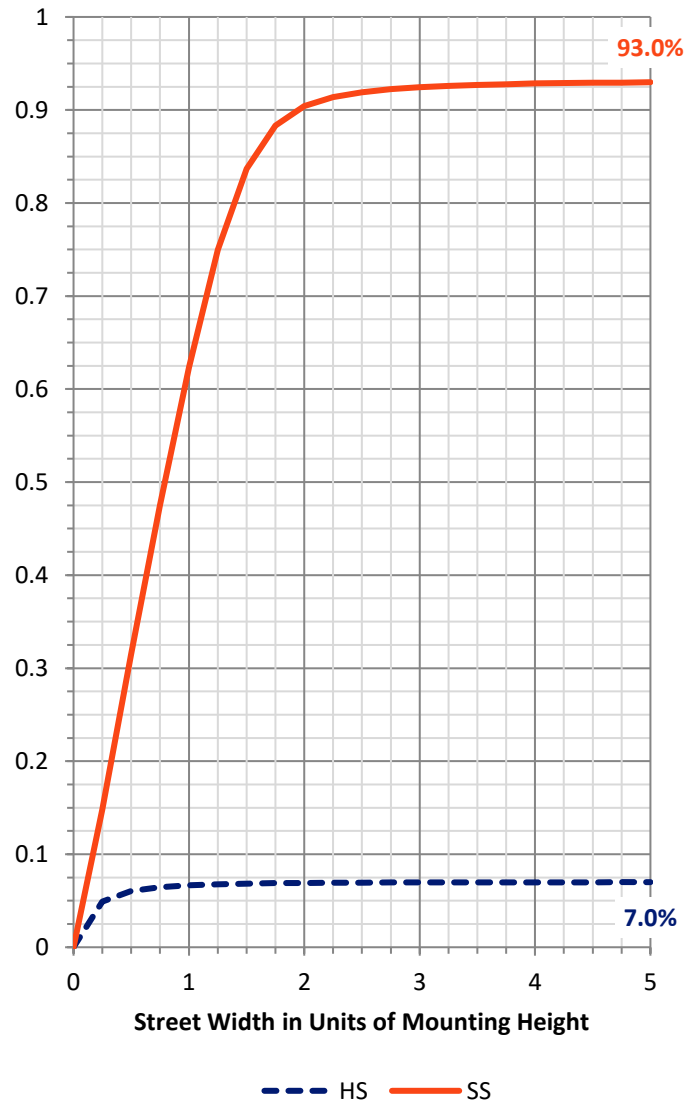
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	330.3	0.0	330.3
	% Fixture	7.1	0.0	7.1
Street Side	Lumens	4351.7	0.0	4351.7
	% Fixture	92.9	0.0	92.9
Total	Lumens	4682.0	0.0	4682.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.4	1.1
10°-20°	150.1	3.2
20°-30°	265.2	5.7
30°-40°	467.6	10.0
40°-50°	803.6	17.2
50°-60°	1209.6	25.8
60°-70°	1190.4	25.4
70°-80°	520.1	11.1
80°-90°	23.1	0.5
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°	4682.0	100.0
0°-180°	4682.0	100.0



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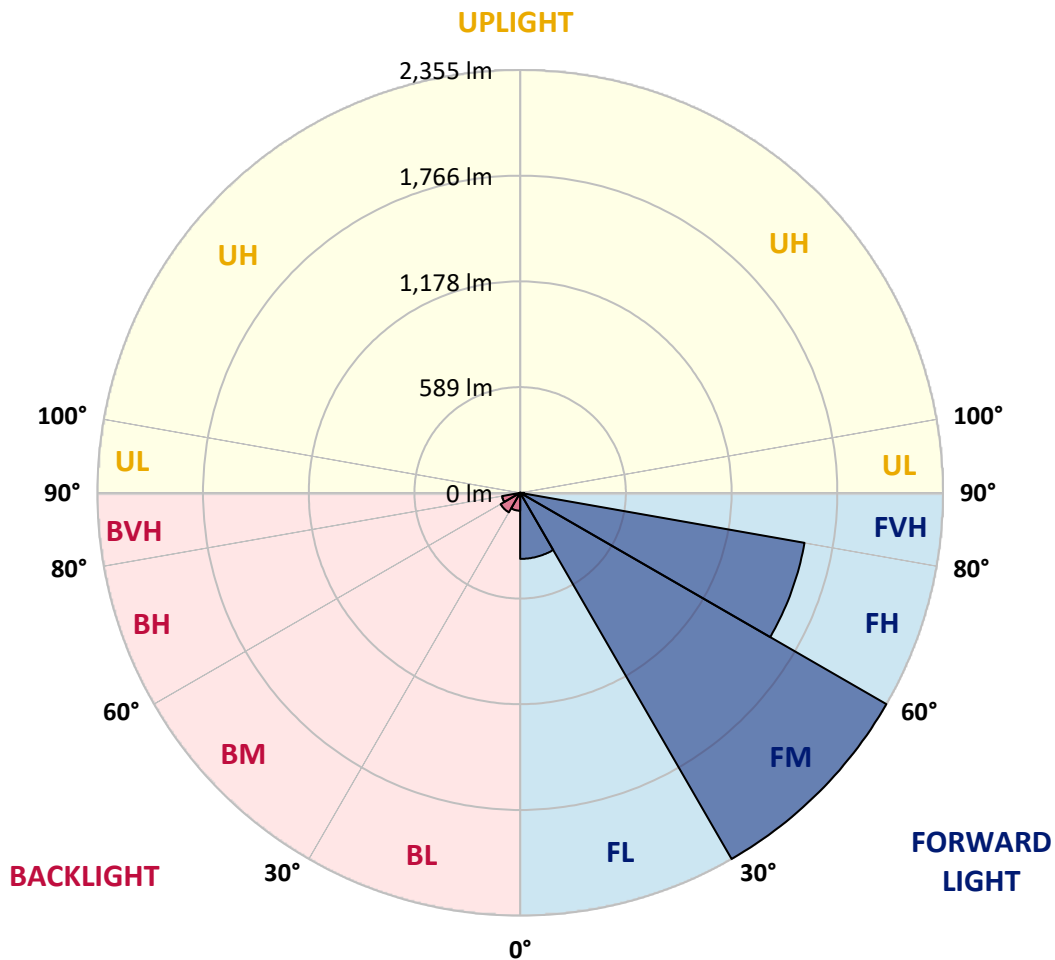
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	367.9	7.9			
FM	(30°-60°)	2355.1	50.3			
FH	(60°-80°)	1608.0	34.3			G1/1800
FVH	(80°-90°)	20.7	0.4			G1/100
BL	(0°-30°)	99.8	2.1	B0/110		
BM	(30°-60°)	125.7	2.7	B0/220		
BH	(60°-80°)	102.5	2.2	B0/110		G0/110
BVH	(80°-90°)	2.4	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-G1

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	543.6	543.6	543.6	543.6	543.6	543.6	543.6	543.6	543.6	543.6	543.6
2.5°	623.7	626.3	622.8	620.1	613.1	604.3	595.5	582.3	568.2	563.0	554.2
5°	700.2	700.2	700.2	693.1	687.0	670.3	650.0	629.8	603.4	593.7	573.5
7.5°	740.6	741.5	744.2	744.2	740.6	729.2	707.2	684.3	644.8	631.6	599.0
10°	745.0	748.6	755.6	766.2	774.1	780.2	767.0	742.4	694.9	679.1	631.6
12.5°	733.6	735.4	746.8	766.2	791.7	817.2	818.0	803.1	750.3	728.3	671.2
15°	707.2	709.9	726.6	757.4	796.9	842.7	869.1	864.7	815.4	789.9	715.1
17.5°	665.0	667.6	688.7	734.5	792.5	859.4	915.7	937.7	879.6	855.0	760.0
20°	663.2	664.1	672.0	706.3	774.9	869.1	961.4	1013.3	957.9	931.5	812.8
22.5°	775.8	768.8	751.2	729.2	759.1	866.4	1002.8	1093.4	1054.7	1013.3	873.5
25°	901.6	904.3	884.9	833.0	795.2	862.0	1034.4	1184.0	1145.3	1103.9	935.9
27.5°	1033.6	1029.2	1012.4	964.9	901.6	893.7	1057.3	1257.0	1232.4	1182.2	991.3
30°	1162.0	1158.5	1146.1	1097.8	1029.2	975.5	1074.9	1323.0	1315.0	1259.6	1036.2
32.5°	1308.9	1315.0	1299.2	1235.9	1152.3	1086.3	1112.7	1392.4	1415.3	1347.6	1082.8
35°	1479.5	1479.5	1447.0	1388.9	1302.7	1210.4	1188.4	1469.0	1542.9	1469.8	1156.7
37.5°	1620.3	1631.7	1612.3	1528.8	1447.9	1351.1	1303.6	1563.1	1700.3	1626.4	1256.1
40°	1731.1	1750.4	1751.3	1668.6	1593.9	1530.5	1464.6	1695.9	1898.2	1803.2	1374.9
42.5°	1834.0	1837.5	1852.5	1805.0	1730.2	1713.5	1645.8	1853.4	2145.4	2033.7	1533.2
45°	1965.1	1972.1	1963.3	1928.1	1863.9	1885.9	1848.1	2053.0	2423.4	2329.2	1719.7
47.5°	2157.7	2174.4	2161.2	2097.9	2019.6	2061.0	2033.7	2251.8	2737.4	2623.0	1922.0
50°	2338.0	2351.2	2365.3	2345.1	2266.8	2227.2	2193.8	2462.1	3006.6	2909.8	2120.8
52.5°	2357.4	2369.7	2447.1	2518.4	2570.3	2466.5	2361.8	2674.9	3255.5	3174.6	2302.9
55°	2231.6	2239.5	2368.8	2509.6	2747.9	2783.1	2609.0	2885.2	3464.0	3408.5	2425.1
57.5°	1881.5	1914.9	2098.8	2314.3	2704.0	2971.4	2959.9	3129.7	3599.4	3573.9	2582.6
60°	1235.9	1272.8	1492.7	1819.1	2380.3	2921.2	3345.2	3496.5	3789.4	3817.6	2858.8
62.5°	640.4	683.5	877.0	1166.4	1724.9	2543.9	3476.3	4099.0	4153.6	4249.5	3351.4
65°	365.9	374.7	471.5	683.5	1067.9	1821.7	3318.8	4695.4	4633.0	4827.4	3980.3
67°	271.8	271.8	339.5	464.4	676.4	1238.5	2830.6	4821.2	4934.7	5037.6	4107.0
67.5°	243.7	256.8	314.9	428.4	606.9	1098.6	2648.5	4787.8	4954.0	5018.2	4063.0
70°	167.1	175.9	226.1	307.0	409.0	571.8	1736.4	4234.5	4772.8	4707.7	3682.1
72.5°	100.3	103.8	149.5	220.8	305.2	306.1	947.4	3214.1	4044.5	4043.6	3007.4
75°	62.5	66.0	88.0	147.8	213.7	191.8	438.1	2186.7	2904.5	2848.2	2015.2
77.5°	35.2	40.5	52.8	80.9	135.5	122.3	184.7	1225.3	1569.2	1472.5	1001.0
80°	14.1	16.7	29.9	38.7	76.5	73.0	75.6	431.0	635.1	572.6	335.1
82.5°	3.5	4.4	10.6	18.5	29.9	29.9	23.7	117.9	150.4	139.9	86.2
85°	0.0	0.0	0.9	0.9	0.9	1.8	6.2	13.2	15.8	18.5	14.1
87.5°	0.0	0.0	0.0	0.9	0.9	0.9	1.8	2.6	2.6	2.6	2.6
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°	543.6	543.6	543.6	543.6	543.6	543.6	543.6	543.6	543.6	543.6	543.6
2.5°	547.1	541.0	528.7	515.5	502.3	491.7	482.9	470.6	468.8	468.8	468.8
5°	558.6	544.5	516.3	488.2	460.0	434.5	416.1	401.1	387.9	383.5	387.0
7.5°	575.3	549.8	500.5	451.2	407.3	371.2	344.8	323.7	314.0	308.7	304.3
10°	597.3	557.7	479.4	407.3	351.8	308.7	280.6	260.4	250.7	244.5	245.4
12.5°	621.0	563.8	453.0	359.8	298.2	258.6	234.9	218.1	202.3	192.6	195.3
15°	644.8	568.2	420.5	315.8	256.8	221.7	188.2	158.3	147.8	146.0	145.1
17.5°	671.2	567.4	384.4	274.4	221.7	172.4	139.0	135.5	134.6	134.6	133.7
20°	698.4	563.0	343.1	240.1	186.5	131.1	125.8	124.0	121.4	120.5	119.6
22.5°	728.3	555.0	305.2	210.2	139.0	119.6	112.6	107.3	102.9	100.3	101.2
25°	755.6	540.1	268.3	182.1	118.7	107.3	97.6	89.7	85.3	81.8	82.7
27.5°	774.1	513.7	236.6	146.9	109.1	95.0	83.6	75.6	69.5	66.9	66.9
30°	775.8	475.9	208.5	120.5	99.4	83.6	71.2	62.5	58.9	57.2	56.3
32.5°	774.1	437.2	187.4	110.8	90.6	73.0	60.7	54.5	51.0	49.3	49.3
35°	782.9	397.6	168.0	102.0	80.9	64.2	53.7	47.5	44.9	43.1	43.1
37.5°	809.3	370.3	147.8	93.2	72.1	56.3	48.4	43.1	40.5	38.7	38.7
40°	845.3	347.5	123.1	84.4	63.3	51.0	44.0	39.6	36.1	34.3	34.3
42.5°	908.7	338.7	102.9	75.6	55.4	45.7	40.5	35.2	31.7	29.9	29.9
45°	1002.8	343.1	94.1	67.7	50.1	41.3	36.1	30.8	27.3	26.4	26.4
47.5°	1106.6	361.5	88.0	60.7	45.7	38.7	32.5	27.3	23.7	22.9	22.9
50°	1222.7	390.6	82.7	53.7	41.3	35.2	29.0	23.7	21.1	20.2	20.2
52.5°	1333.5	427.5	77.4	48.4	38.7	31.7	25.5	21.1	19.4	18.5	18.5
55°	1418.0	451.2	73.0	44.9	36.1	29.0	22.9	20.2	17.6	16.7	16.7
57.5°	1535.8	490.8	67.7	40.5	32.5	26.4	21.1	18.5	15.8	15.8	15.8
60°	1775.1	597.3	59.8	36.9	29.0	23.7	20.2	16.7	15.0	14.1	14.1
62.5°	2206.1	773.2	51.9	34.3	25.5	21.1	17.6	15.0	13.2	11.4	11.4
65°	2621.3	846.2	44.0	29.9	22.9	18.5	15.8	13.2	9.7	7.9	7.9
67°	2598.4	723.9	36.9	25.5	19.4	16.7	13.2	10.6	7.0	4.4	4.4
67.5°	2536.8	673.8	36.1	24.6	18.5	15.8	13.2	9.7	6.2	3.5	3.5
70°	2156.0	471.5	28.1	19.4	15.8	14.1	10.6	7.0	3.5	1.8	1.8
72.5°	1751.3	373.8	22.0	15.8	13.2	10.6	8.8	4.4	2.6	0.9	0.9
75°	1238.5	229.6	19.4	14.1	10.6	7.9	7.0	4.4	2.6	1.8	0.9
77.5°	611.3	105.6	15.8	12.3	9.7	7.9	6.2	5.3	4.4	3.5	1.8
80°	179.4	34.3	10.6	8.8	8.8	7.9	7.0	6.2	5.3	4.4	2.6
82.5°	40.5	12.3	3.5	4.4	6.2	6.2	6.2	4.4	3.5	1.8	0.9
85°	5.3	2.6	2.6	2.6	3.5	3.5	2.6	1.8	1.8	0.0	0.0
87.5°	1.8	1.8	1.8	2.6	2.6	2.6	1.8	0.9	0.9	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

(END OF REPORT)