

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: STREETWORKS

Report Number: P271001

Luminaire Tested: **NVN-AF-04-LED-U-SL4-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P271001
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-04-LED-U-SL4-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20220.5 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G4

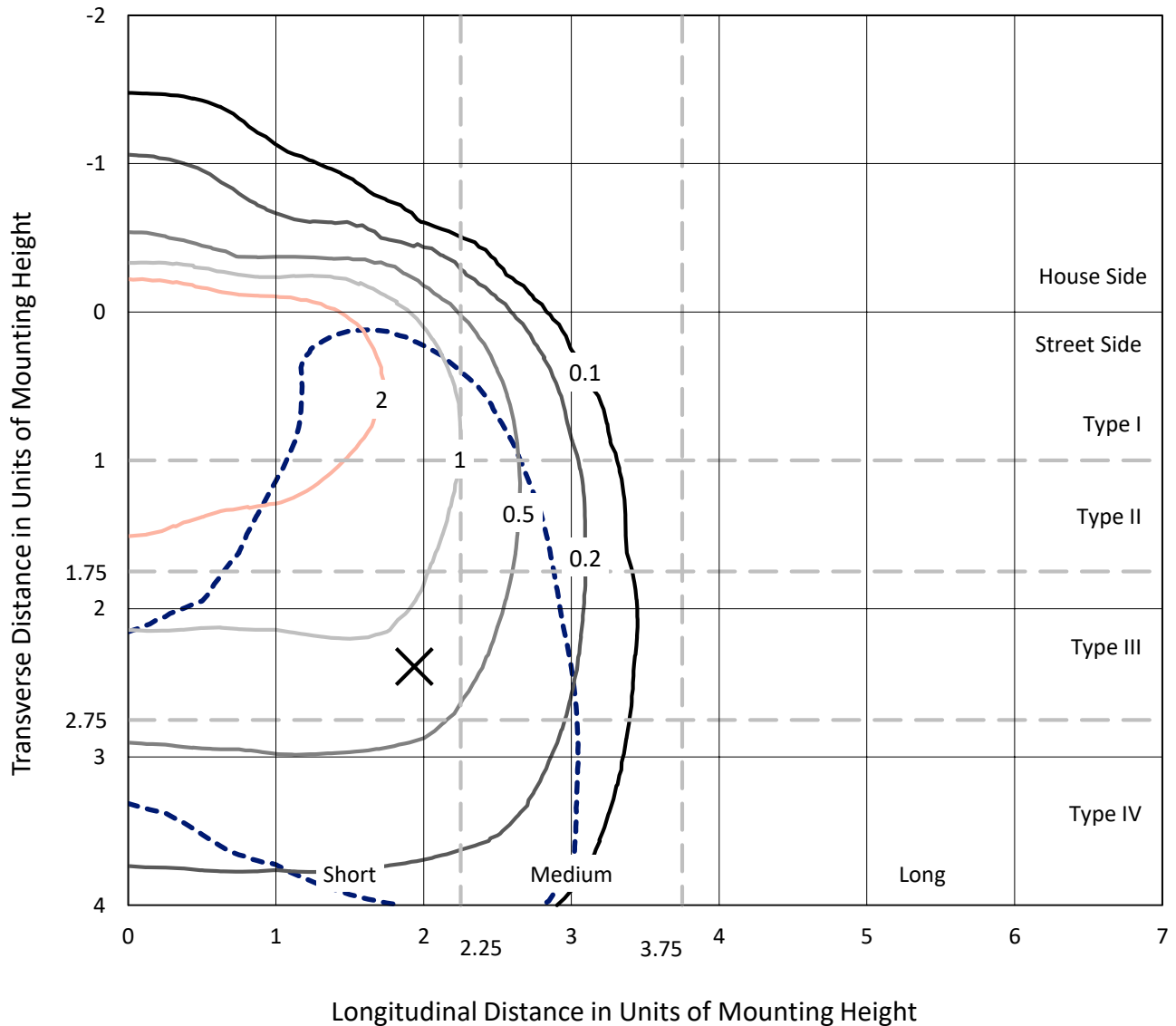
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

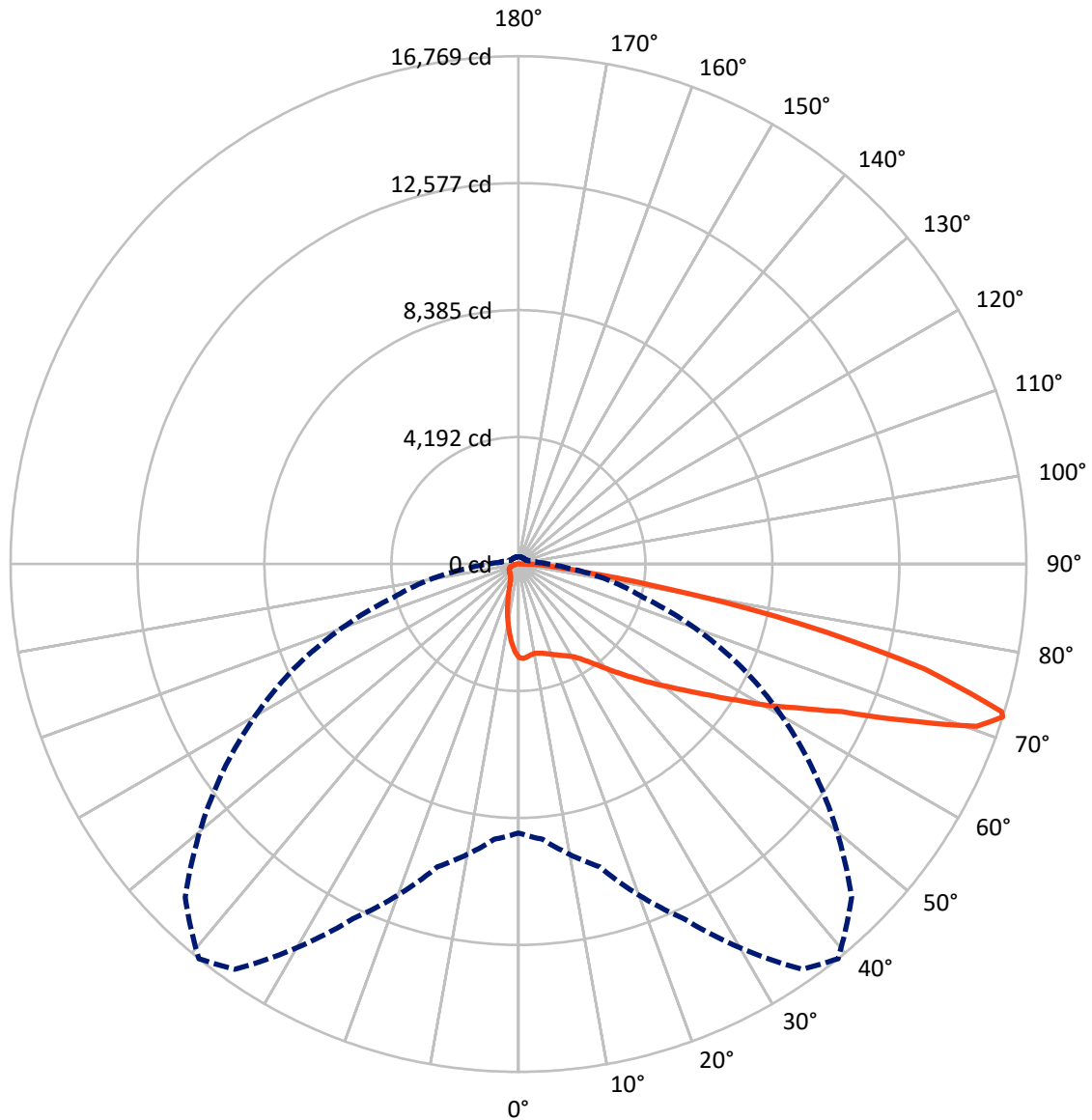
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2318.6	0.0	2318.6
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	17902.0	0.0	17902.0
	% Fixture	88.5	0.0	88.5
Total	Lumens	20220.5	0.0	20220.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.4	1.3
10°-20°	666.8	3.3
20°-30°	1039.2	5.1
30°-40°	1600.0	7.9
40°-50°	2608.4	12.9
50°-60°	4053.1	20.0
60°-70°	5424.9	26.8
70°-80°	3901.3	19.3
80°-90°	661.4	3.3
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°	20220.5	100.0
0°-180°	20220.5	100.0



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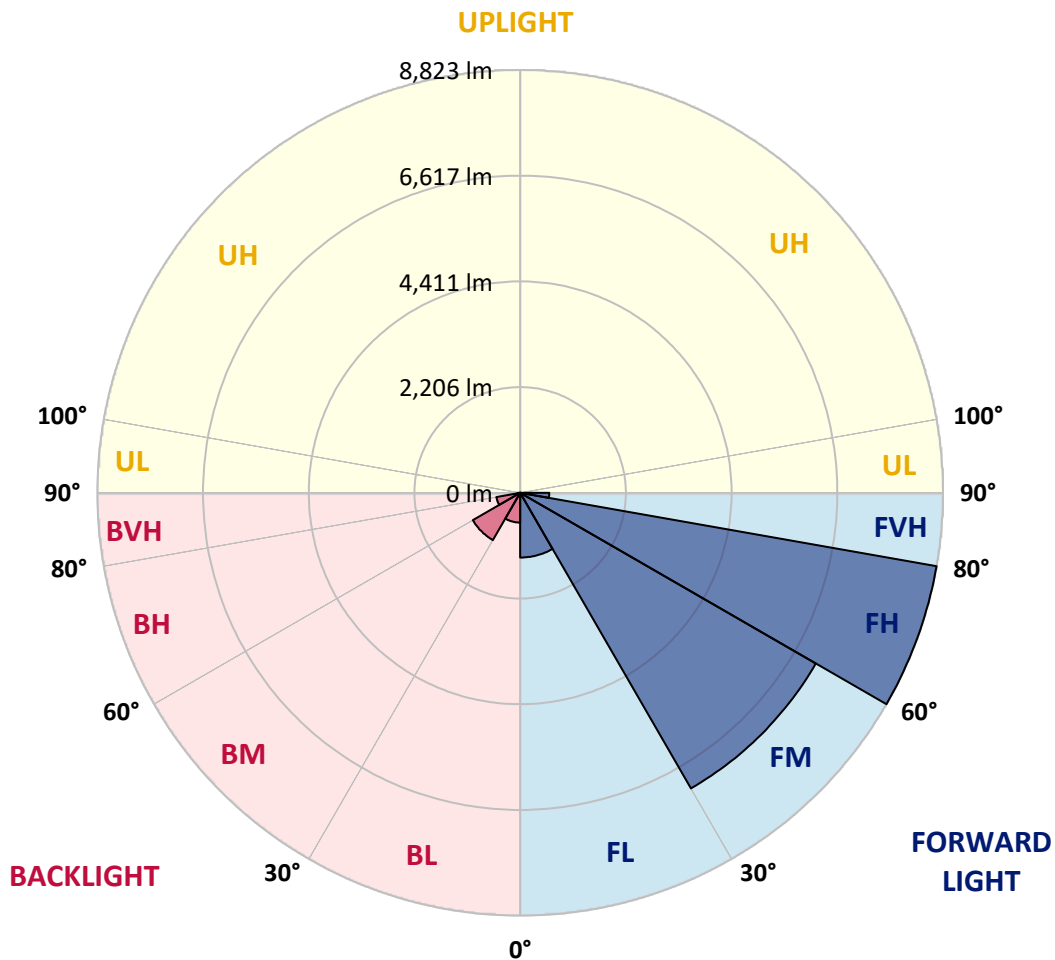
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1350.7	6.7			
FM	(30°-60°)	7122.1	35.2			
FH	(60°-80°)	8822.5	43.6			G4/12000
FVH	(80°-90°)	606.7	3.0			G4/750
BL	(0°-30°)	620.7	3.1	B2/1000		
BM	(30°-60°)	1139.5	5.6	B2/2500		
BH	(60°-80°)	503.7	2.5	B2/1000		G2/1000
BVH	(80°-90°)	54.7	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1
2.5°	3154.6	3155.8	3151.9	3139.5	3128.7	3123.3	3113.9	3097.5	3075.7	3060.9	3048.7
5°	3124.7	3128.7	3126.0	3105.7	3086.7	3075.7	3060.9	3037.8	3009.3	2997.0	2968.5
7.5°	3101.6	3104.4	3096.2	3073.1	3036.5	3022.8	2995.8	2965.8	2940.1	2922.5	2888.5
10°	3085.3	3088.1	3081.2	3058.2	3017.4	3001.1	2968.5	2936.0	2902.1	2880.3	2842.3
12.5°	3062.2	3067.7	3067.7	3056.8	3029.7	3018.8	2986.2	2950.9	2919.8	2896.7	2849.2
15°	3058.2	3064.9	3077.1	3075.7	3067.7	3059.5	3033.8	2998.5	2971.4	2944.1	2885.7
17.5°	3092.1	3107.1	3131.5	3139.5	3134.1	3116.5	3086.7	3054.1	3024.2	2998.5	2926.5
20°	3177.7	3185.7	3222.4	3238.7	3211.5	3185.7	3146.5	3104.4	3077.1	3056.8	2964.4
22.5°	3306.7	3317.4	3347.3	3348.6	3291.6	3260.4	3210.3	3158.6	3132.7	3124.7	3016.1
25°	3512.9	3510.1	3518.3	3484.3	3381.2	3344.6	3283.5	3223.7	3206.1	3222.4	3092.1
27.5°	3759.9	3753.2	3727.3	3639.2	3483.0	3435.5	3362.3	3309.3	3309.3	3347.3	3195.4
30°	4045.0	4038.2	3954.0	3806.1	3603.8	3549.6	3472.2	3416.6	3445.0	3518.3	3335.0
32.5°	4346.3	4321.8	4203.8	4005.6	3776.3	3716.5	3641.9	3584.9	3639.2	3764.0	3536.0
35°	4630.0	4616.4	4471.3	4236.3	3998.9	3948.6	3897.0	3826.4	3913.3	4107.4	3819.7
37.5°	4923.3	4912.3	4734.5	4484.8	4270.4	4236.3	4192.8	4144.2	4283.8	4539.0	4203.8
40°	5250.4	5228.7	5004.6	4754.9	4586.6	4570.2	4547.2	4533.7	4759.0	5139.1	4689.7
42.5°	5620.9	5578.8	5289.7	5052.2	4931.3	4944.9	4932.8	4987.0	5331.8	5831.3	5268.0
45°	6044.3	5960.3	5573.4	5368.5	5312.8	5367.1	5392.9	5531.4	6009.1	6630.7	5914.1
47.5°	6440.8	6332.2	5884.2	5711.9	5743.0	5836.6	5909.9	6154.4	6751.7	7420.8	6573.7
50°	6805.9	6683.7	6216.8	6067.5	6219.4	6352.5	6504.5	6849.3	7541.6	8233.9	7179.2
52.5°	7075.9	6987.7	6549.4	6455.7	6766.6	6943.0	7185.9	7621.7	8339.8	9008.9	7719.3
55°	7285.1	7237.6	6873.7	6900.9	7385.4	7638.0	7932.6	8433.4	9184.0	9703.9	8153.7
57.5°	7526.7	7491.3	7244.3	7438.4	8153.7	8471.3	8818.9	9375.4	9987.5	10316.0	8494.5
60°	7781.8	7781.8	7657.0	8086.0	9114.8	9478.6	9824.8	10257.7	10788.5	10867.2	8632.9
62.5°	7974.6	8024.7	8069.7	8775.5	10026.9	10479.0	10859.0	11274.4	11617.8	11138.7	8307.2
65°	8254.2	8361.5	8613.8	9572.2	11156.3	11748.2	12261.1	12610.0	12289.7	10922.9	7244.3
67.5°	8734.7	8893.5	9431.0	10758.6	12885.6	13771.9	14270.0	13667.4	12158.0	9564.1	5549.0
70°	9167.7	9391.7	10310.7	12263.9	15133.3	16053.7	15824.4	13421.8	10589.0	7010.8	3413.7
72°	8879.9	9124.3	10351.3	12919.6	16334.7	16769.0	15559.6	11894.6	8182.2	4278.4	1683.2
72.5°	8691.3	8945.1	10219.7	12903.3	16367.3	16678.1	15191.7	11287.9	7427.5	3743.6	1361.4
75°	7260.6	7477.9	8787.7	11436.0	14423.5	13853.4	11855.3	7305.3	3413.7	1209.4	700.4
77.5°	4741.3	4906.9	6059.3	7923.1	10103.0	9554.6	7215.8	3420.6	1280.1	734.4	526.6
80°	2382.1	2500.3	3242.8	4165.8	5452.6	5016.9	3330.9	1654.7	856.5	530.7	413.9
82.5°	1657.4	1766.0	2232.8	2126.9	2279.0	2205.8	1566.5	1380.4	640.8	335.2	217.2
85°	1389.9	1502.7	1847.4	1516.2	1240.6	1130.6	1122.5	1304.5	423.6	165.6	183.3
87.5°	1212.2	1383.2	1524.3	1107.6	851.1	750.7	826.6	1195.9	134.3	91.0	55.7
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°	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1	3088.1
2.5°	3028.2	3024.2	3003.9	2972.6	2949.6	2934.7	2906.1	2904.8	2907.5	2883.1	2892.5
5°	2942.8	2926.5	2873.6	2801.6	2743.2	2687.5	2626.6	2606.2	2588.6	2551.8	2555.9
7.5°	2853.1	2824.7	2732.5	2614.2	2501.6	2398.5	2296.6	2246.4	2208.5	2161.0	2161.0
10°	2800.2	2755.6	2614.2	2442.0	2262.7	2112.1	1960.0	1869.2	1802.5	1741.5	1737.4
12.5°	2797.5	2729.7	2533.0	2295.3	2049.7	1837.9	1630.2	1490.4	1391.4	1319.4	1312.6
15°	2819.3	2724.3	2464.9	2158.2	1848.7	1573.2	1316.6	1138.8	1012.6	932.5	924.4
17.5°	2838.3	2717.5	2391.6	2014.4	1653.3	1318.1	1033.1	848.4	729.0	663.8	657.0
20°	2855.9	2702.6	2298.0	1862.4	1437.5	1079.1	807.7	658.3	579.5	542.9	538.9
22.5°	2881.8	2688.9	2200.3	1691.2	1225.6	878.3	666.5	559.3	517.2	499.5	496.9
25°	2923.9	2690.3	2105.3	1516.2	1031.7	731.6	576.9	510.3	487.3	475.1	475.1
27.5°	2984.9	2706.7	2011.7	1338.4	867.4	631.1	523.9	484.5	469.6	460.1	457.4
30°	3074.4	2736.4	1912.5	1170.0	737.1	562.0	492.7	468.2	456.1	448.0	446.5
32.5°	3204.8	2789.3	1808.0	1016.7	637.9	513.1	469.6	454.7	445.2	438.5	437.0
35°	3398.8	2883.1	1706.2	886.4	567.4	477.8	450.7	438.5	433.1	430.3	428.9
37.5°	3683.9	3033.8	1609.9	784.6	521.2	454.7	431.6	424.9	422.2	422.2	422.2
40°	4042.3	3231.9	1522.9	712.6	495.4	437.0	418.2	412.6	412.6	413.9	413.9
42.5°	4478.1	3480.4	1448.2	663.8	480.6	424.9	408.5	405.9	404.4	404.4	405.9
45°	4984.2	3773.5	1402.2	625.8	469.6	418.2	401.8	400.5	395.0	392.3	392.3
47.5°	5493.2	4087.1	1399.5	604.0	456.1	409.9	395.0	395.0	384.1	378.7	380.1
50°	5968.3	4368.1	1429.4	598.6	448.0	397.7	388.2	389.5	374.7	367.9	366.5
52.5°	6351.1	4582.6	1465.9	605.4	448.0	386.9	376.0	382.8	366.5	358.3	356.9
55°	6647.1	4731.8	1479.6	620.3	453.4	377.4	365.2	376.0	363.8	352.9	352.9
57.5°	6858.7	4779.3	1421.2	627.0	461.5	376.0	354.3	374.7	367.9	354.3	354.3
60°	6781.5	4503.8	1204.0	601.3	460.1	373.2	346.1	377.4	381.4	366.5	366.5
62.5°	6177.5	3768.1	966.4	542.9	437.0	363.8	336.7	374.7	390.9	385.6	382.8
65°	5029.2	2763.6	749.2	473.8	397.7	343.4	316.3	350.2	369.3	374.7	376.0
67.5°	3544.2	1749.7	582.3	403.1	348.8	313.6	293.1	309.5	316.3	319.0	324.4
70°	1938.4	947.4	462.8	339.3	298.6	283.7	268.8	270.1	267.3	264.7	267.3
72°	973.3	618.9	390.9	294.6	264.7	255.2	248.4	244.2	244.2	240.2	241.6
72.5°	837.5	575.5	377.4	283.7	256.6	248.4	243.0	238.9	237.5	234.8	236.2
75°	557.8	456.1	314.9	237.5	218.6	213.1	215.9	211.7	213.1	210.5	211.7
77.5°	450.7	392.3	267.3	201.0	187.3	179.2	184.6	185.9	188.6	185.9	184.6
80°	377.4	333.9	223.9	165.6	156.0	149.3	152.1	161.5	163.0	154.8	153.4
82.5°	244.2	268.8	176.4	128.9	119.5	116.7	123.5	132.9	135.7	124.9	122.2
85°	205.0	215.9	127.6	88.3	78.7	75.9	89.7	99.2	105.9	95.0	92.3
87.5°	57.0	105.9	62.4	42.1	35.4	35.4	43.5	51.7	61.1	62.4	62.4
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)