

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: LUMARK

Report Number: P270472

Luminaire Tested: **NAV-AF-03-D-UNV-T3R-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270472
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-T3R-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17559.7 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B2 - U0 - G3

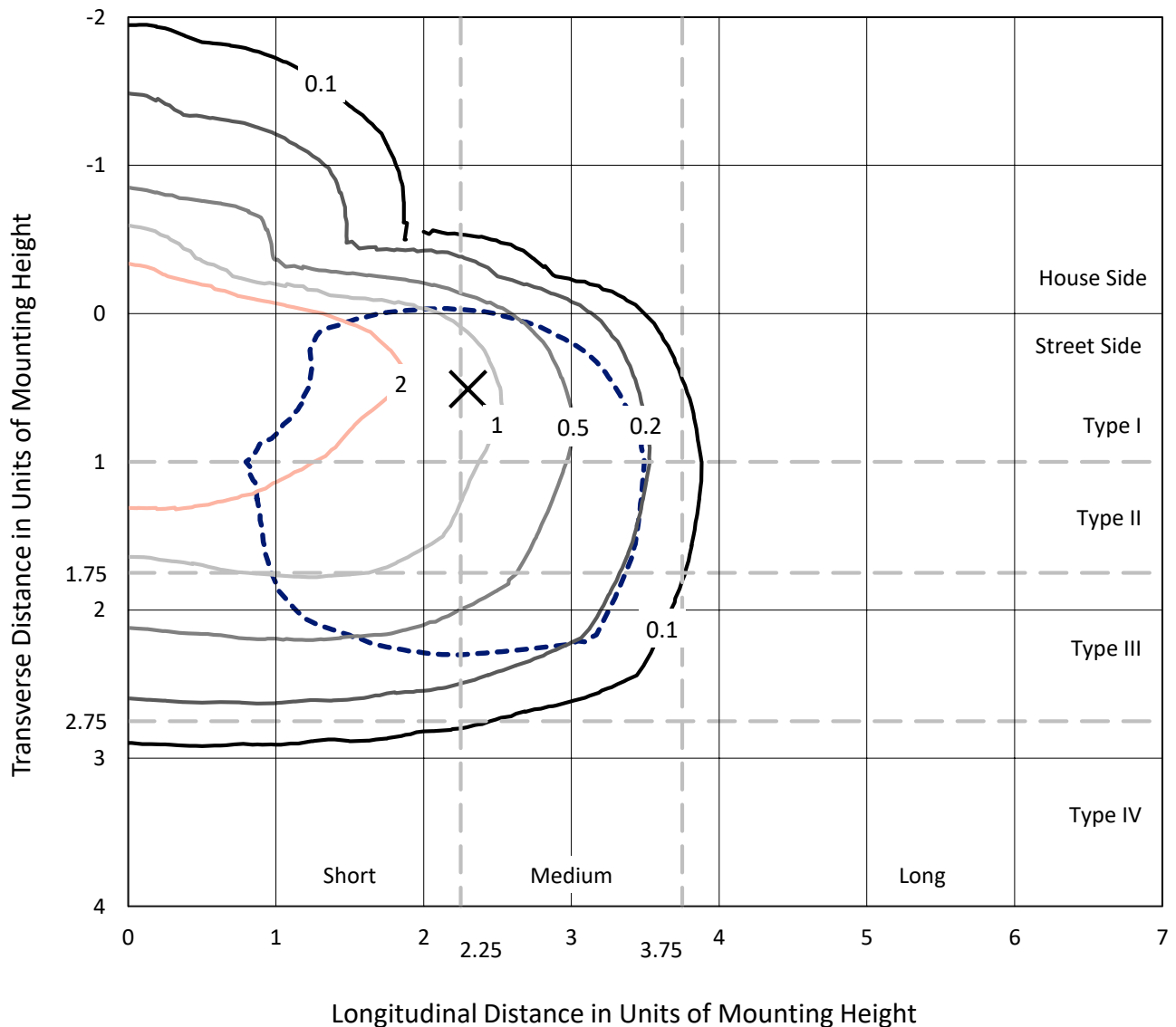
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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 CATALOG NUMBER: NAV-AF-03-D-UNV-T3R-7027-1200

Iso-Footcandle Lines of Horizontal Illumination

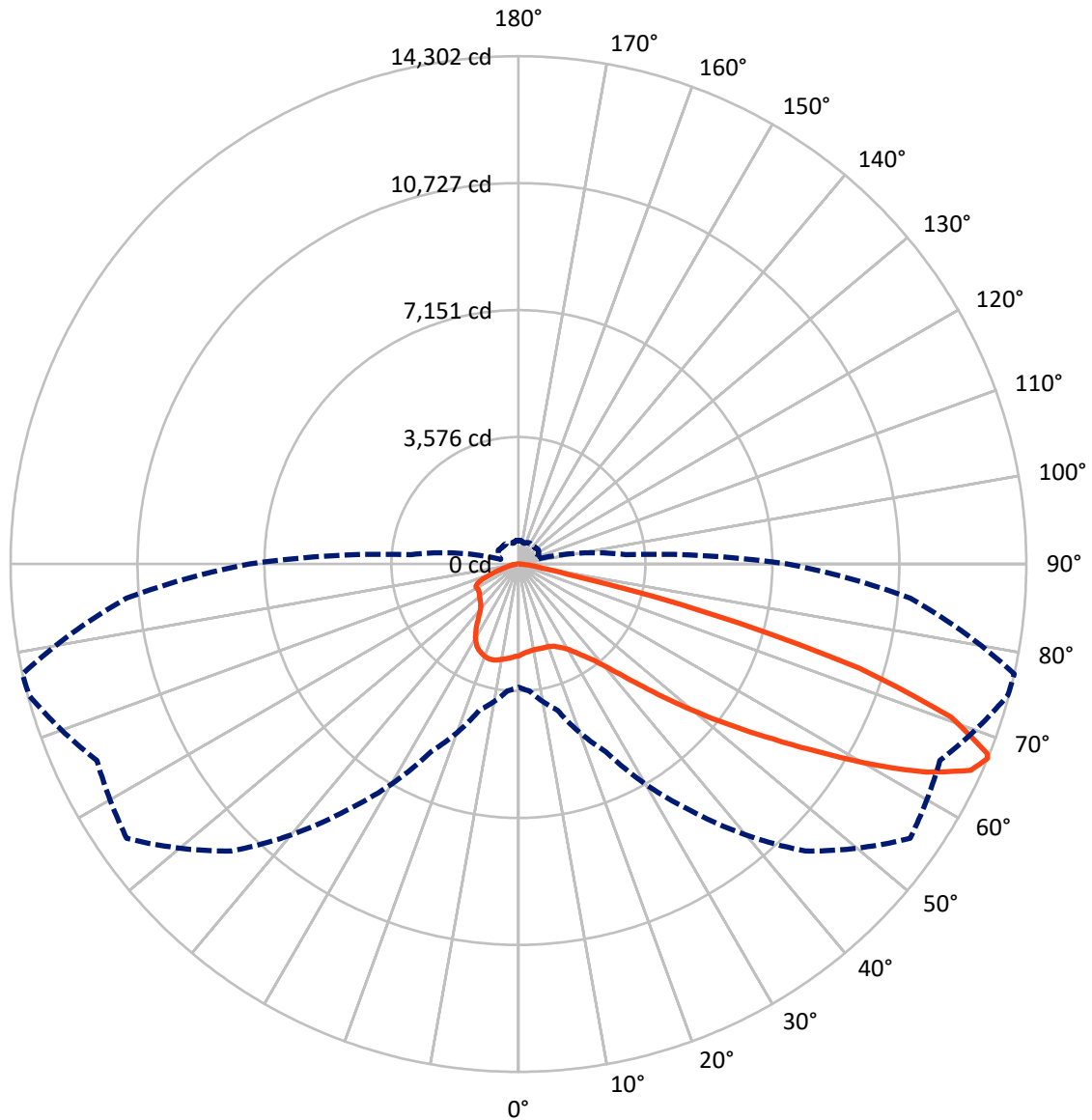
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5 fc
 Type III - Medium - Full Cutoff

REPORT NUMBER: P270472
CATALOG NUMBER: NAV-AF-03-D-UNV-T3R-7027-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

REPORT NUMBER: P270472

CATALOG NUMBER: NAV-AF-03-D-UNV-T3R-7027-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3017.6	0.0	3017.6
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	14542.1	0.0	14542.1
	% Fixture	82.8	0.0	82.8
Total	Lumens	17559.7	0.0	17559.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.2	1.3
10°-20°	637.4	3.6
20°-30°	1083.0	6.2
30°-40°	1732.6	9.9
40°-50°	2667.4	15.2
50°-60°	3700.8	21.1
60°-70°	4936.5	28.1
70°-80°	2349.3	13.4
80°-90°	222.4	1.3
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°	17559.7	100.0
0°-180°	17559.7	100.0

Coefficient of Utilization



REPORT NUMBER: P270472

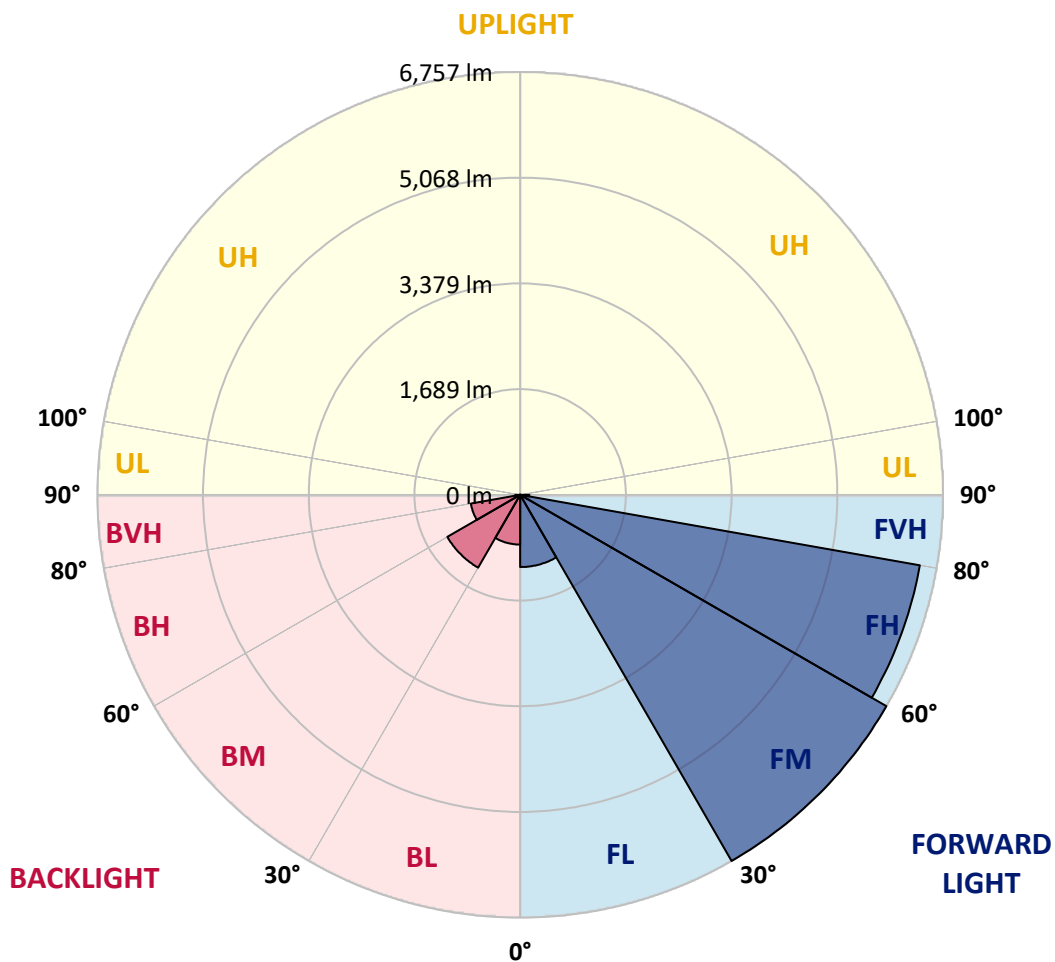
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1154.7	6.6			
FM	(30°-60°)	6757.1	38.5			
FH	(60°-80°)	6485.7	36.9			G3/7500
FVH	(80°-90°)	144.5	0.8			G2/225
BL	(0°-30°)	795.9	4.5	B2/1000		
BM	(30°-60°)	1343.6	7.7	B2/2500		
BH	(60°-80°)	800.1	4.6	B2/1000		G2/1000
BVH	(80°-90°)	78.0	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





REPORT NUMBER: P270472

CATALOG NUMBER: NAV-AF-03-D-UNV-T3R-7027-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3
2.5°	2317.3	2328.1	2329.2	2360.7	2374.8	2410.6	2449.8	2484.4	2514.8	2525.8	2545.3
5°	2085.1	2085.1	2088.3	2109.0	2149.0	2206.5	2288.1	2377.1	2470.3	2493.2	2550.6
7.5°	1963.4	1965.6	1967.7	1988.5	2019.8	2071.0	2152.2	2273.9	2429.0	2467.1	2568.1
10°	1974.4	1971.2	1960.2	1955.9	1968.9	2001.5	2072.0	2196.8	2394.4	2453.0	2599.5
12.5°	2144.8	2138.2	2102.5	2050.3	2002.5	1990.6	2039.4	2157.8	2378.2	2453.0	2652.8
15°	2436.7	2441.1	2370.4	2261.9	2137.2	2052.4	2046.0	2143.6	2372.7	2459.5	2714.6
17.5°	2816.5	2818.8	2721.1	2563.8	2356.4	2181.7	2090.4	2143.6	2372.7	2465.9	2774.2
20°	3220.3	3205.2	3094.4	2896.9	2627.7	2360.7	2171.9	2156.7	2379.3	2475.8	2830.6
22.5°	3566.6	3552.4	3436.3	3229.0	2920.7	2572.3	2281.4	2200.0	2415.1	2516.0	2909.9
25°	3869.4	3878.2	3765.2	3531.9	3212.8	2811.2	2445.4	2299.9	2489.9	2588.6	3007.6
27.5°	4237.3	4221.0	4090.8	3868.3	3513.5	3058.6	2650.4	2425.9	2578.9	2676.6	3127.0
30°	4662.8	4655.2	4479.4	4250.4	3844.4	3335.3	2853.5	2561.5	2695.1	2797.1	3276.7
32.5°	5179.4	5178.4	4989.5	4708.5	4216.7	3647.9	3093.4	2747.1	2864.3	2967.6	3475.5
35°	5764.6	5763.4	5568.1	5196.9	4645.4	3994.3	3375.7	2972.9	3073.8	3182.3	3712.1
37.5°	6170.5	6164.0	6061.9	5701.6	5119.8	4396.9	3728.3	3276.7	3311.5	3433.1	3997.5
40°	6248.6	6287.6	6375.6	6162.9	5637.6	4844.1	4082.2	3603.6	3636.1	3792.4	4356.8
42.5°	6164.0	6215.0	6507.0	6566.6	6155.2	5385.7	4525.0	4056.0	4097.3	4291.7	4779.1
45°	6090.1	6134.6	6500.5	6790.2	6666.5	5976.2	5077.5	4608.6	4686.7	4927.7	5261.0
47.5°	5964.2	6005.4	6372.3	6830.4	6958.5	6545.0	5742.9	5272.8	5407.4	5699.3	5810.1
50°	5957.6	5976.2	6197.5	6695.7	7059.4	6977.0	6479.8	6049.9	6256.2	6592.8	6417.9
52.5°	5792.7	5921.8	6122.7	6480.9	7061.5	7228.8	7205.9	6902.0	7220.0	7592.4	7084.4
55°	4783.4	4932.1	5873.1	6375.6	7048.6	7444.8	7869.2	7808.3	8305.4	8697.3	7831.2
57.5°	4466.5	4529.3	5152.4	6407.2	7157.1	7801.8	8532.3	8781.9	9547.1	9974.8	8726.6
60°	4379.5	4445.8	5008.1	6422.3	7451.3	8452.0	9432.1	9881.4	11007.0	11460.7	9743.6
62.5°	4282.9	4368.6	5018.9	6436.4	7967.8	9413.6	10626.1	11074.2	12505.9	12910.8	10696.6
65°	4000.8	4114.7	4818.1	6347.3	8533.4	10620.7	12204.2	12318.2	13744.3	14001.6	11271.8
67°	3465.8	3590.4	4266.7	5833.0	8481.3	11433.5	13466.5	13096.4	14270.7	14302.3	11085.2
67.5°	3296.3	3425.4	4080.0	5619.1	8332.6	11539.8	13690.1	13203.8	14266.4	14231.7	10911.4
70°	2219.6	2365.1	2889.3	4125.6	6683.8	10740.0	13635.8	12872.8	13330.8	12932.4	9374.5
72.5°	1101.7	1106.1	1441.4	2259.7	4049.6	7703.1	11375.0	11012.4	10806.3	10054.0	6879.2
75°	530.8	540.5	680.6	998.6	1707.3	3976.8	7757.4	7430.6	6326.8	5478.0	3442.8
77.5°	404.9	414.6	528.7	650.2	712.0	1297.1	3842.3	3105.4	1833.3	1464.1	970.3
80°	312.6	331.0	446.1	499.3	471.0	519.8	1208.0	950.8	713.2	654.4	480.9
82.5°	244.2	255.1	378.7	378.7	325.6	348.5	562.2	549.3	442.9	399.4	258.4
85°	172.6	194.4	305.1	282.2	213.8	216.0	336.4	322.3	227.9	183.4	100.9
87.5°	77.1	98.8	217.1	184.5	113.9	87.9	137.8	118.2	90.1	69.4	46.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P270472

CATALOG NUMBER: NAV-AF-03-D-UNV-T3R-7027-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3	2584.3
2.5°	2566.9	2584.3	2611.5	2627.7	2649.5	2658.2	2666.8	2682.0	2693.9	2690.8	2685.3
5°	2590.8	2620.1	2653.9	2664.6	2664.6	2653.9	2647.2	2648.4	2645.1	2643.0	2636.4
7.5°	2625.6	2665.7	2689.6	2678.7	2645.1	2602.7	2562.7	2538.7	2516.0	2501.8	2506.2
10°	2674.4	2718.9	2720.0	2672.3	2591.9	2499.7	2420.5	2369.4	2320.6	2298.9	2305.4
12.5°	2745.0	2789.4	2751.5	2648.4	2507.3	2362.9	2217.5	2112.2	2017.8	1995.0	1988.5
15°	2820.9	2855.7	2771.0	2597.4	2385.7	2147.9	1903.8	1746.5	1641.2	1622.7	1616.1
17.5°	2887.2	2906.6	2761.2	2506.2	2193.7	1819.1	1534.8	1428.3	1406.7	1417.5	1417.5
20°	2945.7	2939.3	2718.9	2365.1	1890.8	1454.4	1289.4	1288.3	1317.6	1344.9	1347.0
22.5°	3019.6	2968.5	2651.5	2155.7	1529.4	1213.5	1185.3	1213.5	1245.9	1276.4	1279.6
25°	3107.4	3001.1	2561.5	1857.1	1229.8	1101.7	1113.5	1137.6	1158.2	1182.0	1183.1
27.5°	3195.5	3026.1	2434.5	1506.5	1066.9	1030.0	1043.0	1052.9	1058.3	1073.5	1073.5
30°	3297.4	3045.7	2251.2	1207.0	992.1	967.0	959.5	955.2	959.5	980.1	981.2
32.5°	3425.4	3080.4	2000.3	1035.4	957.4	922.6	883.6	861.8	876.9	913.8	920.5
35°	3570.9	3121.6	1699.8	967.0	945.3	900.9	829.2	795.5	801.0	834.6	840.0
37.5°	3753.3	3174.8	1403.4	950.8	957.4	898.8	804.3	756.6	732.7	733.7	732.7
40°	3986.7	3228.0	1169.0	955.2	983.4	904.1	792.3	717.4	667.5	669.6	674.0
42.5°	4230.8	3262.7	1020.3	968.2	1014.8	911.7	788.1	679.5	636.0	672.9	706.5
45°	4516.3	3252.9	943.2	980.1	1038.7	915.1	771.7	675.2	639.4	750.1	813.0
47.5°	4844.1	3210.6	899.8	985.5	1045.3	913.8	759.7	689.2	666.5	858.5	930.1
50°	5200.1	3144.3	865.1	976.8	1041.9	909.5	772.8	706.5	677.3	882.5	937.8
52.5°	5589.8	3083.6	829.2	957.4	1025.8	896.6	789.2	699.1	646.9	813.0	855.2
55°	6051.1	3069.5	789.2	923.6	998.6	882.5	780.4	675.2	613.3	720.7	746.8
57.5°	6578.6	3157.5	737.0	882.5	961.6	854.2	759.7	662.1	601.3	655.6	669.6
60°	7248.2	3351.7	681.6	838.9	916.1	811.9	741.3	665.4	604.6	645.8	649.0
62.5°	7771.4	3526.4	631.7	785.8	855.2	760.9	721.8	668.6	614.4	658.8	653.3
65°	7961.4	3440.7	569.9	706.5	769.6	704.5	694.7	670.8	614.4	666.5	654.4
67°	7571.8	3031.5	511.2	627.3	688.1	654.4	668.6	662.1	603.5	665.4	644.8
67.5°	7386.1	2887.2	496.0	614.4	666.5	639.4	662.1	657.7	600.2	663.2	639.4
70°	6091.2	2071.0	419.0	515.5	557.8	563.2	621.9	629.5	574.1	623.1	579.5
72.5°	4334.1	1296.0	361.5	399.4	450.4	481.9	567.6	591.5	539.4	541.6	505.7
75°	2144.8	695.7	322.3	308.3	350.6	401.6	495.0	539.4	488.4	451.5	439.6
77.5°	723.9	393.9	272.5	248.6	272.5	322.3	410.3	471.0	430.8	382.0	374.5
80°	374.5	286.6	212.8	199.8	215.0	249.6	321.2	391.8	367.9	370.1	305.1
82.5°	233.4	174.7	153.0	152.0	162.9	191.0	236.7	318.0	315.8	270.3	196.5
85°	108.5	100.9	97.6	100.9	104.3	108.5	154.1	226.8	239.8	145.4	129.1
87.5°	45.5	44.5	39.0	42.3	46.7	45.5	61.9	96.6	134.6	91.2	83.6
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)