

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: P197026

Luminaire Tested: **NAV-AF-04-D-UNV-SL2-8030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197026
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-04-D-UNV-SL2-8030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13120 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 171
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

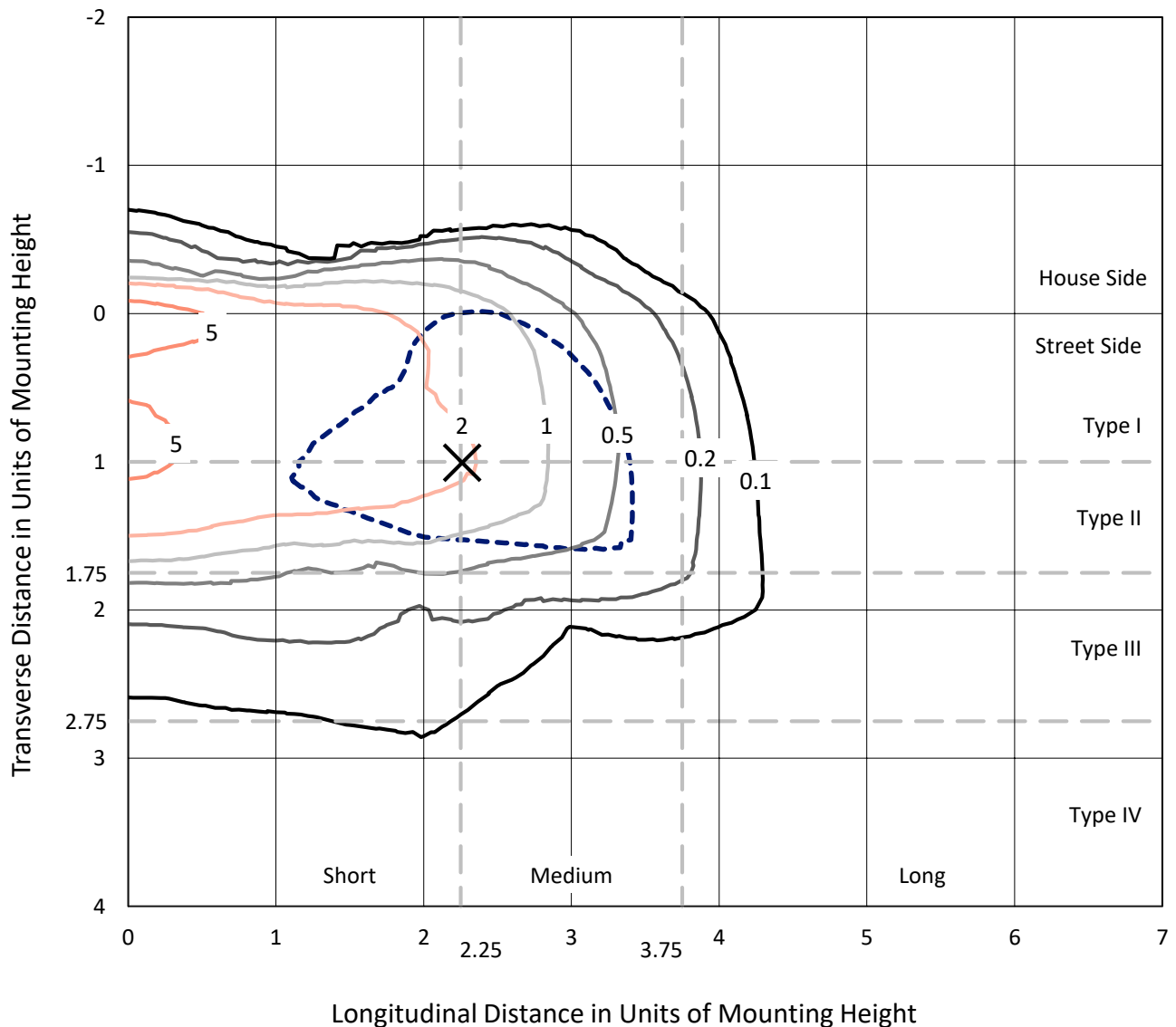


REPORT NUMBER: P197026

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-8030-800-HSS

Iso-Footcandle Lines of Horizontal Illumination

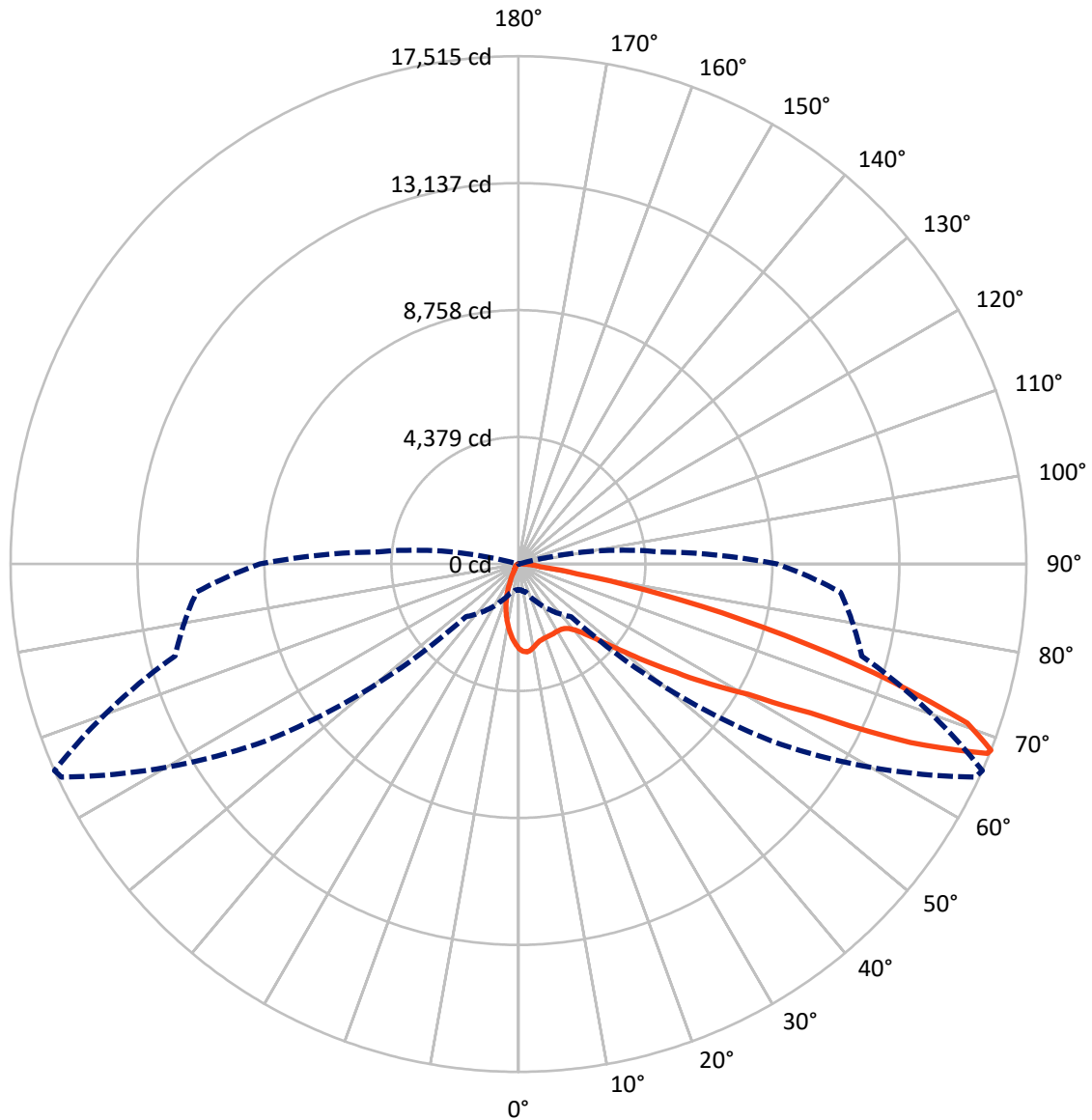
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.3 fc
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P197026
CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-8030-800-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P197026

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-8030-800-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1328.9	0.0	1328.9
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	11791.1	0.0	11791.1
	% Fixture	89.9	0.0	89.9
Total	Lumens	13120.0	0.0	13120.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.6	1.8
10°-20°	515.6	3.9
20°-30°	747.1	5.7
30°-40°	1143.7	8.7
40°-50°	1956.2	14.9
50°-60°	3060.1	23.3
60°-70°	3523.6	26.9
70°-80°	1763.3	13.4
80°-90°	170.8	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°	13120.0	100.0
0°-180°	13120.0	100.0

Coefficient of Utilization



REPORT NUMBER: P197026

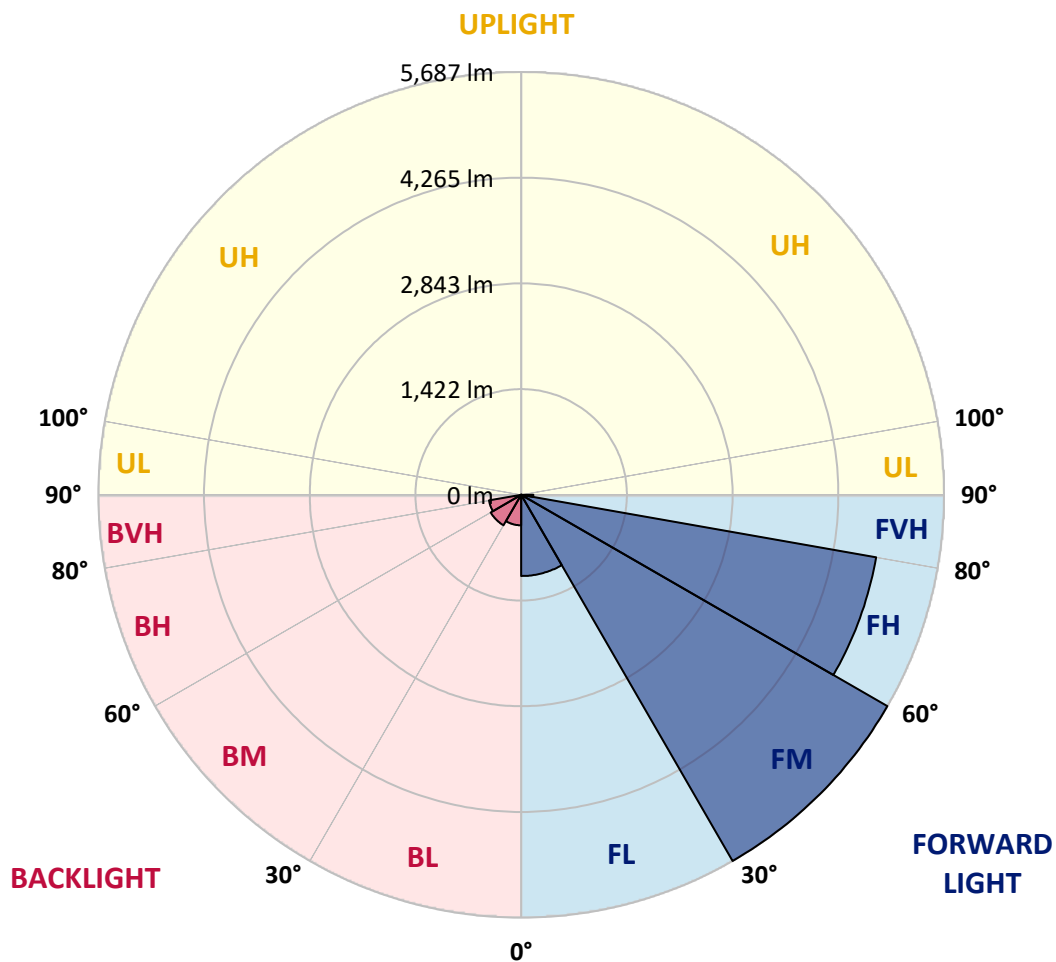
CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-8030-800-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1092.2	8.3			
FM (30°-60°)	5686.8	43.3			
FH (60°-80°)	4847.8	36.9			G2/5000
FVH (80°-90°)	164.3	1.3			G2/225
BL (0°-30°)	410.2	3.1	B1/500		
BM (30°-60°)	473.2	3.6	B1/1000		
BH (60°-80°)	439.1	3.3	B1/500		G1/500
BVH (80°-90°)	6.5	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Medium





REPORT NUMBER: P197026

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-8030-800-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0
2.5°	3074.4	3076.5	3075.4	3078.5	3076.5	3061.0	3044.5	3009.5	3012.6	2967.3	2916.8
5°	2858.1	2875.6	2893.1	2910.7	2952.9	2990.0	3034.2	3044.5	3044.5	3005.4	2931.3
7.5°	2637.7	2638.7	2658.3	2682.0	2738.7	2806.6	2909.6	3002.3	3004.4	3014.7	2933.3
10°	2471.9	2477.0	2490.4	2516.2	2572.8	2639.8	2755.1	2900.4	2911.7	2987.9	2912.7
12.5°	2343.1	2349.3	2363.7	2393.6	2445.1	2514.1	2635.7	2801.5	2816.9	2962.2	2906.5
15°	2244.3	2252.5	2263.8	2293.7	2349.3	2422.5	2555.3	2735.6	2754.1	2951.9	2926.1
17.5°	2203.1	2203.1	2202.0	2222.6	2278.3	2352.4	2491.5	2700.5	2724.2	2960.1	2959.1
20°	2220.6	2217.5	2195.9	2190.7	2224.7	2298.9	2441.0	2677.9	2704.7	2975.5	2999.2
22.5°	2313.3	2307.1	2258.7	2218.5	2208.2	2257.7	2407.0	2662.4	2694.4	3007.5	3052.8
25°	2510.0	2491.5	2424.5	2333.9	2252.5	2247.4	2383.3	2654.2	2688.2	3044.5	3111.5
27.5°	2765.4	2760.3	2653.2	2531.6	2375.1	2281.4	2376.1	2648.0	2682.0	3071.3	3158.9
30°	3082.7	3084.7	2961.1	2802.5	2565.6	2377.1	2398.8	2644.9	2679.9	3073.4	3179.5
32.5°	3410.2	3412.2	3309.2	3139.3	2826.2	2541.9	2462.6	2659.3	2691.3	3065.1	3178.4
35°	3725.3	3728.4	3666.6	3529.7	3174.3	2770.6	2583.1	2708.8	2731.4	3070.3	3176.4
37.5°	4123.9	4136.3	4060.1	3932.4	3611.0	3106.3	2779.8	2808.7	2827.2	3112.5	3191.8
40°	4803.7	4787.2	4568.9	4352.6	4084.8	3515.2	3064.1	2980.7	2986.9	3221.7	3250.5
42.5°	5595.7	5575.1	5201.3	4828.4	4572.0	4008.6	3427.7	3244.4	3243.3	3405.0	3378.3
45°	6277.6	6265.2	5871.8	5374.3	5111.7	4553.4	3875.7	3624.4	3612.1	3722.3	3611.0
47.5°	6761.7	6751.4	6453.7	5955.2	5735.8	5152.9	4435.0	4142.5	4116.7	4137.3	3989.0
50°	6809.0	6797.7	6693.7	6373.4	6465.0	6032.4	5126.1	4821.2	4788.3	4756.3	4560.6
52.5°	6366.2	6365.1	6419.7	6399.1	6975.9	7164.4	5973.7	5660.6	5621.5	5540.1	5345.5
55°	5460.8	5455.7	5662.7	5963.4	6964.6	8332.3	7266.3	6659.7	6608.2	6445.5	6190.0
57.5°	3990.0	3963.3	4395.8	5033.4	6475.3	8843.2	9319.0	7900.8	7815.3	7299.3	6905.8
60°	2203.1	2213.4	2769.5	3524.5	5316.6	8742.3	11208.0	9347.9	9123.3	8035.7	7639.2
62.5°	1234.9	1260.7	1674.7	2290.6	3389.6	7923.4	12221.4	11838.3	11297.6	8894.7	8566.1
65°	934.2	949.6	1157.7	1767.4	2137.2	5537.0	12383.1	15320.6	14854.0	10196.6	10042.1
67.5°	879.6	891.9	993.9	1465.6	1946.6	2871.5	11165.7	17380.5	17439.2	11972.2	11185.3
68°	885.8	901.2	1003.2	1410.0	1943.5	2568.7	10646.6	17390.8	17515.4	12258.5	11146.2
70°	813.7	817.8	1060.9	1383.2	1883.8	2023.9	7702.0	16199.1	16422.6	12599.4	10118.3
72.5°	311.0	312.1	475.8	1197.8	1973.4	2035.2	3879.8	12803.4	12814.7	10964.9	7888.4
75°	161.7	136.0	149.3	374.9	1884.8	1983.7	1946.6	8742.3	8687.7	7415.7	4833.6
77.5°	111.2	94.8	99.9	129.8	783.8	1982.7	1405.9	5027.2	5015.9	3154.8	1379.1
80°	62.8	54.6	59.7	109.2	275.0	1861.1	1310.1	2160.8	2036.2	554.1	223.5
82.5°	31.9	26.8	31.9	91.7	171.0	1171.1	1274.1	847.7	755.0	131.8	145.2
85°	8.2	8.2	15.4	63.9	106.1	384.2	1142.2	611.8	550.0	57.7	103.0
87.5°	2.1	1.0	6.2	23.7	38.1	83.4	633.4	340.9	293.5	29.9	59.7
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: P197026

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-8030-800-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0	2923.0
2.5°	2896.2	2867.4	2810.7	2746.9	2701.6	2652.1	2623.3	2588.3	2561.5	2537.8	2555.3
5°	2885.9	2830.3	2704.7	2563.6	2445.1	2331.8	2247.4	2167.0	2106.3	2068.1	2083.6
7.5°	2859.2	2776.8	2572.8	2352.4	2158.8	1976.5	1828.2	1695.3	1592.3	1536.7	1554.2
10°	2813.8	2697.5	2423.5	2117.6	1846.7	1589.2	1368.8	1171.1	1021.7	951.7	968.2
12.5°	2780.9	2627.4	2269.0	1891.0	1534.6	1169.0	876.5	649.9	533.5	463.5	469.7
15°	2766.5	2572.8	2124.8	1652.0	1193.7	750.8	473.8	343.0	302.8	288.4	289.4
17.5°	2768.5	2529.6	1987.8	1403.8	849.7	431.6	290.4	261.6	255.4	252.3	252.3
20°	2773.7	2486.3	1845.7	1145.3	543.8	278.1	242.0	232.8	229.7	225.6	226.6
22.5°	2789.1	2453.4	1702.5	885.8	334.7	226.6	214.2	206.0	200.8	194.7	195.7
25°	2812.8	2428.6	1561.4	637.5	235.9	197.8	186.4	175.1	165.8	158.6	159.6
27.5°	2827.2	2393.6	1411.0	434.6	195.7	173.0	157.6	142.1	131.8	125.7	124.6
30°	2816.9	2337.0	1240.1	285.3	173.0	149.3	130.8	113.3	103.0	97.8	97.8
32.5°	2789.1	2263.8	1051.6	208.1	153.5	128.7	106.1	90.6	83.4	80.3	81.4
35°	2757.2	2187.6	850.7	176.1	138.0	109.2	86.5	74.2	71.1	70.0	70.0
37.5°	2739.7	2121.7	658.1	159.6	123.6	90.6	71.1	63.9	60.8	60.8	60.8
40°	2759.2	2071.2	487.2	147.3	109.2	75.2	59.7	54.6	53.6	53.6	53.6
42.5°	2842.7	2053.7	356.4	137.0	94.8	62.8	51.5	47.4	46.3	47.4	47.4
45°	3005.4	2091.8	269.8	126.7	81.4	51.5	44.3	41.2	41.2	42.2	42.2
47.5°	3281.4	2189.7	221.4	116.4	68.0	43.3	38.1	36.0	36.0	37.1	37.1
50°	3709.9	2371.0	198.8	105.1	56.6	37.1	31.9	30.9	30.9	31.9	33.0
52.5°	4360.8	2716.0	187.5	93.7	46.3	30.9	26.8	25.7	26.8	27.8	27.8
55°	5084.9	3157.8	174.1	82.4	39.1	25.7	21.6	21.6	22.7	24.7	24.7
57.5°	5759.5	3584.2	161.7	68.0	34.0	20.6	17.5	17.5	19.6	21.6	21.6
60°	6472.2	4002.4	145.2	54.6	28.8	16.5	14.4	14.4	17.5	19.6	20.6
62.5°	7352.8	4488.5	123.6	43.3	22.7	12.4	10.3	13.4	16.5	19.6	19.6
65°	8625.9	5093.1	96.8	34.0	17.5	9.3	8.2	12.4	15.4	18.5	19.6
67.5°	9088.3	5015.9	73.1	27.8	13.4	7.2	7.2	11.3	15.4	18.5	18.5
68°	8919.4	4847.0	70.0	26.8	12.4	7.2	7.2	11.3	15.4	18.5	18.5
70°	7772.0	3962.2	57.7	20.6	10.3	6.2	6.2	10.3	15.4	17.5	18.5
72.5°	5819.2	2632.6	49.4	13.4	9.3	6.2	5.1	10.3	14.4	17.5	17.5
75°	3338.1	1092.8	42.2	10.3	8.2	5.1	5.1	9.3	14.4	17.5	17.5
77.5°	943.4	255.4	34.0	8.2	7.2	5.1	4.1	9.3	13.4	16.5	16.5
80°	173.0	76.2	26.8	7.2	6.2	5.1	4.1	9.3	13.4	16.5	16.5
82.5°	114.3	36.0	19.6	7.2	6.2	5.1	4.1	8.2	12.4	15.4	15.4
85°	85.5	25.7	12.4	7.2	6.2	5.1	4.1	8.2	12.4	15.4	15.4
87.5°	47.4	11.3	9.3	8.2	7.2	5.1	4.1	7.2	11.3	14.4	14.4
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)