

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: P196638

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196638
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL4-7030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18698.6 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G4

Input Watts (W): 193
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

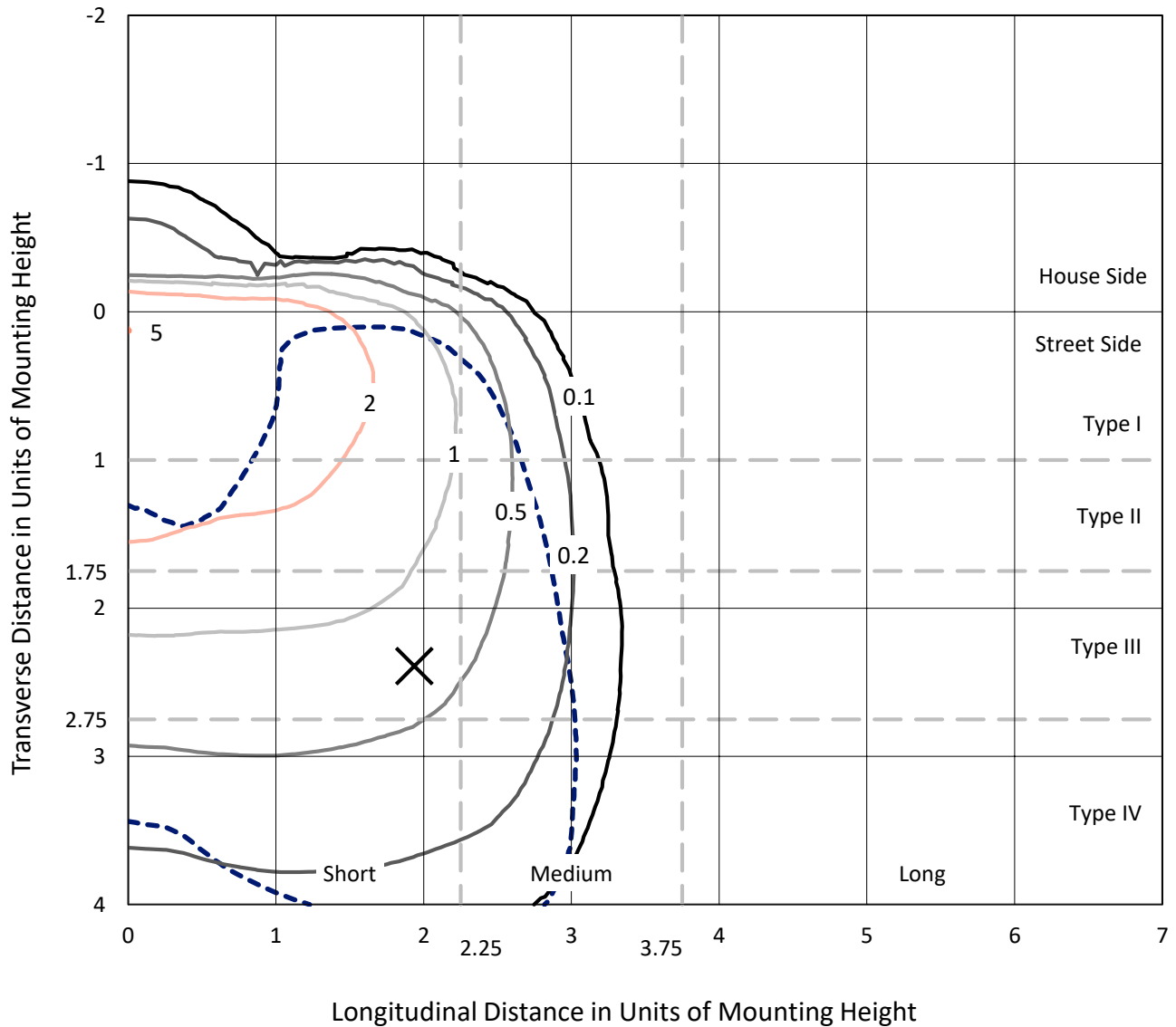


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

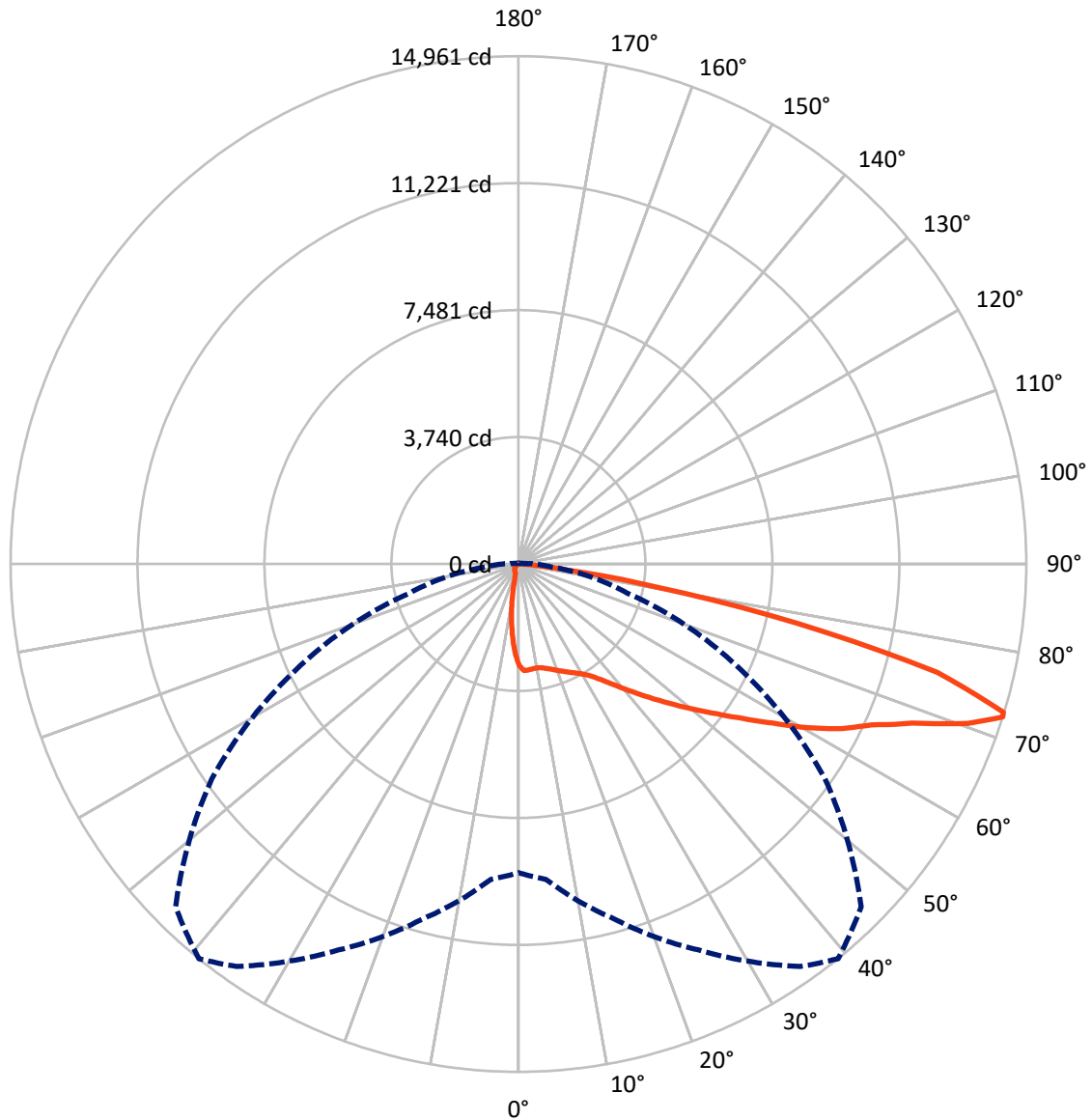


Based on 25 foot mounting height. Maximum calculated value = 5 fc
 Type IV - Short - Non-Cutoff

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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	1225.5	0.0	1225.5
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	17473.2	0.0	17473.2
	% Fixture	93.4	0.0	93.4
Total	Lumens	18698.6	0.0	18698.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.4	1.3
10°-20°	589.4	3.2
20°-30°	978.8	5.2
30°-40°	1560.0	8.3
40°-50°	2575.0	13.8
50°-60°	3888.7	20.8
60°-70°	5065.6	27.1
70°-80°	3422.9	18.3
80°-90°	374.9	2.0
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°	18698.6	100.0
0°-180°	18698.6	100.0

Coefficient of Utilization



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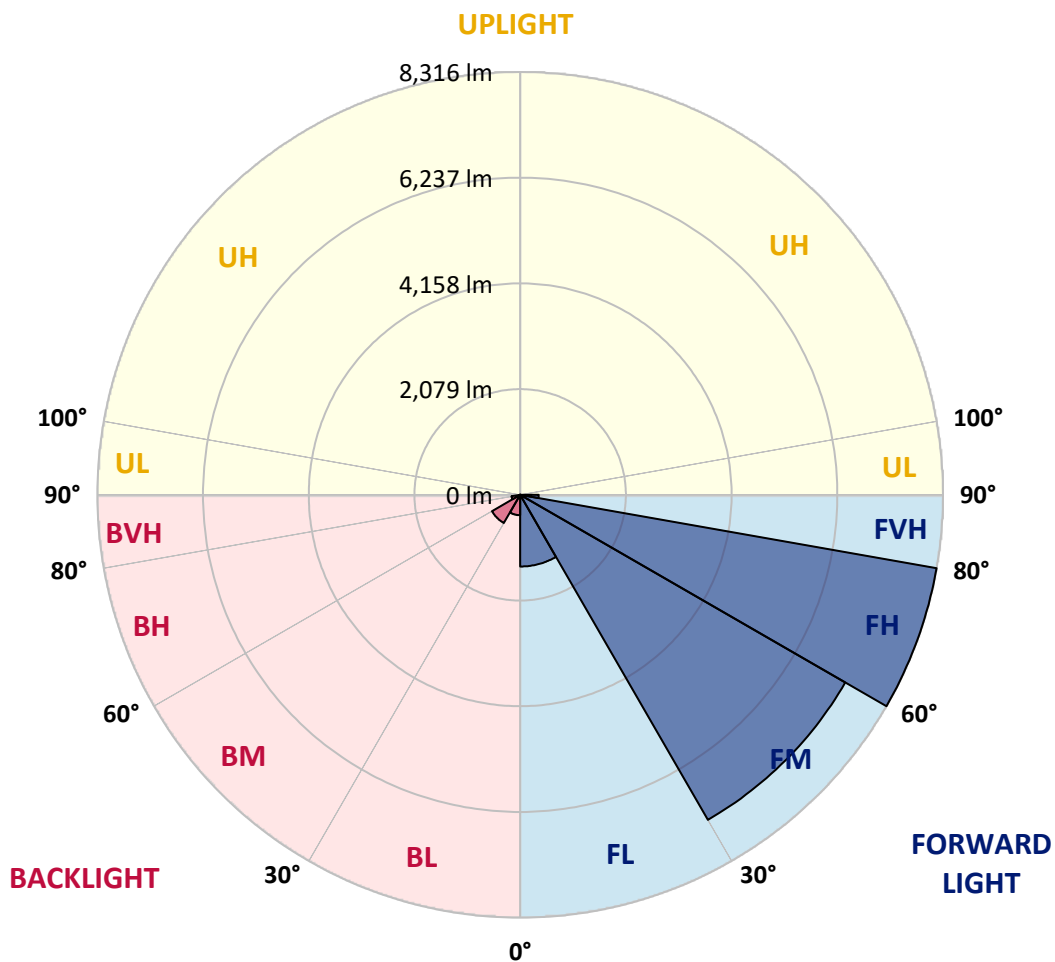
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1410.3	7.5			
FM	(30°-60°)	7382.5	39.5			
FH	(60°-80°)	8316.3	44.5			G4/12000
FVH	(80°-90°)	364.1	1.9			G3/500
BL	(0°-30°)	401.3	2.1	B1/500		
BM	(30°-60°)	641.2	3.4	B1/1000		
BH	(60°-80°)	172.2	0.9	B1/500		G1/500
BVH	(80°-90°)	10.8	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8
2.5°	3186.9	3192.8	3185.5	3172.2	3153.1	3141.3	3125.2	3089.9	3045.7	3007.6	2963.4
5°	3211.9	3214.9	3206.0	3181.0	3151.6	3135.4	3114.9	3076.6	3031.1	2978.2	2898.7
7.5°	3219.3	3217.8	3207.5	3176.6	3131.1	3110.4	3075.1	3028.1	2981.0	2932.5	2842.9
10°	3216.3	3216.3	3209.0	3179.6	3128.1	3109.0	3069.3	3019.3	2960.5	2912.0	2816.4
12.5°	3206.0	3211.9	3207.5	3191.3	3153.1	3138.4	3103.1	3053.1	2997.2	2947.3	2845.8
15°	3219.3	3228.1	3236.8	3231.1	3209.0	3195.8	3163.4	3111.9	3066.4	3013.4	2904.6
17.5°	3272.1	3291.2	3311.8	3313.3	3289.8	3266.2	3229.4	3176.6	3132.5	3084.0	2966.4
20°	3372.1	3386.8	3425.0	3432.4	3385.3	3351.5	3300.0	3238.3	3194.2	3153.1	3023.7
22.5°	3520.6	3536.7	3567.7	3557.3	3477.9	3438.3	3373.6	3303.0	3257.4	3233.8	3089.9
25°	3745.4	3749.9	3757.2	3711.6	3580.9	3536.7	3457.3	3378.0	3341.2	3338.3	3184.0
27.5°	4010.1	4016.0	3983.6	3882.2	3695.4	3638.2	3548.5	3476.4	3458.8	3480.9	3303.0
30°	4312.9	4314.3	4224.6	4060.1	3827.8	3764.5	3671.9	3592.6	3608.8	3663.1	3455.9
32.5°	4623.0	4608.3	4484.9	4270.2	4008.6	3932.1	3852.8	3773.4	3820.5	3930.7	3679.3
35°	4906.8	4900.9	4755.3	4505.5	4243.7	4176.1	4118.8	4035.1	4111.4	4290.8	3983.6
37.5°	5190.5	5186.0	5019.9	4759.8	4533.3	4484.9	4442.3	4377.6	4502.5	4765.6	4390.8
40°	5503.5	5496.2	5291.9	5042.0	4870.0	4843.5	4818.6	4790.6	5003.7	5369.8	4897.9
42.5°	5890.1	5857.8	5580.0	5349.3	5240.4	5247.7	5249.3	5277.1	5610.8	6088.6	5496.2
45°	6334.1	6261.9	5869.5	5678.4	5647.6	5691.7	5735.8	5851.9	6317.9	6916.1	6157.7
47.5°	6764.8	6648.7	6203.2	6032.8	6095.9	6187.1	6292.9	6519.3	7111.6	7782.0	6757.3
50°	7135.1	7016.1	6533.9	6392.9	6594.3	6729.5	6917.6	7260.2	7949.4	8514.0	7135.1
52.5°	7426.3	7332.2	6883.8	6789.7	7146.9	7332.2	7627.6	8077.4	8740.4	8996.2	7399.8
55°	7640.8	7593.8	7219.0	7232.2	7761.3	8028.9	8396.3	8904.9	9407.8	9370.9	7598.2
57.5°	7883.4	7846.7	7570.2	7754.0	8500.8	8846.1	9271.0	9679.8	9892.8	9672.2	7792.3
60°	8131.8	8143.5	7996.5	8386.0	9415.1	9797.3	10167.6	10269.2	10308.8	9978.1	7996.5
62.5°	8320.0	8370.0	8383.1	9068.2	10353.0	10679.2	10839.5	10767.5	10758.6	10388.2	7980.4
65°	8536.1	8666.9	8884.4	9816.4	11205.5	11420.1	11534.7	11639.2	11418.6	10510.2	7195.5
67.5°	8909.4	9115.2	9604.8	10733.6	12190.4	12507.9	12832.7	12722.4	11517.1	9271.0	5481.4
70°	9412.1	9663.6	10527.9	11931.6	13526.6	14058.7	14330.7	12635.8	9778.1	6406.1	2891.4
72°	9094.6	9322.4	10813.1	12543.2	14473.2	14961.2	14280.6	11021.7	7088.2	3320.6	968.7
72.5°	8786.0	9021.1	10721.8	12535.9	14567.3	14940.6	13955.8	10385.3	6272.3	2584.2	667.3
75°	6095.9	6392.9	9191.7	11268.7	13154.7	12744.5	10677.8	6288.5	2272.6	443.9	220.4
77.5°	3151.6	3380.9	5575.6	7962.9	9168.2	8396.3	6310.5	2728.2	629.2	235.2	145.6
80°	1953.5	2066.7	2607.7	3923.3	4762.7	4165.8	2784.2	1102.4	402.7	139.7	116.2
82.5°	1011.3	1098.0	1641.9	1583.1	1759.5	1462.7	1027.5	923.1	248.4	86.8	119.1
85°	332.2	352.8	1008.4	1052.5	752.6	505.7	455.7	880.5	72.0	55.8	101.4
87.5°	44.1	51.5	354.2	602.7	370.4	229.3	273.3	310.2	25.0	30.9	28.0
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°	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8	2992.8
2.5°	2934.0	2914.9	2854.6	2794.5	2725.3	2662.1	2612.2	2579.8	2594.5	2546.0	2553.3
5°	2850.2	2801.7	2669.4	2526.8	2372.6	2228.5	2113.8	2028.5	2012.3	1939.0	1941.9
7.5°	2769.4	2690.1	2475.4	2240.3	1984.4	1777.2	1589.0	1424.4	1365.6	1305.3	1270.0
10°	2725.3	2616.5	2312.3	1969.7	1609.6	1305.3	1040.7	833.4	746.8	683.5	652.8
12.5°	2738.6	2594.5	2190.2	1724.2	1250.9	864.4	588.1	436.6	383.6	354.2	343.9
15°	2782.7	2598.8	2080.0	1484.7	909.9	523.4	345.5	295.4	291.0	289.5	288.1
17.5°	2823.8	2603.3	1963.8	1234.7	608.6	333.7	277.8	273.3	273.3	273.3	273.3
20°	2866.4	2604.7	1836.0	973.1	399.8	273.3	261.6	258.7	261.6	261.6	261.6
22.5°	2916.3	2615.0	1712.5	718.8	295.4	257.2	249.8	248.4	249.8	249.8	248.4
25°	2978.2	2637.1	1578.7	514.5	267.5	246.9	239.6	238.1	239.6	238.1	238.1
27.5°	3060.5	2666.5	1422.9	369.0	255.7	236.6	229.3	229.3	229.3	227.8	227.8
30°	3166.4	2701.8	1214.2	291.0	243.9	226.3	220.4	220.4	219.1	217.5	217.5
32.5°	3317.6	2759.2	986.4	263.1	230.7	213.2	207.3	208.6	207.3	205.9	204.4
35°	3532.4	2848.8	761.4	248.4	217.5	200.0	194.1	194.1	194.1	191.1	191.1
37.5°	3836.6	2985.5	570.4	233.7	204.4	186.8	179.3	179.3	177.9	175.0	176.4
40°	4212.9	3157.5	413.1	220.4	191.1	172.0	166.1	163.2	160.2	157.4	157.4
42.5°	4665.7	3325.1	310.2	207.3	177.9	160.2	152.9	149.9	144.0	141.2	139.7
45°	5172.8	3503.0	257.2	191.1	163.2	147.0	141.2	135.3	127.9	123.5	122.1
47.5°	5600.5	3611.7	229.3	175.0	148.5	133.8	127.9	119.1	110.3	107.3	107.3
50°	5857.8	3566.1	205.9	158.8	133.8	120.5	113.2	101.4	95.6	92.7	91.1
52.5°	6001.8	3430.8	186.8	145.6	120.5	105.9	95.6	85.2	82.3	79.4	79.4
55°	6100.4	3235.3	166.1	132.3	108.8	92.7	80.9	73.5	70.6	69.1	67.6
57.5°	6194.5	2997.2	147.0	120.5	97.0	82.3	69.1	66.1	60.3	58.8	58.8
60°	6222.4	2669.4	129.4	107.3	86.8	72.0	60.3	55.8	49.9	48.5	48.5
62.5°	5866.5	2124.1	114.6	91.1	76.5	61.7	52.9	47.1	41.2	41.2	41.2
65°	4902.4	1442.0	98.5	79.4	67.6	52.9	45.6	38.2	35.3	35.3	35.3
67.5°	3414.7	804.0	83.8	67.6	57.4	44.1	38.2	32.3	30.9	32.3	32.3
70°	1539.0	318.9	70.6	55.8	47.1	36.7	32.3	28.0	30.9	30.9	30.9
72°	461.6	170.6	58.8	45.6	38.2	32.3	28.0	26.4	29.4	30.9	30.9
72.5°	342.5	152.9	55.8	44.1	38.2	30.9	26.4	26.4	29.4	30.9	30.9
75°	176.4	104.4	42.6	32.3	28.0	25.0	22.1	25.0	29.4	29.4	29.4
77.5°	138.2	85.2	35.3	25.0	23.5	22.1	20.5	23.5	26.4	26.4	26.4
80°	129.4	55.8	28.0	23.5	20.5	19.1	19.1	20.5	23.5	25.0	25.0
82.5°	130.8	45.6	25.0	22.1	19.1	17.6	17.6	19.1	22.1	23.5	23.5
85°	83.8	30.9	22.1	19.1	17.6	16.2	16.2	17.6	20.5	22.1	22.1
87.5°	28.0	23.5	19.1	17.6	14.7	14.7	14.7	14.7	17.6	19.1	20.5
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)