

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: P195129

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195129
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14348 lumens
Efficiency: N/A
Efficacy: 115.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B2 - U0 - G3

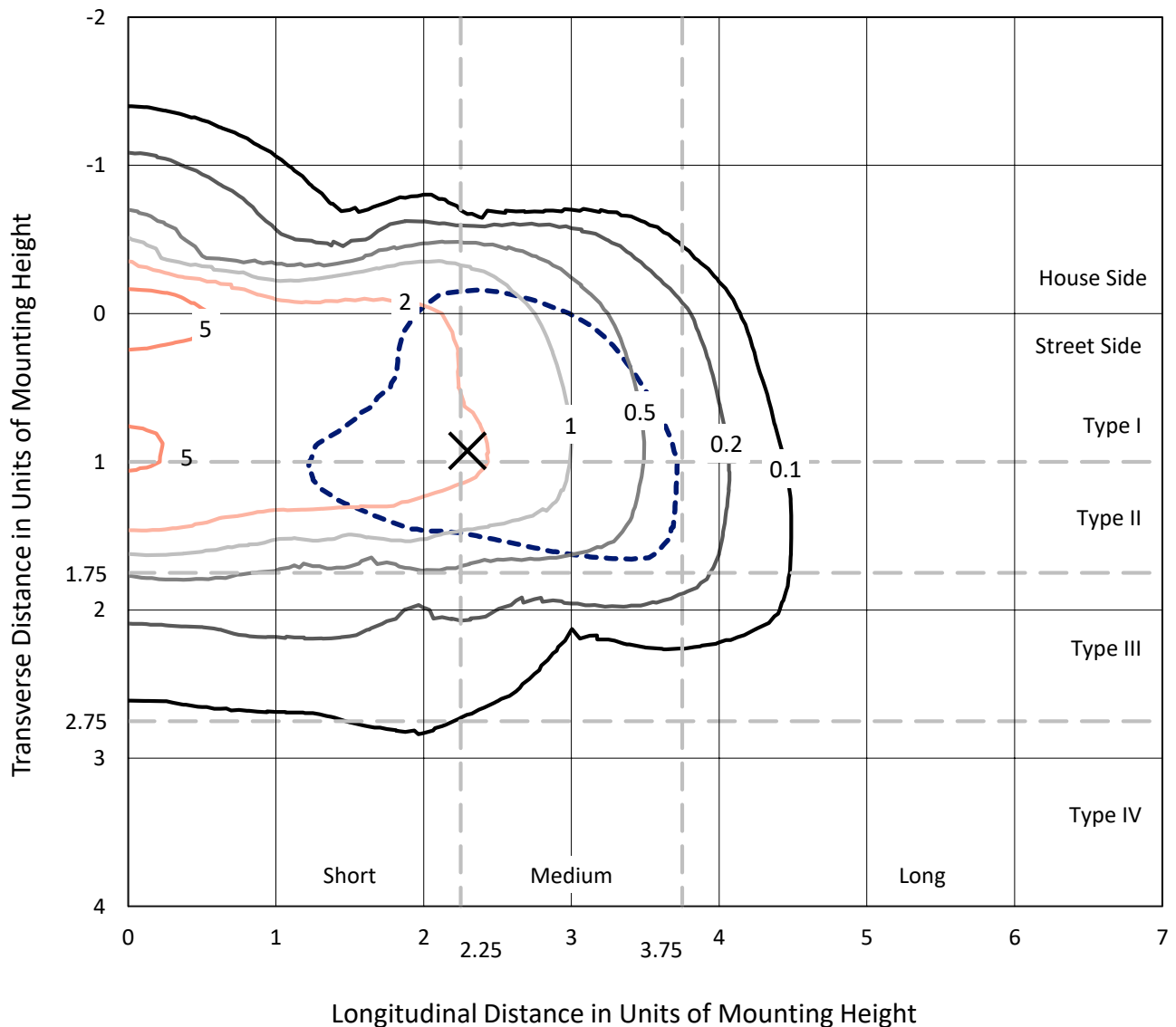
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

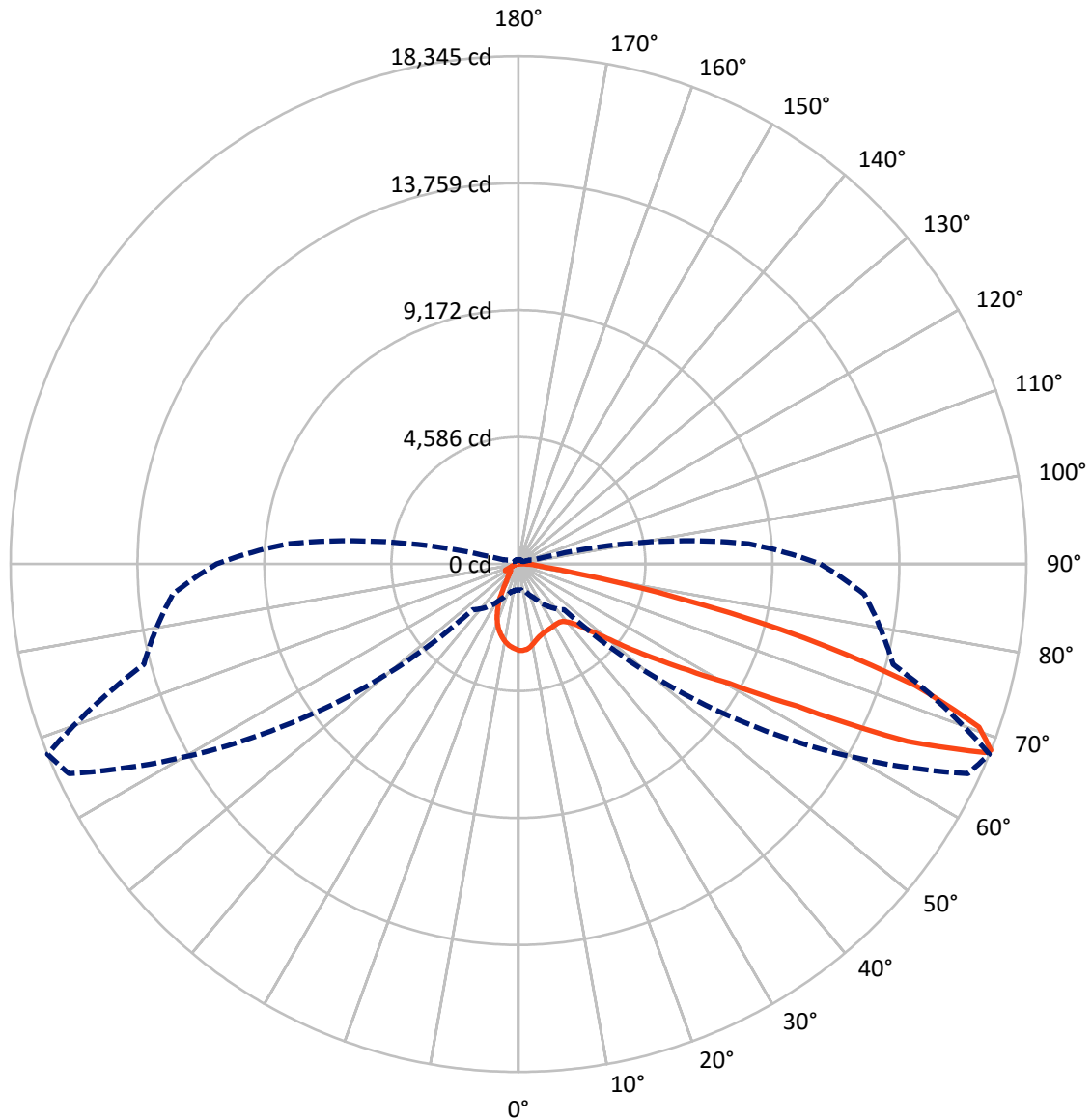
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.8 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2347.4	0.0	2347.4
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	12000.6	0.0	12000.6
	% Fixture	83.6	0.0	83.6
Total	Lumens	14348.0	0.0	14348.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.5	1.9
10°-20°	620.4	4.3
20°-30°	839.1	5.8
30°-40°	1183.1	8.2
40°-50°	1945.5	13.6
50°-60°	3015.7	21.0
60°-70°	3910.1	27.3
70°-80°	2243.8	15.6
80°-90°	322.8	2.3
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°	14348.0	100.0
0°-180°	14348.0	100.0

Coefficient of Utilization



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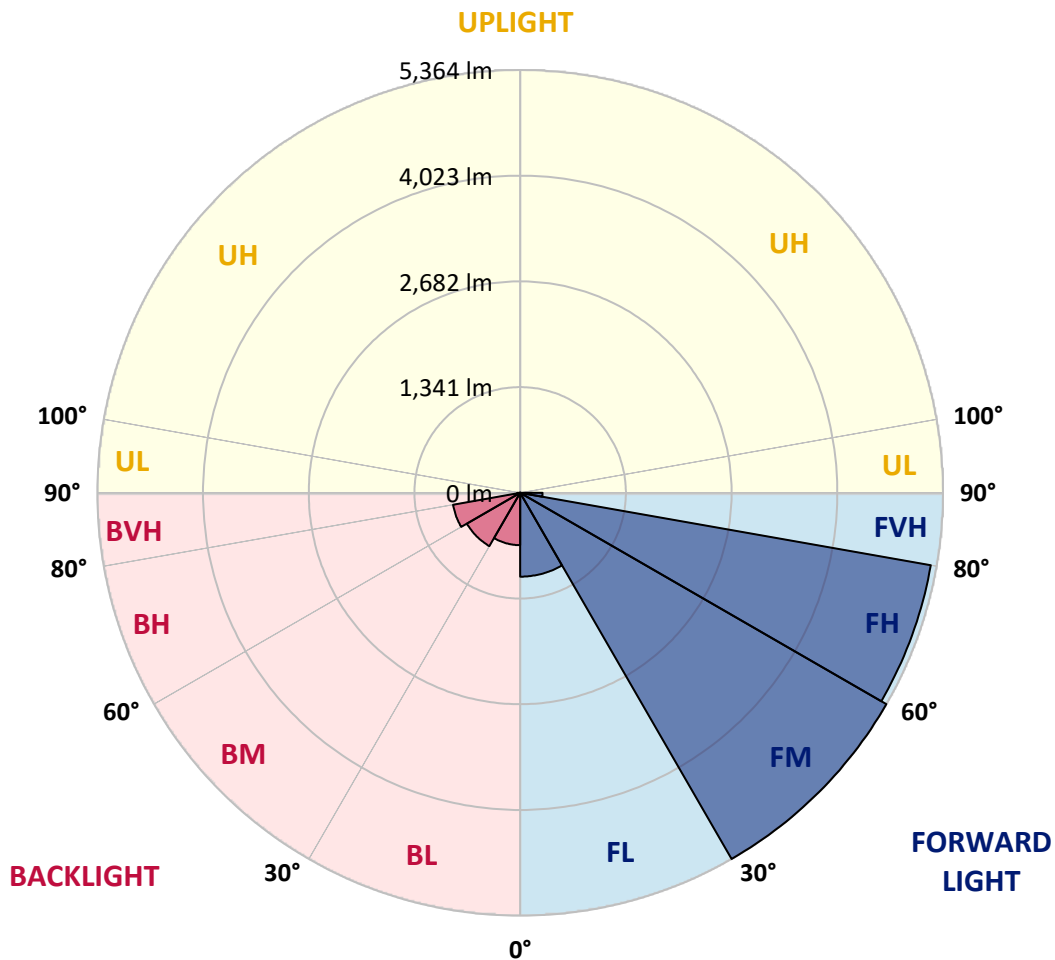
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1063.4	7.4			
FM	(30°-60°)	5363.5	37.4			
FH	(60°-80°)	5289.3	36.9			G3/7500
FVH	(80°-90°)	284.4	2.0			G3/500
BL	(0°-30°)	663.6	4.6	B2/1000		
BM	(30°-60°)	780.8	5.4	B1/1000		
BH	(60°-80°)	864.5	6.0	B2/1000		G2/1000
BVH	(80°-90°)	38.5	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-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0
2.5°	3038.6	3062.9	3062.9	3080.8	3096.7	3109.8	3121.1	3121.1	3121.1	3113.6	3107.0
5°	2719.0	2751.8	2756.5	2801.5	2860.5	2932.7	3013.3	3084.5	3098.6	3124.8	3135.1
7.5°	2496.8	2507.2	2525.0	2555.9	2615.9	2704.9	2831.4	2990.8	3029.2	3111.7	3154.8
10°	2339.4	2347.8	2362.8	2393.7	2448.1	2528.7	2653.4	2860.5	2924.2	3070.4	3155.7
12.5°	2224.1	2230.7	2244.7	2272.8	2328.1	2400.3	2527.8	2743.3	2822.1	3029.2	3168.9
15°	2134.1	2145.4	2156.6	2183.8	2240.0	2309.4	2438.7	2658.1	2743.3	2996.4	3193.2
17.5°	2098.5	2104.1	2106.0	2120.1	2170.7	2241.0	2370.3	2598.1	2686.2	2970.2	3212.0
20°	2121.0	2121.9	2103.2	2093.8	2122.9	2187.6	2313.1	2553.1	2643.1	2946.7	3219.5
22.5°	2219.4	2219.4	2170.7	2129.4	2109.8	2150.1	2274.7	2522.2	2619.6	2928.9	3219.5
25°	2406.9	2398.4	2322.5	2241.0	2153.8	2136.9	2250.3	2502.5	2601.8	2919.5	3207.3
27.5°	2653.4	2645.9	2549.3	2428.4	2271.0	2165.1	2241.9	2486.5	2584.0	2905.5	3181.0
30°	2953.3	2946.7	2837.1	2678.7	2446.2	2254.1	2261.6	2475.3	2570.0	2882.1	3137.0
32.5°	3252.3	3248.5	3161.4	2999.2	2688.0	2405.0	2313.1	2473.4	2562.5	2853.9	3083.6
35°	3553.1	3553.1	3499.7	3362.9	3013.3	2631.8	2420.9	2508.1	2576.5	2838.9	3037.6
37.5°	3997.4	3979.6	3880.2	3738.7	3422.9	2926.1	2595.3	2581.2	2630.9	2864.3	3022.6
40°	4685.3	4633.8	4385.4	4147.4	3869.9	3302.9	2850.2	2722.7	2752.7	2950.5	3058.3
42.5°	5405.2	5323.6	4994.6	4614.1	4332.0	3767.8	3184.8	2952.4	2951.4	3117.3	3171.7
45°	6022.8	5980.6	5624.5	5141.8	4859.7	4290.8	3607.5	3293.5	3259.8	3376.0	3390.1
47.5°	6381.8	6353.7	6139.0	5700.4	5485.8	4908.4	4143.6	3766.8	3703.1	3772.5	3750.9
50°	6282.4	6309.6	6247.7	6023.7	6158.7	5776.3	4826.9	4415.4	4294.5	4363.9	4311.4
52.5°	5759.4	5832.5	5887.8	5931.0	6545.8	6937.6	5685.4	5225.2	5124.9	5112.7	5062.1
55°	4817.5	4933.7	5108.0	5424.8	6441.8	7870.1	7185.0	6204.6	6058.4	5981.6	6001.2
57.5°	3278.5	3454.7	3830.6	4433.2	5901.0	8267.5	9402.5	7469.9	7222.5	6948.8	7012.5
60°	1806.1	1953.2	2400.3	3007.7	4666.6	8208.5	11368.0	9526.3	8747.4	8022.0	8153.2
62.5°	1168.8	1200.6	1533.3	2054.5	2864.3	7246.9	12459.9	12963.2	11312.7	9437.2	9621.9
65°	939.1	961.6	1124.7	1657.1	1995.4	4661.9	12508.6	16528.5	15440.3	11360.5	11366.1
67.5°	917.6	927.9	1022.5	1393.7	1871.7	2538.1	10812.2	17934.4	18186.5	13630.5	12533.0
68°	930.7	942.9	1038.5	1350.6	1870.8	2339.4	9993.0	17912.8	18344.9	14010.1	12533.0
70°	821.0	836.0	1059.1	1397.4	1791.1	2011.3	6842.9	16961.5	17656.9	14882.7	11891.9
72.5°	429.3	417.1	523.9	1103.1	2016.0	2095.7	3615.0	14170.4	14982.0	13783.3	10274.2
75°	334.6	304.6	293.4	435.8	1773.3	2173.5	2099.5	10071.7	10684.7	9935.8	6867.3
77.5°	314.9	278.4	256.8	257.7	780.7	2261.6	1698.3	5927.2	5927.2	4739.7	2191.3
80°	253.1	219.3	205.3	234.3	376.8	2084.5	1772.3	2701.2	2303.8	1225.0	603.6
82.5°	166.8	149.0	150.0	190.3	285.9	1391.8	2052.6	1333.7	1001.9	542.7	355.2
85°	105.9	90.9	101.2	133.1	213.7	620.5	2032.0	926.9	663.6	304.6	177.1
87.5°	53.4	41.2	50.6	69.4	130.3	178.1	1673.0	827.6	492.1	126.5	96.5
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°	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0	3122.0
2.5°	3107.0	3086.4	3076.1	3059.2	3038.6	3018.0	3003.9	2997.3	2993.6	2995.5	2994.5
5°	3129.5	3102.3	3058.3	2995.5	2930.8	2862.4	2809.9	2769.6	2744.3	2736.8	2734.9
7.5°	3146.4	3107.0	3024.5	2910.2	2799.6	2679.6	2577.5	2495.9	2440.6	2415.3	2414.4
10°	3143.6	3092.9	2962.7	2794.0	2631.8	2455.6	2295.3	2158.5	2059.1	2011.3	2009.5
12.5°	3146.4	3077.0	2886.7	2658.1	2425.6	2173.5	1935.4	1722.7	1574.6	1504.3	1501.5
15°	3157.6	3060.1	2809.0	2506.2	2184.7	1828.6	1488.4	1221.2	1086.3	1040.4	1040.4
17.5°	3156.7	3032.0	2719.0	2330.0	1898.9	1421.8	1016.0	851.0	837.9	880.1	886.6
20°	3137.9	2987.0	2602.8	2121.0	1563.3	984.1	688.9	665.5	770.4	886.6	899.8
22.5°	3108.9	2928.9	2468.7	1878.3	1172.5	641.1	531.4	567.0	709.5	853.8	874.5
25°	3068.6	2858.6	2315.0	1596.1	779.8	461.1	443.3	487.4	587.7	684.2	699.2
27.5°	3009.5	2769.6	2147.3	1290.6	497.7	379.6	386.1	417.1	460.2	501.4	509.9
30°	2935.5	2665.6	1964.5	952.3	377.7	339.3	350.5	369.3	388.0	414.3	419.9
32.5°	2860.5	2559.6	1774.2	654.2	329.9	317.7	329.0	339.3	355.2	373.0	376.8
35°	2793.0	2461.2	1578.3	456.4	309.3	303.7	309.3	315.9	331.8	349.6	351.5
37.5°	2744.3	2380.6	1374.0	360.8	297.1	291.5	294.3	297.1	315.9	342.1	344.9
40°	2737.7	2327.2	1166.9	324.3	287.7	280.2	278.4	280.2	304.6	334.6	337.4
42.5°	2801.5	2330.0	964.4	309.3	280.2	271.8	264.3	268.1	289.6	313.0	314.9
45°	2952.4	2395.6	789.2	302.7	273.7	267.1	255.9	257.7	268.1	280.2	282.1
47.5°	3218.5	2539.0	655.1	299.0	268.1	262.4	248.4	242.7	243.7	250.2	250.2
50°	3644.0	2779.0	573.6	295.2	263.4	253.1	237.1	225.9	223.1	226.8	227.8
52.5°	4278.6	3190.4	534.2	287.7	254.9	240.9	223.1	211.8	207.1	210.9	210.9
55°	5136.2	3847.4	515.5	277.4	244.6	225.9	209.9	200.6	196.8	199.6	199.6
57.5°	6113.7	4701.3	547.4	263.4	231.5	209.9	198.7	192.1	189.3	192.1	193.1
60°	7275.0	5818.5	766.7	245.6	217.4	195.9	189.3	185.6	183.7	186.5	186.5
62.5°	8818.6	7305.0	1186.6	231.5	202.4	182.8	180.9	179.0	177.1	180.0	180.0
65°	10485.1	8657.4	1221.2	223.1	189.3	171.5	172.5	172.5	170.6	173.4	173.4
67.5°	11015.6	8540.3	682.3	212.8	173.4	160.3	164.0	164.0	163.1	165.9	165.0
68°	10903.1	8354.7	594.2	209.9	170.6	157.5	161.2	162.1	161.2	164.0	163.1
70°	10065.2	7335.0	390.8	194.0	158.4	148.1	153.7	154.6	153.7	157.5	156.5
72.5°	8308.8	5501.7	288.7	169.6	143.4	135.9	141.5	142.5	143.4	147.1	146.2
75°	5276.7	3038.6	227.8	144.3	128.4	121.8	127.5	130.3	132.2	137.8	135.0
77.5°	1445.2	922.3	184.6	122.8	110.6	107.8	111.5	115.3	117.2	123.7	119.0
80°	506.1	407.7	153.7	104.0	91.9	90.9	94.7	98.4	100.3	105.9	100.3
82.5°	307.4	266.2	122.8	81.5	72.2	71.2	75.9	79.7	81.5	81.5	77.8
85°	160.3	140.6	90.0	57.2	49.7	46.9	55.3	60.0	60.9	60.0	57.2
87.5°	90.0	79.7	47.8	27.2	22.5	23.4	29.1	35.6	38.4	37.5	35.6
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)