

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: P196617

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196617
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
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-SL3-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14135.9 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G3

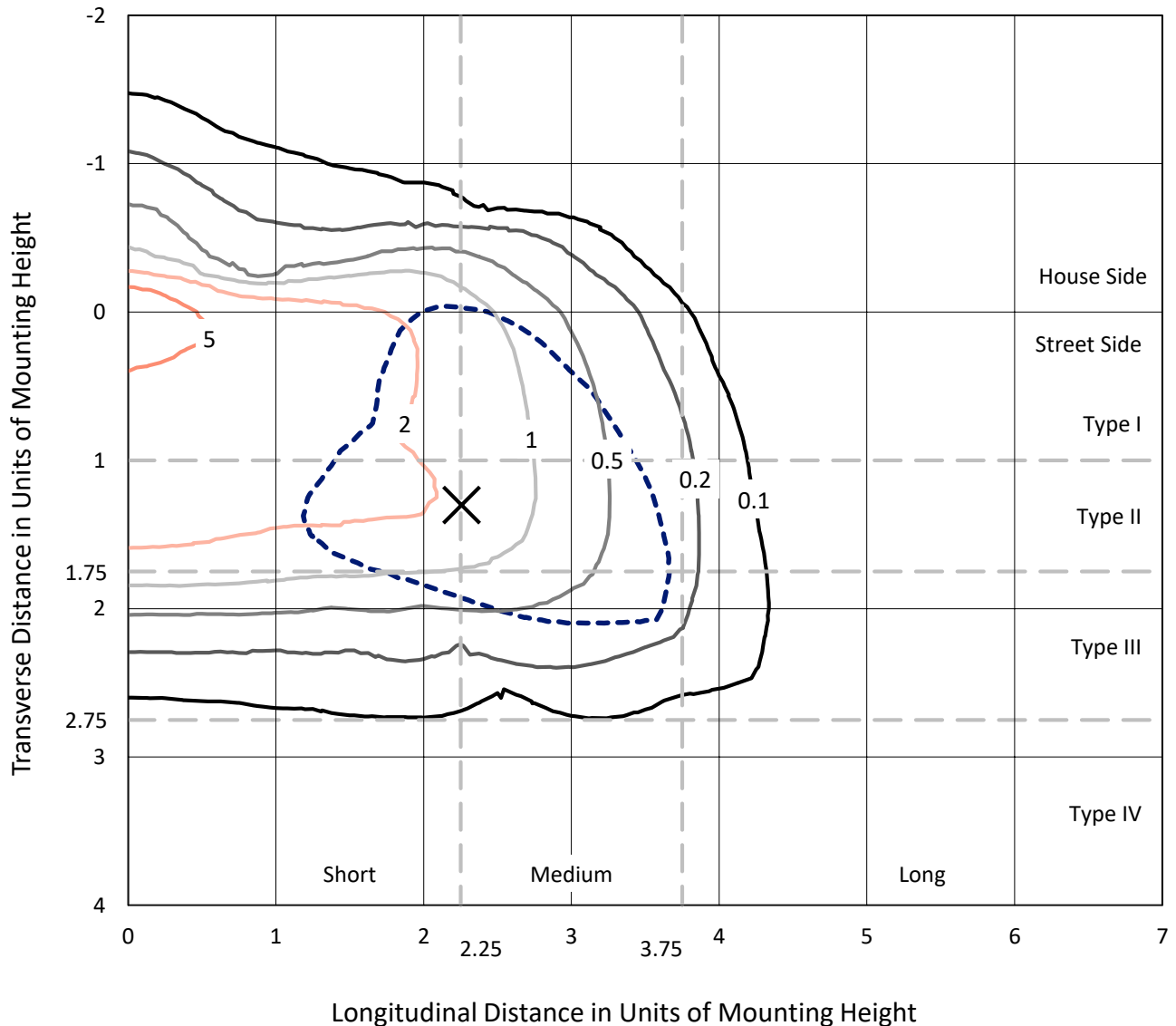
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

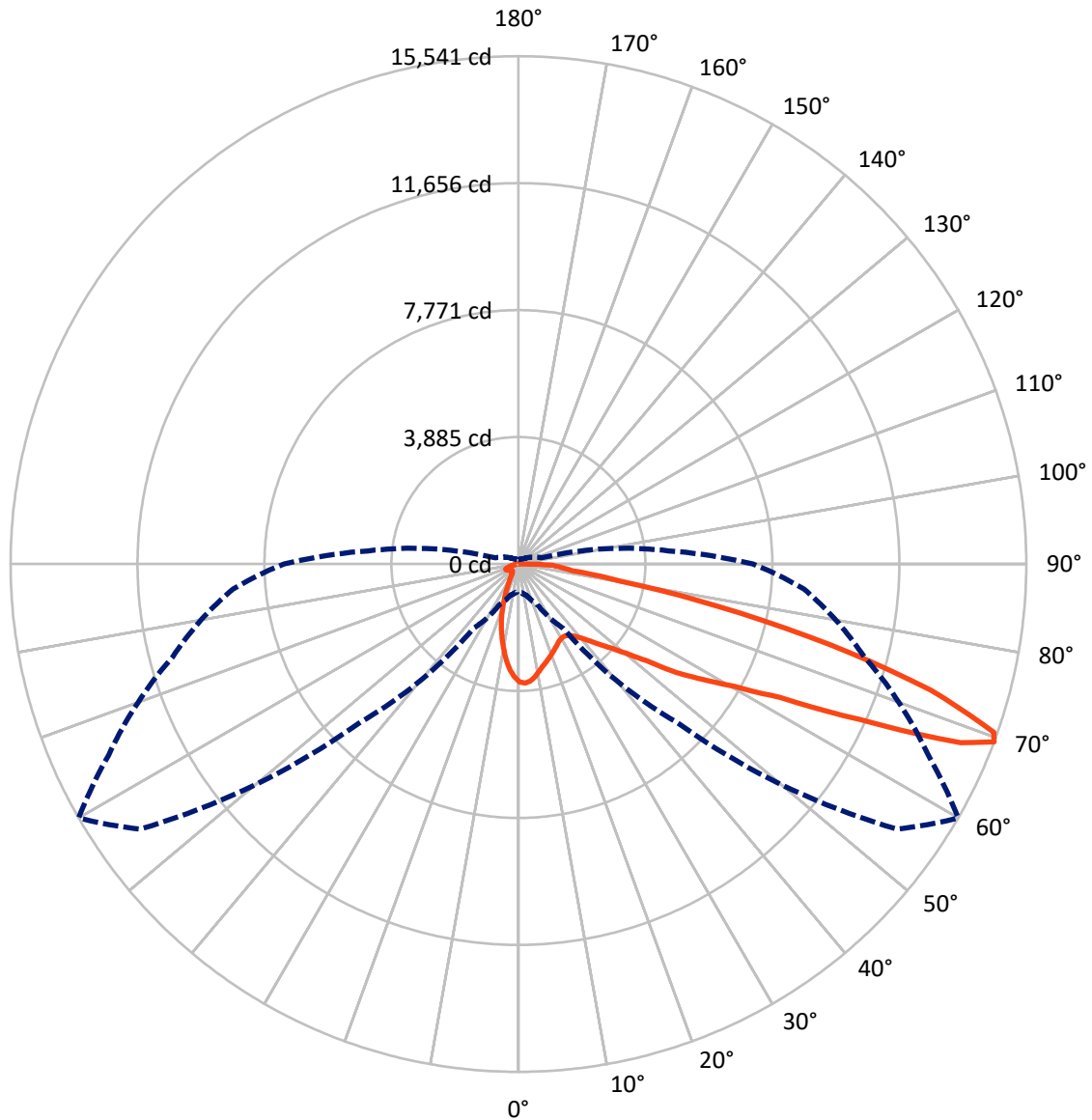
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2016.2	0.0	2016.2
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	12119.7	0.0	12119.7
	% Fixture	85.7	0.0	85.7
Total	Lumens	14135.9	0.0	14135.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	306.0	2.2
10°-20°	655.1	4.6
20°-30°	835.8	5.9
30°-40°	1150.1	8.1
40°-50°	1862.9	13.2
50°-60°	2923.8	20.7
60°-70°	3897.9	27.6
70°-80°	2168.1	15.3
80°-90°	336.3	2.4
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°	14135.9	100.0
0°-180°	14135.9	100.0

Coefficient of Utilization



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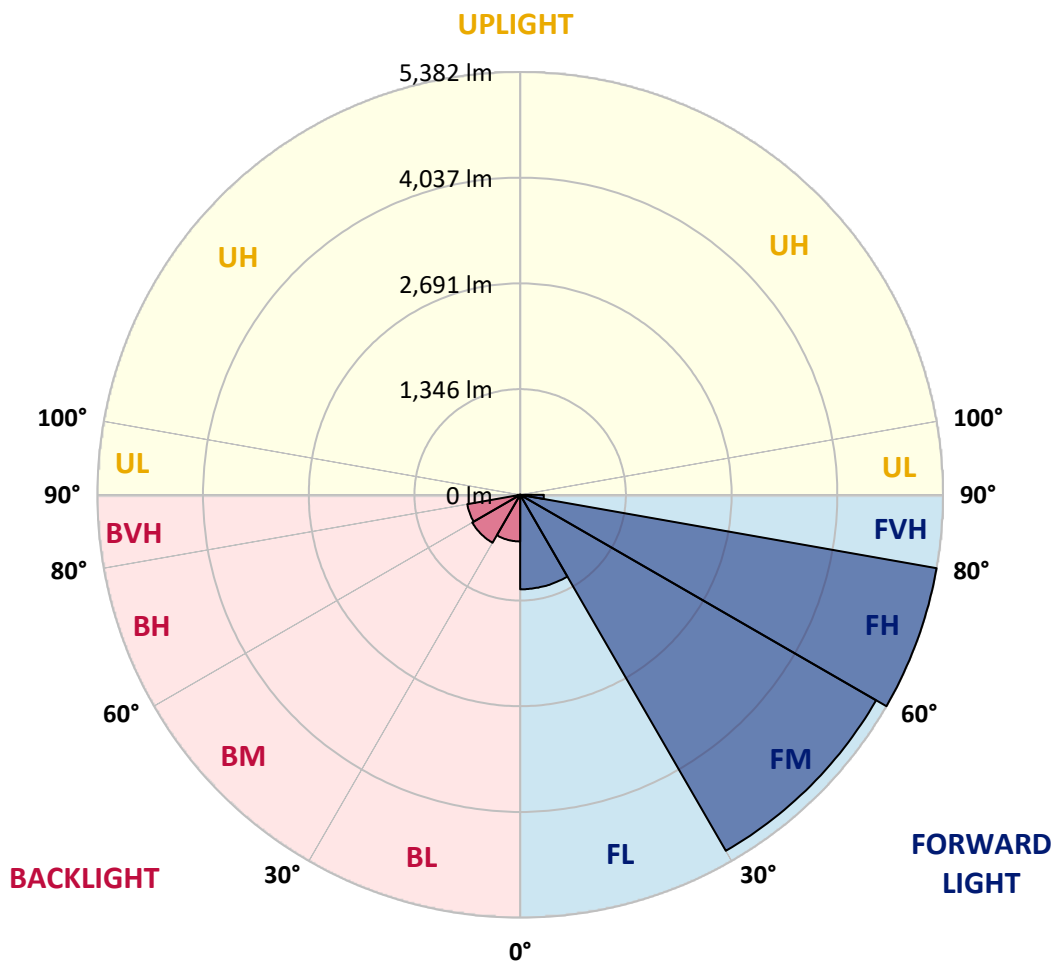
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1202.7	8.5			
FM	(30°-60°)	5232.4	37.0			
FH	(60°-80°)	5382.4	38.1			G3/7500
FVH	(80°-90°)	302.2	2.1			G3/500
BL	(0°-30°)	594.2	4.2	B2/1000		
BM	(30°-60°)	704.4	5.0	B1/1000		
BH	(60°-80°)	683.6	4.8	B2/1000		G2/1000
BVH	(80°-90°)	34.1	0.2			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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8
2.5°	3702.9	3712.8	3712.8	3704.8	3700.2	3674.0	3658.5	3647.6	3628.6	3593.2	3561.6
5°	3570.6	3589.6	3597.8	3601.4	3625.0	3616.8	3617.7	3610.5	3594.2	3556.1	3504.4
7.5°	3327.6	3331.4	3345.7	3370.2	3427.4	3467.3	3499.9	3506.2	3502.7	3474.5	3402.0
10°	3088.3	3094.7	3111.9	3153.5	3208.0	3265.1	3335.8	3364.8	3386.6	3377.5	3286.0
12.5°	2889.8	2890.7	2909.8	2957.7	3018.5	3090.2	3186.2	3231.6	3283.2	3304.1	3201.7
15°	2698.6	2711.3	2729.4	2787.4	2862.6	2953.3	3063.8	3126.5	3194.4	3254.2	3136.4
17.5°	2553.5	2563.4	2574.3	2622.4	2709.4	2822.7	2959.7	3026.7	3116.4	3208.0	3069.3
20°	2473.7	2477.4	2469.3	2492.8	2566.2	2688.6	2847.2	2927.9	3034.9	3163.6	3000.4
22.5°	2457.5	2457.5	2427.5	2423.1	2455.6	2559.0	2731.2	2830.1	2960.5	3132.8	2938.7
25°	2533.6	2528.2	2472.0	2420.3	2408.5	2461.1	2620.6	2742.1	2897.1	3131.8	2892.5
27.5°	2677.7	2670.4	2600.7	2513.6	2438.4	2415.7	2535.4	2659.6	2847.2	3162.6	2868.9
30°	2857.2	2854.5	2783.8	2675.0	2550.7	2433.9	2501.8	2617.0	2813.7	3219.8	2868.0
32.5°	3053.9	3041.2	2997.6	2889.0	2727.5	2534.5	2521.8	2618.8	2804.5	3303.1	2889.0
35°	3263.2	3254.2	3243.4	3133.7	2952.4	2712.2	2609.7	2681.3	2849.1	3419.2	2947.9
37.5°	3529.8	3519.8	3538.0	3418.2	3219.8	2945.1	2758.4	2806.5	2939.7	3587.7	3057.5
40°	4004.0	3974.9	3924.0	3740.1	3531.6	3230.7	2973.2	2980.5	3094.7	3813.4	3233.4
42.5°	4782.5	4689.2	4438.1	4100.0	3860.6	3562.4	3253.3	3218.9	3308.6	4111.8	3488.9
45°	5563.1	5457.8	5033.6	4492.4	4201.4	3918.7	3599.5	3517.0	3575.1	4458.9	3818.1
47.5°	6066.9	6015.3	5536.7	4885.0	4558.7	4306.7	3995.7	3859.7	3901.4	4852.3	4224.2
50°	6214.7	6170.3	5794.1	5192.2	4895.8	4775.2	4486.0	4305.7	4313.0	5311.8	4710.9
52.5°	6104.2	6086.1	5836.7	5382.6	5205.8	5269.2	5165.0	4913.9	4854.2	5815.9	5238.4
55°	5956.4	5962.8	5866.6	5573.9	5521.3	5729.8	6053.4	5851.3	5597.5	6340.8	5787.8
57.5°	5491.4	5496.0	5747.9	5938.2	6123.2	6375.2	6745.0	6659.8	6364.4	6907.3	6403.2
60°	4421.7	4457.1	5018.2	5863.1	6811.2	7646.9	7737.6	7590.8	7180.1	7559.9	7203.7
62.5°	3159.0	3190.8	3840.7	5089.9	6730.5	9086.4	9570.4	8986.7	8286.9	8536.2	8329.5
65°	1659.7	1654.3	2157.5	3517.0	5669.0	9420.0	12458.5	11465.0	10151.5	9878.6	9417.3
67.5°	927.3	957.2	1152.1	1774.0	3694.7	8290.6	14303.1	14596.0	12744.0	10943.7	9370.2
69°	857.4	867.5	998.0	1371.5	2408.5	6840.1	14144.4	15541.4	13837.2	10948.4	8766.4
70°	833.0	843.9	962.7	1263.6	2023.3	5604.7	13567.2	15430.8	14102.8	10705.3	8217.2
72.5°	746.9	761.4	876.6	1135.8	1705.1	2889.0	10928.3	13207.3	12774.8	9356.5	6371.6
75°	637.2	661.7	835.8	1127.7	1615.3	1836.5	7288.0	9839.7	9508.0	6691.6	3615.0
77.5°	263.8	266.5	365.3	825.8	1695.0	1757.7	3916.8	6232.9	5517.7	2934.2	1088.7
80°	184.0	180.4	182.3	241.1	1367.8	1769.5	2009.6	3169.9	2463.8	774.1	509.4
82.5°	155.0	153.2	160.4	151.5	463.3	2007.8	1680.6	1652.4	1160.4	417.0	242.9
85°	102.4	99.8	131.4	137.7	220.2	1594.5	1807.4	1299.0	864.8	223.0	103.4
87.5°	49.8	50.8	75.3	93.4	116.9	504.9	1731.3	1027.0	668.1	97.0	41.7
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°	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8	3606.8
2.5°	3548.8	3521.7	3497.2	3466.4	3442.8	3422.9	3395.7	3394.6	3390.2	3396.6	3398.4
5°	3470.0	3424.6	3355.8	3278.7	3224.3	3152.6	3082.9	3059.4	3033.0	3030.3	3038.5
7.5°	3351.2	3280.5	3162.6	3044.8	2926.9	2806.5	2692.2	2634.2	2578.0	2560.8	2568.9
10°	3218.9	3129.0	2948.7	2756.6	2590.6	2411.3	2237.2	2124.8	2022.3	1978.8	1989.7
12.5°	3115.5	3001.4	2747.6	2498.2	2249.8	1992.5	1763.1	1541.0	1373.3	1298.1	1302.6
15°	3026.7	2880.7	2559.0	2227.1	1916.3	1563.6	1245.4	988.0	841.2	786.7	785.0
17.5°	2930.7	2753.9	2362.3	1975.2	1571.8	1135.8	833.9	681.7	623.7	605.6	605.6
20°	2828.1	2623.4	2156.4	1700.5	1209.3	793.1	627.2	568.3	546.7	541.2	540.3
22.5°	2733.0	2495.5	1949.8	1407.7	874.7	601.9	533.9	511.3	507.6	512.2	512.2
25°	2657.7	2383.1	1740.4	1099.5	636.3	504.0	474.9	472.2	485.8	502.1	504.9
27.5°	2601.6	2282.5	1533.8	803.2	500.4	438.6	428.8	440.6	472.2	504.9	511.3
30°	2562.5	2196.3	1286.3	577.4	417.0	384.4	388.9	409.7	457.8	507.6	521.1
32.5°	2545.4	2126.6	1037.0	443.3	356.3	338.1	349.8	377.1	426.9	476.8	493.1
35°	2561.7	2075.8	806.8	367.9	311.8	298.3	311.8	339.9	372.6	397.0	407.0
37.5°	2620.6	2057.7	607.4	326.3	282.9	269.3	280.1	299.2	313.7	322.8	327.2
40°	2744.8	2076.7	476.0	304.7	266.5	251.1	253.8	262.9	272.8	280.1	281.1
42.5°	2942.4	2139.3	423.3	296.4	256.5	236.5	232.0	238.4	249.3	259.3	261.0
45°	3205.2	2243.5	417.9	299.2	252.0	224.8	215.8	222.2	236.5	252.9	255.6
47.5°	3545.3	2408.5	443.3	313.7	254.7	218.4	204.9	211.2	230.2	252.0	255.6
50°	3947.6	2636.9	490.3	335.4	267.3	218.4	200.4	205.7	225.7	250.2	253.8
52.5°	4421.7	2955.1	539.3	357.2	285.5	226.6	202.1	201.2	219.4	242.0	246.6
55°	4944.7	3350.3	586.5	376.2	295.5	237.5	206.7	195.8	210.4	228.5	232.0
57.5°	5560.3	3891.5	669.0	394.3	300.9	245.7	212.1	190.3	198.6	211.2	213.9
60°	6395.2	4686.4	829.4	425.1	311.0	249.3	213.0	184.8	184.0	193.1	193.9
62.5°	7483.8	5617.3	982.6	461.4	330.8	250.2	209.3	181.3	172.2	175.0	175.0
65°	8258.0	5960.0	938.2	492.2	349.0	249.3	205.7	178.5	163.2	158.7	158.7
67.5°	7817.4	5264.7	796.8	500.4	350.8	239.3	197.6	172.2	155.0	144.1	144.1
69°	7170.1	4614.8	731.5	485.8	336.3	227.5	188.6	165.8	149.5	136.9	136.9
70°	6642.6	4122.6	691.6	468.6	319.0	217.5	180.4	159.5	144.1	133.3	132.3
72.5°	4959.3	2751.1	591.0	404.3	262.0	184.0	157.8	142.4	129.6	122.4	122.4
75°	2617.0	1378.8	484.0	330.0	202.1	146.9	129.6	119.6	112.4	111.5	110.6
77.5°	857.4	623.7	348.1	248.3	148.7	114.1	103.4	97.0	96.0	99.8	99.8
80°	463.3	372.6	223.9	167.7	103.4	85.2	79.8	78.8	81.6	87.0	87.0
82.5°	224.8	184.0	133.3	103.4	70.7	62.5	62.5	63.5	67.0	73.4	73.4
85°	97.0	87.0	77.0	58.0	43.4	39.0	44.5	48.9	51.7	56.2	58.0
87.5°	46.2	40.8	35.4	22.6	19.0	20.0	23.6	29.0	34.4	38.0	39.0
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)