

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: P197098

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197098
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-04-D-UNV-SL3-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 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: 16063 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G3

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

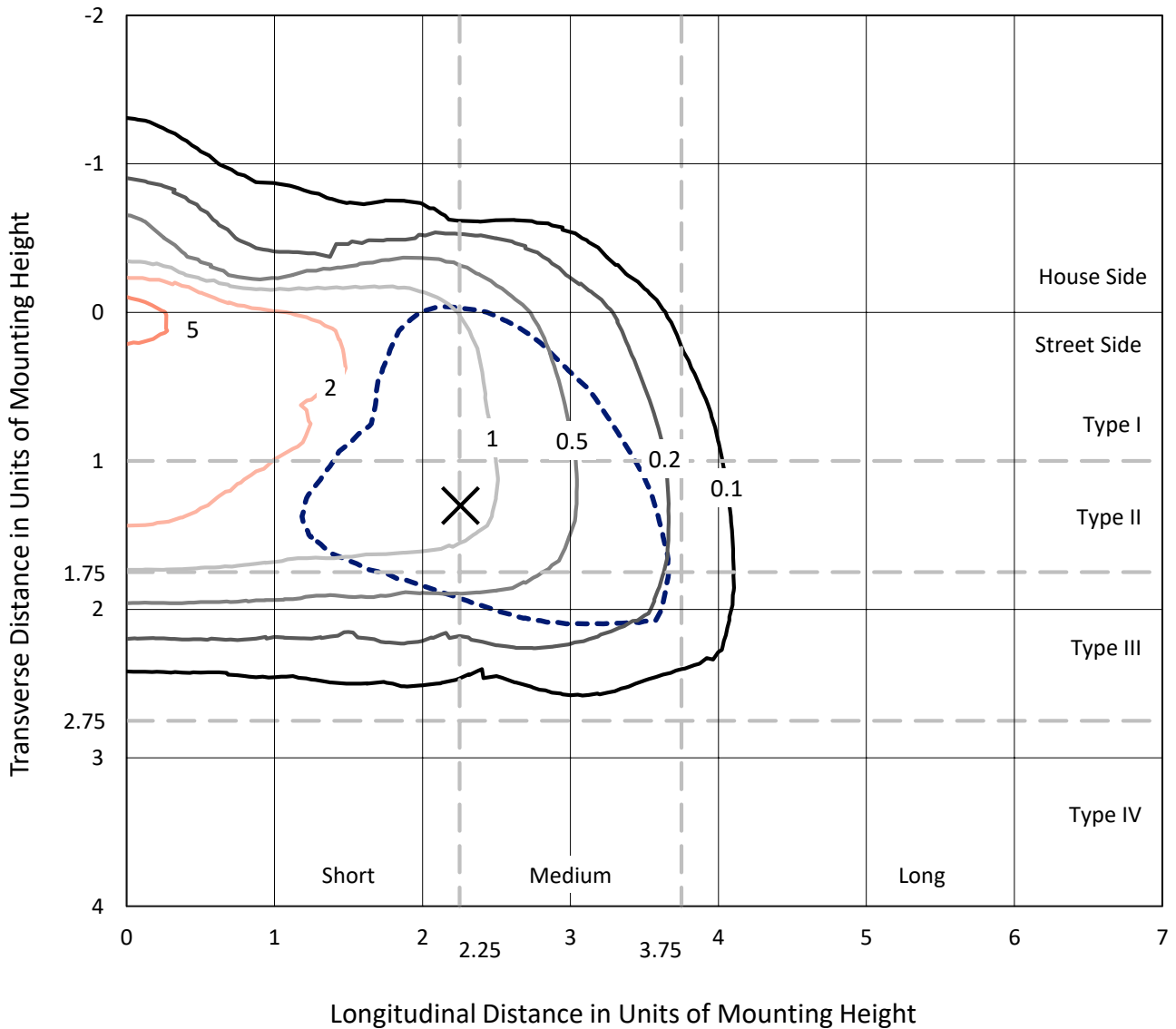


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Iso-Footcandle Lines of Horizontal Illumination

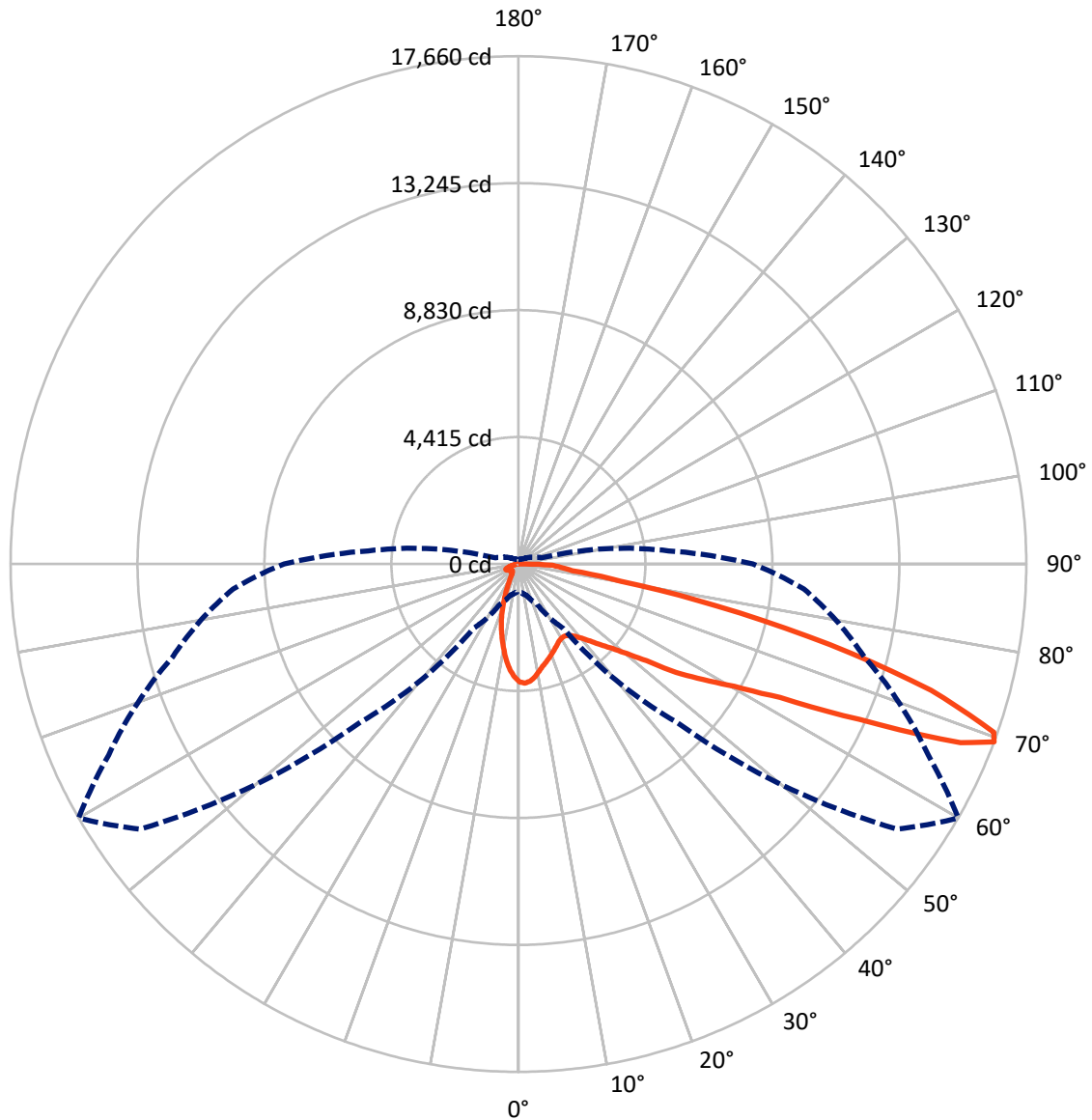
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 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	2291.1	0.0	2291.1
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	13771.9	0.0	13771.9
	% Fixture	85.7	0.0	85.7
Total	Lumens	16063.0	0.0	16063.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.7	2.2
10°-20°	744.5	4.6
20°-30°	949.7	5.9
30°-40°	1306.9	8.1
40°-50°	2116.9	13.2
50°-60°	3322.3	20.7
60°-70°	4429.3	27.6
70°-80°	2463.7	15.3
80°-90°	382.1	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°	16063.0	100.0
0°-180°	16063.0	100.0

Coefficient of Utilization



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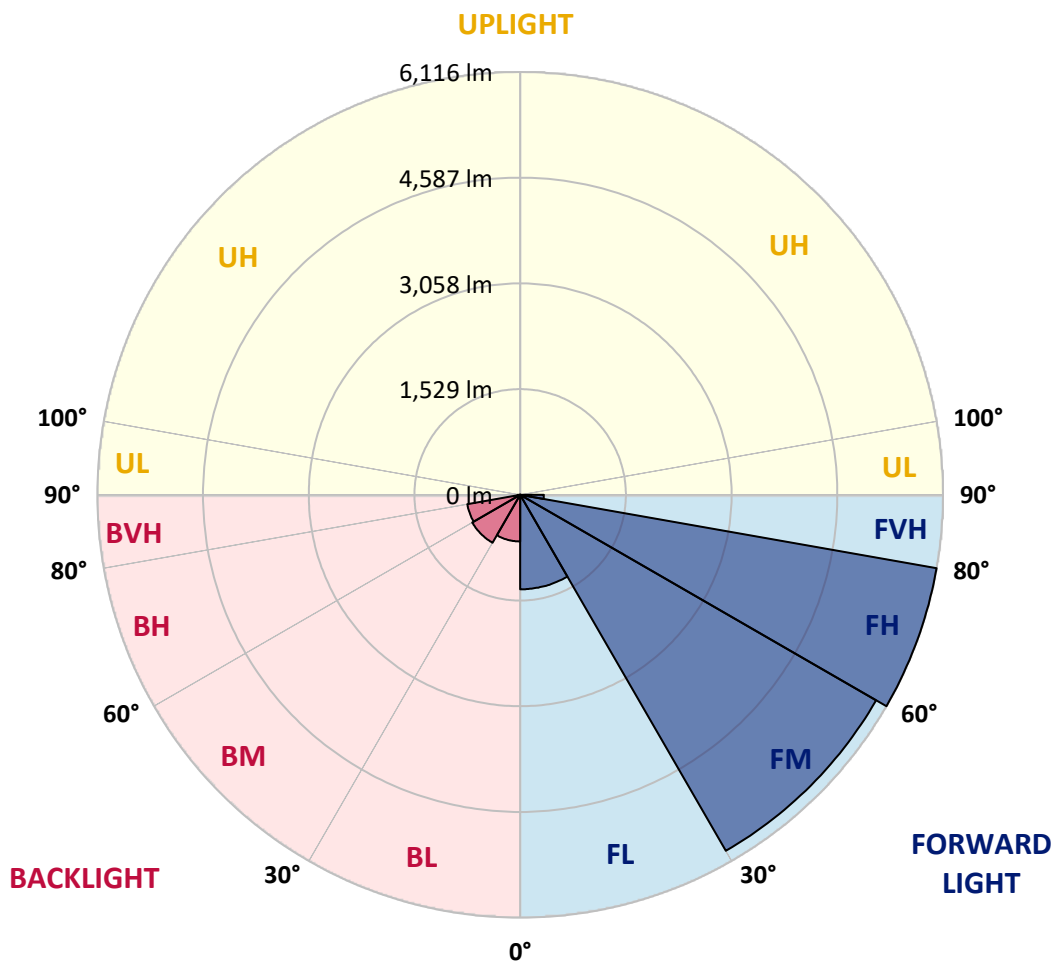
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1366.6	8.5			
FM	(30°-60°)	5945.7	37.0			
FH	(60°-80°)	6116.2	38.1			G3/7500
FVH	(80°-90°)	343.4	2.1			G3/500
BL	(0°-30°)	675.2	4.2	B2/1000		
BM	(30°-60°)	800.4	5.0	B1/1000		
BH	(60°-80°)	776.8	4.8	B2/1000		G2/1000
BVH	(80°-90°)	38.7	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°	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5
2.5°	4207.7	4219.0	4219.0	4209.8	4204.6	4174.7	4157.2	4144.9	4123.2	4083.1	4047.0
5°	4057.3	4079.0	4088.2	4092.3	4119.1	4109.9	4110.9	4102.6	4084.1	4040.8	3982.1
7.5°	3781.3	3785.4	3801.9	3829.7	3894.6	3939.9	3977.0	3984.2	3980.1	3948.1	3865.7
10°	3509.3	3516.6	3536.1	3583.5	3645.3	3710.2	3790.5	3823.5	3848.2	3837.9	3733.9
12.5°	3283.8	3284.8	3306.4	3361.0	3430.0	3511.4	3620.6	3672.1	3730.8	3754.5	3638.1
15°	3066.4	3080.8	3101.4	3167.4	3252.9	3355.9	3481.5	3552.6	3629.9	3697.8	3563.9
17.5°	2901.6	2913.0	2925.3	2979.9	3078.8	3207.5	3363.1	3439.3	3541.3	3645.3	3487.7
20°	2811.0	2815.1	2805.8	2832.6	2916.0	3055.1	3235.4	3327.0	3448.6	3594.8	3409.4
22.5°	2792.4	2792.4	2758.4	2753.3	2790.4	2907.8	3103.5	3215.8	3364.1	3559.8	3339.4
25°	2879.0	2872.8	2808.9	2750.2	2736.8	2796.6	2977.8	3115.9	3292.0	3558.8	3286.9
27.5°	3042.7	3034.5	2955.2	2856.3	2770.8	2745.1	2881.0	3022.1	3235.4	3593.8	3260.1
30°	3246.7	3243.6	3163.2	3039.6	2898.5	2765.7	2842.9	2973.7	3197.2	3658.7	3259.0
32.5°	3470.2	3455.8	3406.3	3282.7	3099.4	2880.0	2865.6	2975.8	3186.9	3753.5	3282.7
35°	3708.1	3697.8	3685.5	3560.8	3354.8	3081.9	2965.5	3046.9	3237.4	3885.3	3349.7
37.5°	4011.0	3999.6	4020.2	3884.3	3658.7	3346.6	3134.4	3189.0	3340.4	4076.9	3474.3
40°	4549.7	4516.7	4459.0	4249.9	4013.0	3671.1	3378.5	3386.8	3516.6	4333.4	3674.1
42.5°	5434.5	5328.4	5043.1	4658.9	4386.9	4048.1	3696.8	3657.7	3759.6	4672.3	3964.6
45°	6321.3	6201.9	5719.8	5104.9	4774.2	4452.9	4090.3	3996.6	4062.5	5066.8	4338.5
47.5°	6894.1	6835.3	6291.5	5550.9	5180.1	4893.7	4540.4	4385.9	4433.3	5513.8	4800.0
50°	7061.9	7011.5	6584.0	5900.1	5563.2	5426.2	5097.7	4892.7	4900.9	6036.0	5353.1
52.5°	6936.3	6915.7	6632.4	6116.4	5915.5	5987.6	5869.2	5583.8	5515.9	6608.7	5952.6
55°	6768.4	6775.6	6666.4	6333.7	6274.0	6510.9	6878.6	6648.9	6360.5	7205.1	6576.8
57.5°	6240.0	6245.1	6531.5	6747.8	6957.9	7244.3	7664.5	7567.7	7231.9	7848.9	7276.2
60°	5024.5	5064.7	5702.3	6662.3	7739.7	8689.4	8792.4	8625.5	8158.9	8590.5	8185.7
62.5°	3589.7	3625.7	4364.3	5783.7	7648.0	10325.1	10875.2	10211.8	9416.6	9699.9	9465.0
65°	1886.0	1879.8	2451.5	3996.6	6441.9	10704.2	14156.9	13027.9	11535.4	11225.4	10701.1
67.5°	1053.7	1087.7	1309.2	2015.8	4198.4	9420.7	16253.0	16585.7	14481.3	12435.7	10647.5
69°	974.4	985.7	1134.1	1558.4	2736.8	7772.7	16072.7	17660.0	15723.5	12440.8	9961.5
70°	946.6	959.0	1093.9	1435.9	2299.0	6368.7	15416.6	17534.4	16025.3	12164.8	9337.3
72.5°	848.8	865.2	996.0	1290.6	1937.5	3282.7	12418.2	15007.7	14516.3	10632.1	7240.1
75°	724.1	751.9	949.7	1281.4	1835.5	2086.9	8281.5	11181.1	10804.1	7603.7	4107.8
77.5°	299.7	302.8	415.1	938.4	1926.2	1997.2	4450.8	7082.5	6269.8	3334.2	1237.1
80°	209.1	205.0	207.0	274.0	1554.3	2010.6	2283.6	3602.0	2799.6	879.7	578.9
82.5°	176.1	174.1	182.3	172.0	526.3	2281.5	1909.7	1877.8	1318.4	473.8	276.1
85°	116.4	113.3	149.4	156.6	250.3	1811.8	2053.9	1476.0	982.7	253.4	117.4
87.5°	56.7	57.7	85.5	106.1	132.9	573.7	1967.4	1167.0	759.1	110.2	47.4
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°	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5	4098.5
2.5°	4032.6	4001.7	3973.9	3938.9	3912.1	3889.4	3858.5	3857.5	3852.3	3859.6	3861.6
5°	3943.0	3891.5	3813.2	3725.7	3663.8	3582.5	3503.2	3476.4	3446.5	3443.4	3452.7
7.5°	3808.1	3727.7	3593.8	3459.9	3326.0	3189.0	3059.2	2993.3	2929.4	2909.9	2919.1
10°	3657.7	3555.7	3350.7	3132.3	2943.9	2739.9	2542.1	2414.4	2298.0	2248.6	2260.9
12.5°	3540.2	3410.5	3122.0	2838.8	2556.6	2264.0	2003.4	1751.1	1560.5	1475.0	1480.2
15°	3439.3	3273.5	2907.8	2530.8	2177.5	1776.8	1415.3	1122.7	955.9	894.1	892.0
17.5°	3330.1	3129.3	2684.3	2244.5	1786.1	1290.6	947.6	774.6	708.7	688.1	688.1
20°	3213.7	2980.9	2450.5	1932.4	1374.1	901.3	712.8	645.8	621.1	614.9	613.9
22.5°	3105.6	2835.7	2215.6	1599.7	994.0	683.9	606.7	580.9	576.8	582.0	582.0
25°	3020.1	2708.0	1977.7	1249.4	723.1	572.7	539.7	536.7	552.1	570.6	573.7
27.5°	2956.2	2593.6	1742.8	912.6	568.6	498.5	487.2	500.6	536.7	573.7	580.9
30°	2911.9	2495.8	1461.6	656.1	473.8	436.7	441.9	465.6	520.2	576.8	592.3
32.5°	2892.3	2416.5	1178.4	503.7	404.8	384.2	397.6	428.5	485.1	541.8	560.3
35°	2910.9	2358.8	916.7	418.2	354.3	338.9	354.3	386.3	423.3	451.2	462.5
37.5°	2977.8	2338.2	690.1	370.8	321.4	305.9	318.3	339.9	356.4	366.7	371.8
40°	3119.0	2359.8	540.8	346.1	302.8	285.3	288.4	298.7	310.0	318.3	319.3
42.5°	3343.5	2430.9	481.0	336.8	291.5	268.8	263.7	270.9	283.3	294.6	296.7
45°	3642.2	2549.3	474.8	339.9	286.4	255.4	245.1	252.4	268.8	287.4	290.5
47.5°	4028.5	2736.8	503.7	356.4	289.4	248.2	232.8	240.0	261.6	286.4	290.5
50°	4485.8	2996.4	557.3	381.1	303.9	248.2	227.6	233.8	256.5	284.3	288.4
52.5°	5024.5	3357.9	612.9	405.8	324.5	257.5	229.7	228.7	249.3	275.0	280.2
55°	5618.9	3807.0	666.4	427.5	335.8	269.9	234.8	222.5	239.0	259.6	263.7
57.5°	6318.3	4422.0	760.2	448.1	342.0	279.1	241.0	216.3	225.6	240.0	243.1
60°	7266.9	5325.3	942.5	483.1	353.3	283.3	242.1	210.1	209.1	219.4	220.4
62.5°	8504.0	6383.2	1116.6	524.3	376.0	284.3	237.9	206.0	195.7	198.8	198.8
65°	9383.7	6772.5	1066.1	559.3	396.6	283.3	233.8	202.9	185.4	180.3	180.3
67.5°	8883.1	5982.5	905.4	568.6	398.6	271.9	224.5	195.7	176.1	163.8	163.8
69°	8147.6	5243.9	831.2	552.1	382.1	258.5	214.2	188.5	170.0	155.5	155.5
70°	7548.1	4684.6	785.9	532.5	362.6	247.2	205.0	181.3	163.8	151.4	150.4
72.5°	5635.3	3126.2	671.6	459.4	297.7	209.1	179.2	161.7	147.3	139.1	139.1
75°	2973.7	1566.7	550.0	374.9	229.7	166.9	147.3	136.0	127.7	126.7	125.7
77.5°	974.4	708.7	395.5	282.2	168.9	129.8	117.4	110.2	109.2	113.3	113.3
80°	526.3	423.3	254.4	190.6	117.4	96.8	90.6	89.6	92.7	98.9	98.9
82.5°	255.4	209.1	151.4	117.4	80.3	71.1	71.1	72.1	76.2	83.4	83.4
85°	110.2	98.9	87.6	65.9	49.4	44.3	50.5	55.6	58.7	63.9	65.9
87.5°	52.5	46.4	40.2	25.8	21.6	22.7	26.8	33.0	39.1	43.3	44.3
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)