

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: P197106

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197106
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-06-D-UNV-SL3-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1050mA 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: 29356 lumens
Efficiency: N/A
Efficacy: 88.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

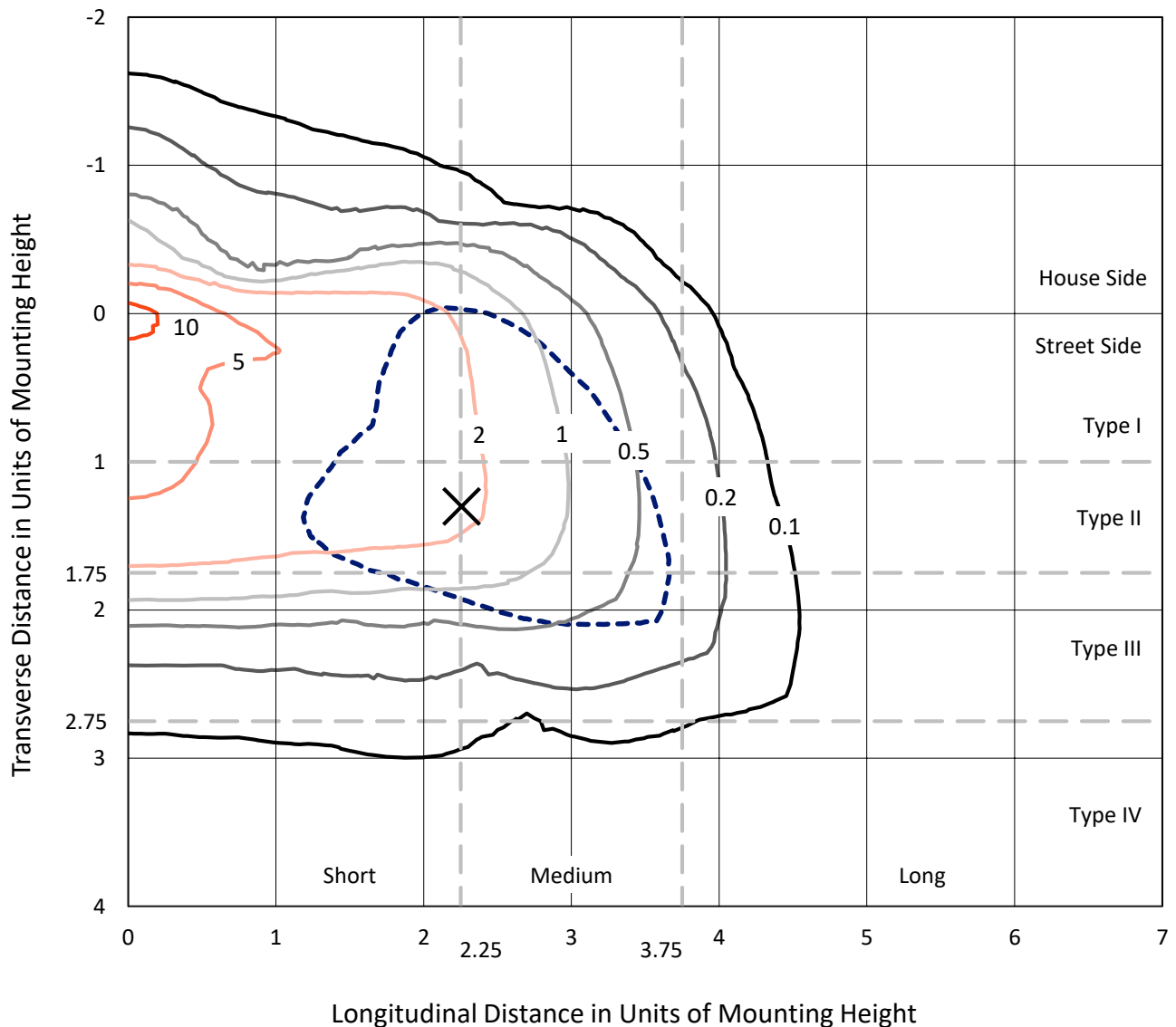
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

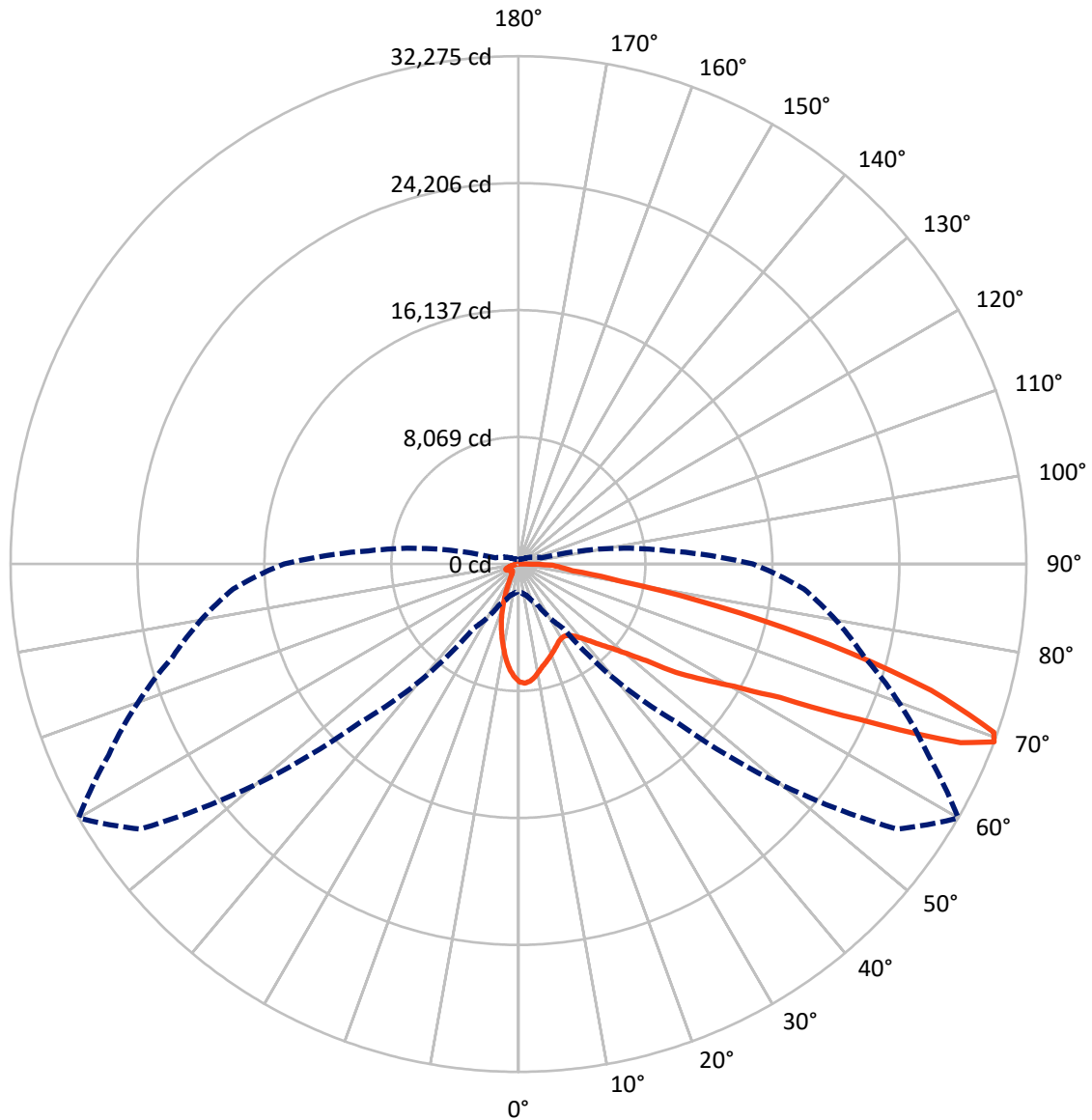
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12 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	4187.1	0.0	4187.1
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	25168.9	0.0	25168.9
	% Fixture	85.7	0.0	85.7
Total	Lumens	29356.0	0.0	29356.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	635.4	2.2
10°-20°	1360.5	4.6
20°-30°	1735.6	5.9
30°-40°	2388.4	8.1
40°-50°	3868.7	13.2
50°-60°	6071.8	20.7
60°-70°	8094.7	27.6
70°-80°	4502.5	15.3
80°-90°	698.3	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°	29356.0	100.0
0°-180°	29356.0	100.0



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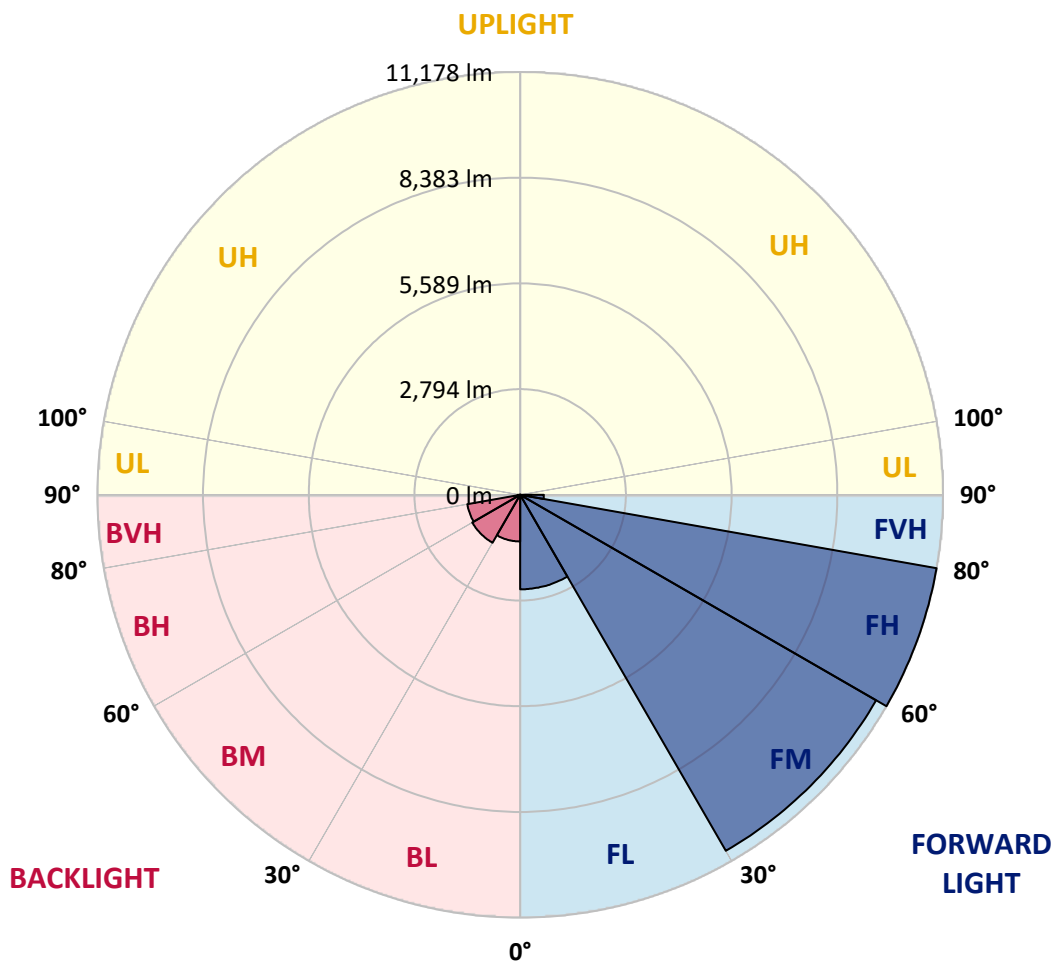
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2497.6	8.5			
FM (30°-60°)	10866.1	37.0			
FH (60°-80°)	11177.6	38.1			G4/12000
FVH (80°-90°)	627.5	2.1			G4/750
BL (0°-30°)	1234.0	4.2	B3/2500		
BM (30°-60°)	1462.7	5.0	B2/2500		
BH (60°-80°)	1419.6	4.8	B3/2500		G3/2500
BVH (80°-90°)	70.8	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3
2.5°	7689.8	7710.5	7710.5	7693.6	7684.2	7629.6	7597.6	7575.0	7535.5	7462.0	7396.2
5°	7415.0	7454.5	7471.5	7479.0	7527.9	7511.0	7512.9	7497.8	7463.9	7384.9	7277.6
7.5°	6910.5	6918.0	6948.1	6999.0	7117.6	7200.4	7268.1	7281.3	7273.8	7215.4	7064.8
10°	6413.5	6426.7	6462.5	6549.1	6662.0	6780.6	6927.4	6987.7	7032.8	7014.0	6823.9
12.5°	6001.3	6003.1	6042.7	6142.4	6268.6	6417.3	6616.8	6710.9	6818.2	6861.5	6648.8
15°	5604.1	5630.4	5668.1	5788.5	5944.8	6133.0	6362.7	6492.6	6633.8	6758.0	6513.3
17.5°	5302.9	5323.6	5346.2	5445.9	5626.6	5862.0	6146.2	6285.5	6471.9	6662.0	6374.0
20°	5137.2	5144.7	5127.8	5176.7	5329.2	5583.4	5912.8	6080.3	6302.4	6569.8	6230.9
22.5°	5103.3	5103.3	5041.2	5031.8	5099.6	5314.2	5671.8	5877.0	6148.1	6505.8	6102.9
25°	5261.5	5250.2	5133.4	5026.1	5001.7	5110.9	5442.2	5694.4	6016.3	6503.9	6006.9
27.5°	5560.8	5545.7	5400.8	5220.0	5063.8	5016.7	5265.2	5523.1	5912.8	6567.9	5958.0
30°	5933.5	5927.8	5781.0	5555.1	5297.2	5054.4	5195.6	5434.6	5843.1	6686.5	5956.1
32.5°	6342.0	6315.6	6225.3	5999.4	5664.3	5263.3	5237.0	5438.4	5824.3	6859.7	5999.4
35°	6776.8	6758.0	6735.4	6507.6	6131.1	5632.3	5419.6	5568.3	5916.5	7100.6	6121.7
37.5°	7330.3	7309.6	7347.2	7098.7	6686.5	6116.1	5728.3	5828.1	6104.8	7450.7	6349.5
40°	8314.8	8254.6	8149.1	7767.0	7334.0	6709.1	6174.4	6189.5	6426.7	7919.5	6714.7
42.5°	9931.8	9737.9	9216.5	8514.3	8017.4	7398.0	6756.1	6684.6	6870.9	8538.8	7245.6
45°	11552.6	11334.2	10453.3	9329.4	8725.2	8137.8	7475.2	7303.9	7424.4	9259.8	7928.9
47.5°	12599.3	12492.0	11498.0	10144.5	9466.9	8943.5	8297.8	8015.5	8102.1	10076.8	8772.2
50°	12906.1	12813.9	12032.6	10782.7	10167.1	9916.8	9316.3	8941.6	8956.7	11031.2	9783.1
52.5°	12676.4	12638.8	12121.1	11178.0	10810.9	10942.7	10726.2	10204.8	10080.5	12077.8	10878.7
55°	12369.6	12382.8	12183.2	11575.2	11466.0	11899.0	12571.0	12151.2	11624.1	13167.8	12019.5
57.5°	11403.9	11413.3	11936.6	12331.9	12716.0	13239.3	14007.3	13830.4	13216.7	14344.3	13297.6
60°	9182.6	9256.0	10421.3	12175.7	14144.7	15880.4	16068.6	15763.7	14910.9	15699.6	14959.8
62.5°	6560.3	6626.2	7975.9	10570.0	13977.2	18869.7	19874.9	18662.6	17209.4	17727.1	17297.9
65°	3446.8	3435.5	4480.2	7303.9	11772.9	19562.4	25872.4	23809.3	21081.6	20515.0	19556.8
67.5°	1925.7	1987.9	2392.6	3684.0	7672.9	17216.9	29703.2	30311.2	26465.4	22726.8	19458.9
69°	1780.8	1801.5	2072.6	2848.1	5001.7	14205.0	29373.8	32274.6	28735.6	22736.3	18205.2
70°	1730.0	1752.6	1999.2	2624.1	4201.6	11639.2	28174.7	32045.0	29287.2	22231.8	17064.4
72.5°	1551.1	1581.3	1820.3	2358.7	3540.9	5999.4	22694.8	27427.3	26529.4	19430.7	13231.8
75°	1323.4	1374.2	1735.6	2341.8	3354.5	3813.8	15134.9	20434.0	19745.0	13896.3	7507.2
77.5°	547.8	553.4	758.6	1714.9	3520.2	3650.1	8134.1	12943.7	11458.5	6093.5	2260.8
80°	382.1	374.6	378.4	500.7	2840.6	3674.5	4173.4	6582.9	5116.5	1607.6	1057.9
82.5°	321.9	318.1	333.2	314.4	961.9	4169.6	3490.1	3431.7	2409.5	865.9	504.5
85°	212.7	207.1	273.0	286.1	457.4	3311.2	3753.6	2697.6	1795.9	463.1	214.6
87.5°	103.5	105.4	156.2	193.9	242.8	1048.5	3595.5	2132.8	1387.4	201.4	86.6
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°	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3	7490.3
2.5°	7369.8	7313.3	7262.5	7198.5	7149.6	7108.1	7051.7	7049.8	7040.4	7053.5	7057.3
5°	7206.0	7111.9	6968.8	6808.8	6695.9	6547.2	6402.2	6353.3	6298.7	6293.0	6310.0
7.5°	6959.4	6812.6	6567.9	6323.2	6078.4	5828.1	5590.9	5470.4	5353.7	5317.9	5334.9
10°	6684.6	6498.2	6123.6	5724.5	5380.0	5007.3	4645.9	4412.5	4199.8	4109.4	4132.0
12.5°	6470.0	6232.8	5705.7	5188.0	4672.2	4137.6	3661.4	3200.2	2851.9	2695.7	2705.1
15°	6285.5	5982.4	5314.2	4625.2	3979.5	3247.2	2586.5	2051.9	1746.9	1634.0	1630.2
17.5°	6086.0	5718.9	4905.7	4101.9	3264.2	2358.7	1731.9	1415.6	1295.1	1257.5	1257.5
20°	5873.3	5447.8	4478.4	3531.5	2511.2	1647.1	1302.7	1180.3	1135.1	1123.8	1121.9
22.5°	5675.6	5182.4	4049.2	2923.4	1816.6	1249.9	1108.8	1061.7	1054.2	1063.6	1063.6
25°	5519.3	4949.0	3614.3	2283.4	1321.5	1046.6	986.4	980.8	1009.0	1042.9	1048.5
27.5°	5402.6	4740.0	3185.1	1667.9	1039.1	911.1	890.4	914.9	980.8	1048.5	1061.7
30°	5321.7	4561.2	2671.2	1199.1	865.9	798.2	807.6	850.9	950.6	1054.2	1082.4
32.5°	5285.9	4416.2	2153.5	920.5	739.8	702.2	726.6	783.1	886.6	990.2	1024.1
35°	5319.8	4310.8	1675.4	764.3	647.6	619.3	647.6	705.9	773.7	824.5	845.2
37.5°	5442.2	4273.2	1261.2	677.7	587.3	559.1	581.7	621.2	651.3	670.2	679.6
40°	5700.1	4312.7	988.3	632.5	553.4	521.4	527.1	545.9	566.6	581.7	583.6
42.5°	6110.4	4442.6	879.1	615.6	532.7	491.3	481.9	495.1	517.7	538.4	542.1
45°	6656.4	4659.1	867.8	621.2	523.3	466.8	448.0	461.2	491.3	525.2	530.9
47.5°	7362.3	5001.7	920.5	651.3	529.0	453.7	425.4	438.6	478.1	523.3	530.9
50°	8198.1	5476.1	1018.4	696.5	555.3	453.7	416.0	427.3	468.7	519.6	527.1
52.5°	9182.6	6136.8	1120.1	741.7	593.0	470.6	419.8	417.9	455.6	502.6	512.0
55°	10268.8	6957.5	1217.9	781.2	613.7	493.2	429.2	406.6	436.7	474.4	481.9
57.5°	11547.0	8081.4	1389.2	818.9	625.0	510.1	440.5	395.3	412.3	438.6	444.3
60°	13280.7	9732.3	1722.4	882.9	645.7	517.7	442.4	384.0	382.1	401.0	402.8
62.5°	15541.5	11665.6	2040.6	958.2	687.1	519.6	434.8	376.5	357.7	363.3	363.3
65°	17149.1	12377.1	1948.3	1022.2	724.7	517.7	427.3	370.8	338.8	329.4	329.4
67.5°	16234.3	10933.3	1654.7	1039.1	728.5	497.0	410.4	357.7	321.9	299.3	299.3
69°	14890.2	9583.6	1519.1	1009.0	698.4	472.5	391.6	344.5	310.6	284.3	284.3
70°	13794.6	8561.4	1436.3	973.2	662.6	451.8	374.6	331.3	299.3	276.7	274.8
72.5°	10298.9	5713.2	1227.4	839.6	544.0	382.1	327.5	295.5	269.2	254.1	254.1
75°	5434.6	2863.2	1005.2	685.2	419.8	305.0	269.2	248.5	233.4	231.5	229.7
77.5°	1780.8	1295.1	722.9	515.8	308.7	237.2	214.6	201.4	199.5	207.1	207.1
80°	961.9	773.7	465.0	348.3	214.6	177.0	165.7	163.8	169.4	180.7	180.7
82.5°	466.8	382.1	276.7	214.6	146.8	129.9	129.9	131.8	139.3	152.5	152.5
85°	201.4	180.7	160.0	120.5	90.4	80.9	92.2	101.7	107.3	116.7	120.5
87.5°	96.0	84.7	73.4	47.1	39.5	41.4	48.9	60.2	71.5	79.1	80.9
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)