

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: P196571

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196571
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-05-D-UNV-SL2-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 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: 23035.1 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 210
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

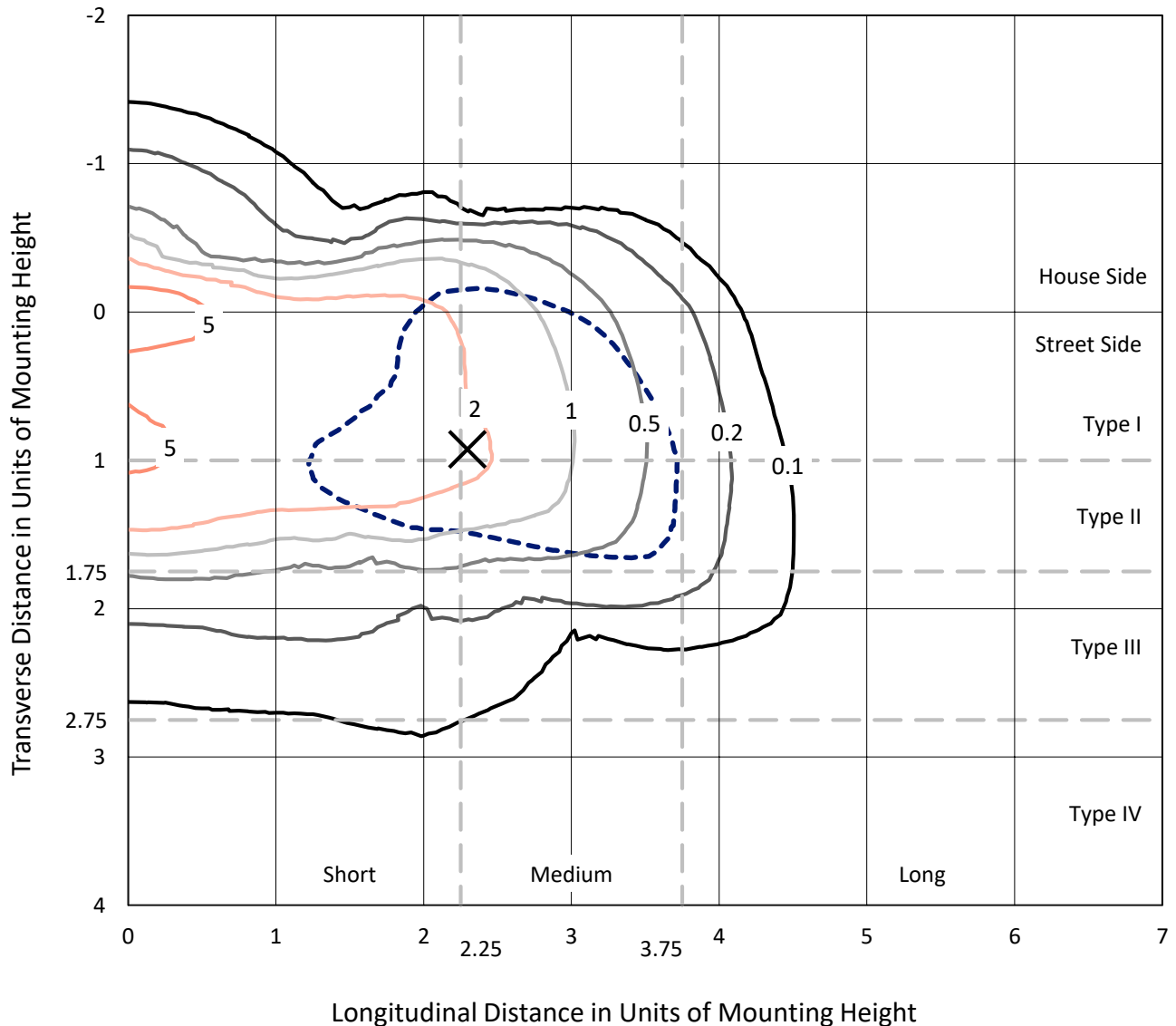


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Iso-Footcandle Lines of Horizontal Illumination

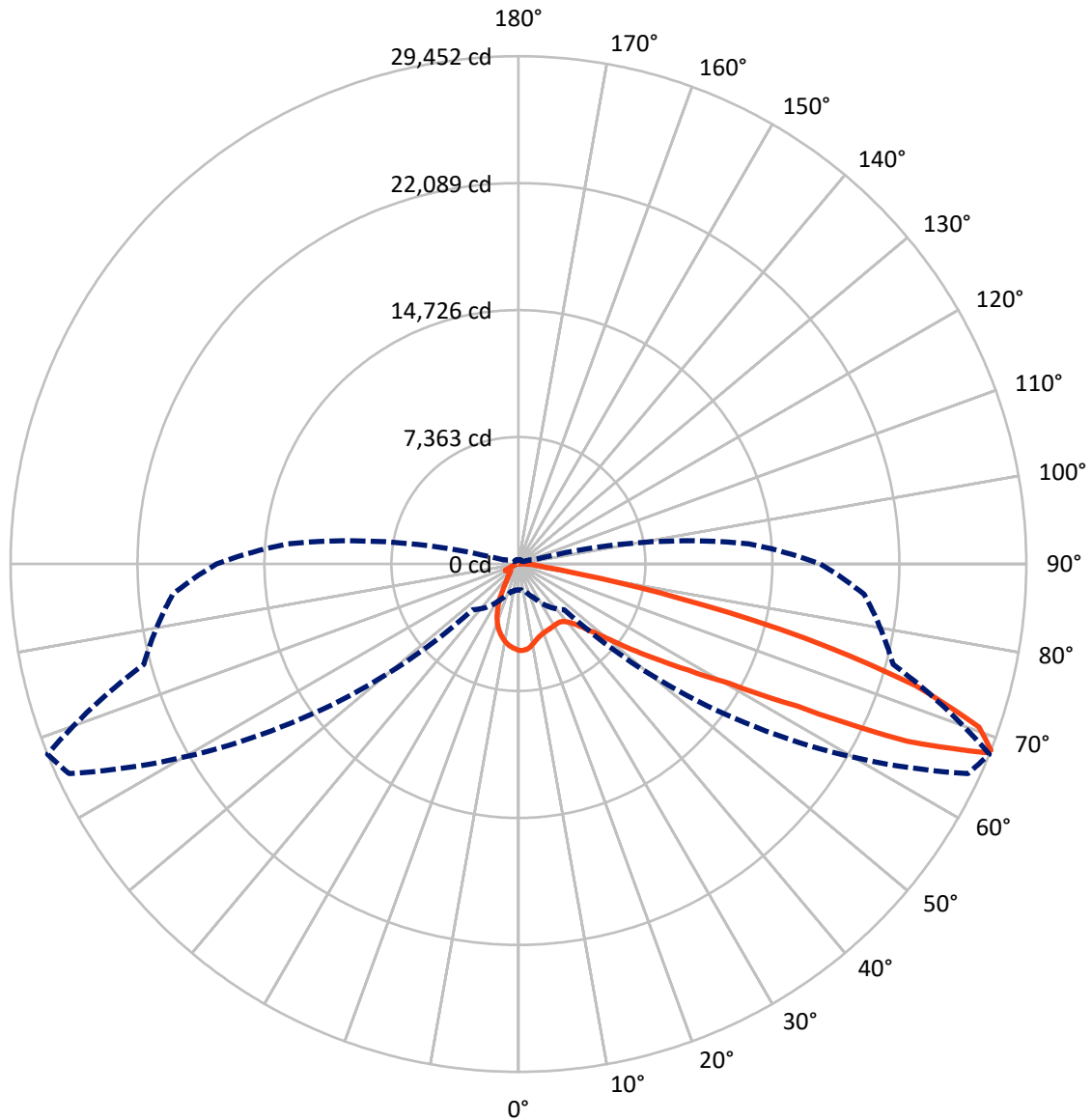
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 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	3768.6	0.0	3768.6
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	19266.5	0.0	19266.5
	% Fixture	83.6	0.0	83.6
Total	Lumens	23035.1	0.0	23035.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	429.4	1.9
10°-20°	996.1	4.3
20°-30°	1347.2	5.8
30°-40°	1899.4	8.2
40°-50°	3123.4	13.6
50°-60°	4841.5	21.0
60°-70°	6277.4	27.3
70°-80°	3602.3	15.6
80°-90°	518.3	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°	23035.1	100.0
0°-180°	23035.1	100.0

Coefficient of Utilization



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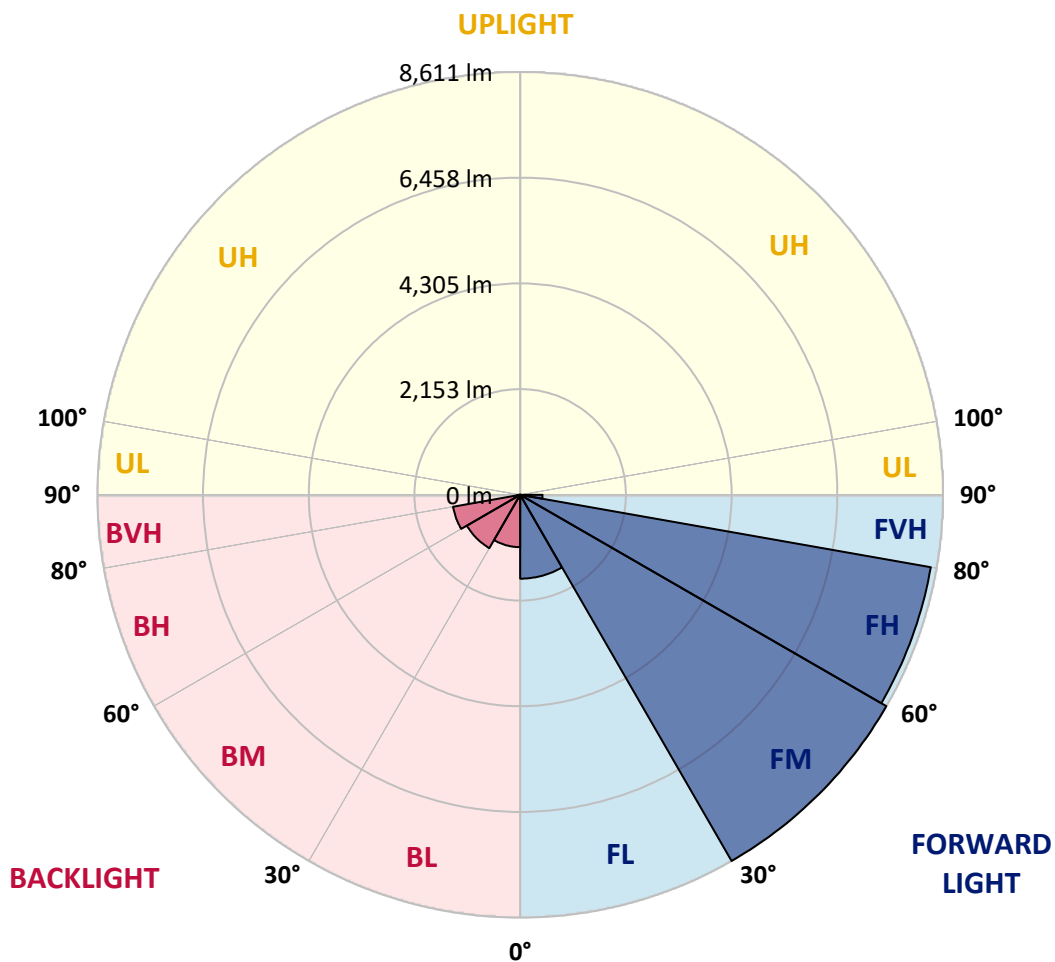
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1707.3	7.4			
FM	(30°-60°)	8610.9	37.4			
FH	(60°-80°)	8491.8	36.9			G4/12000
FVH	(80°-90°)	456.5	2.0			G3/500
BL	(0°-30°)	1065.4	4.6	B3/2500		
BM	(30°-60°)	1253.5	5.4	B2/2500		
BH	(60°-80°)	1387.9	6.0	B3/2500		G3/2500
BVH	(80°-90°)	61.8	0.3			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3
2.5°	4878.3	4917.4	4917.4	4946.0	4971.7	4992.7	5010.7	5010.7	5010.7	4998.7	4988.1
5°	4365.2	4417.9	4425.4	4497.6	4592.3	4708.3	4837.7	4952.0	4974.6	5016.7	5033.3
7.5°	4008.6	4025.1	4053.7	4103.3	4199.7	4342.6	4545.7	4801.6	4863.2	4995.7	5064.9
10°	3755.8	3769.3	3793.4	3843.0	3930.4	4059.7	4259.9	4592.3	4694.8	4929.4	5066.5
12.5°	3570.7	3581.2	3603.8	3648.9	3737.8	3853.6	4058.2	4404.3	4530.8	4863.2	5087.4
15°	3426.3	3444.3	3462.4	3506.0	3596.3	3707.6	3915.3	4267.4	4404.3	4810.5	5126.6
17.5°	3369.1	3378.1	3381.1	3403.7	3485.0	3597.8	3805.5	4171.1	4312.6	4768.5	5156.7
20°	3405.2	3406.7	3376.5	3361.6	3408.3	3512.0	3713.6	4098.9	4243.3	4730.8	5168.7
22.5°	3563.2	3563.2	3485.0	3418.7	3387.1	3451.8	3652.0	4049.2	4205.7	4702.3	5168.7
25°	3864.2	3850.7	3728.7	3597.8	3457.8	3430.7	3612.8	4017.6	4177.1	4687.2	5149.2
27.5°	4259.9	4247.9	4092.9	3898.7	3646.0	3475.9	3599.3	3992.0	4148.6	4664.6	5107.0
30°	4741.5	4730.8	4554.8	4300.6	3927.4	3618.8	3630.9	3974.0	4125.9	4627.0	5036.3
32.5°	5221.4	5215.4	5075.4	4815.2	4315.5	3861.1	3713.6	3970.9	4113.9	4581.9	4950.5
35°	5704.4	5704.4	5618.6	5398.9	4837.7	4225.3	3886.7	4026.6	4136.4	4557.9	4876.8
37.5°	6417.7	6389.1	6229.5	6002.3	5495.3	4697.7	4166.6	4143.9	4223.8	4598.4	4852.8
40°	7522.2	7439.4	7040.5	6658.4	6213.0	5302.7	4575.9	4371.3	4419.4	4736.8	4909.9
42.5°	8677.7	8546.8	8018.6	7407.8	6954.8	6049.0	5113.0	4739.8	4738.3	5004.7	5092.0
45°	9669.3	9601.7	9029.8	8255.0	7801.9	6888.6	5791.8	5287.6	5233.4	5420.1	5442.6
47.5°	10245.7	10200.6	9855.9	9151.8	8807.2	7880.3	6652.4	6047.5	5945.2	6056.6	6022.0
50°	10086.2	10129.8	10030.5	9670.9	9887.5	9273.6	7749.3	7088.7	6894.7	7006.0	6921.7
52.5°	9246.5	9363.9	9452.7	9522.0	10509.0	11138.0	9127.6	8388.8	8227.9	8208.3	8127.0
55°	7734.3	7920.9	8200.8	8709.4	10341.9	12635.2	11535.3	9961.2	9726.6	9603.2	9634.7
57.5°	5263.6	5546.4	6149.7	7117.3	9473.8	13273.2	15095.4	11992.7	11595.3	11156.0	11258.4
60°	2899.6	3135.8	3853.6	4828.7	7492.0	13178.5	18250.7	15294.0	14043.6	12878.9	13089.6
62.5°	1876.4	1927.6	2461.7	3298.3	4598.4	11634.6	20003.8	20811.8	18162.0	15151.1	15447.5
65°	1507.8	1543.9	1805.6	2660.4	3203.6	7484.5	20082.1	26535.8	24788.8	18238.7	18247.8
67.5°	1473.2	1489.6	1641.6	2237.5	3004.9	4074.9	17358.4	28792.9	29197.7	21883.2	20121.1
68°	1494.2	1513.8	1667.2	2168.4	3003.4	3755.8	16043.4	28758.3	29452.0	22492.6	20121.1
70°	1318.1	1342.2	1700.3	2243.5	2875.4	3229.1	10986.0	27231.0	28347.6	23893.6	19092.0
72.5°	689.2	669.6	841.2	1771.1	3236.7	3364.5	5803.8	22750.0	24053.0	22128.5	16494.8
75°	537.2	489.1	471.0	699.7	2847.0	3489.4	3370.5	16169.9	17153.8	15951.7	11025.2
77.5°	505.6	446.9	412.4	413.8	1253.4	3630.9	2726.6	9515.8	9515.8	7609.4	3518.0
80°	406.2	352.2	329.5	376.2	604.9	3346.5	2845.4	4336.6	3698.7	1966.6	969.0
82.5°	267.8	239.3	240.8	305.5	458.9	2234.6	3295.4	2141.3	1608.6	871.3	570.4
85°	170.0	146.0	162.5	213.7	343.1	996.1	3262.3	1488.2	1065.4	489.1	284.4
87.5°	85.8	66.2	81.3	111.3	209.1	285.9	2685.9	1328.7	790.0	203.1	155.0
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°	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3	5012.3
2.5°	4988.1	4955.0	4938.5	4911.4	4878.3	4845.2	4822.6	4812.1	4806.1	4809.0	4807.6
5°	5024.3	4980.7	4909.9	4809.0	4705.2	4595.5	4511.2	4446.5	4405.9	4393.8	4390.8
7.5°	5051.4	4988.1	4855.7	4672.2	4494.6	4302.0	4137.9	4007.1	3918.2	3877.7	3876.2
10°	5046.8	4965.7	4756.4	4485.6	4225.3	3942.4	3685.1	3465.3	3305.8	3229.1	3226.1
12.5°	5051.4	4940.0	4634.6	4267.4	3894.2	3489.4	3107.3	2765.7	2527.9	2415.0	2410.6
15°	5069.4	4913.0	4509.6	4023.6	3507.6	2935.7	2389.5	1960.6	1744.0	1670.2	1670.2
17.5°	5067.9	4867.8	4365.2	3740.7	3048.6	2282.7	1631.1	1366.3	1345.2	1412.9	1423.4
20°	5037.8	4795.6	4178.6	3405.2	2509.9	1580.0	1105.9	1068.3	1237.0	1423.4	1444.5
22.5°	4991.2	4702.3	3963.5	3015.4	1882.4	1029.2	853.2	910.3	1139.0	1370.7	1403.9
25°	4926.5	4589.4	3716.7	2562.5	1251.9	740.3	711.8	782.4	943.5	1098.5	1122.5
27.5°	4831.7	4446.5	3447.3	2072.0	799.0	609.4	619.9	669.6	738.8	805.0	818.6
30°	4712.8	4279.4	3153.9	1528.7	606.4	544.6	562.8	592.8	623.0	665.1	674.1
32.5°	4592.3	4109.3	2848.5	1050.3	529.7	510.1	528.2	544.6	570.4	598.8	604.9
35°	4484.1	3951.4	2533.9	732.8	496.6	487.6	496.6	507.1	532.6	561.3	564.4
37.5°	4405.9	3822.0	2206.0	579.3	477.0	467.9	472.4	477.0	507.1	549.2	553.7
40°	4395.3	3736.2	1873.4	520.6	461.9	449.9	446.9	449.9	489.1	537.2	541.7
42.5°	4497.6	3740.7	1548.3	496.6	449.9	436.4	424.4	430.4	465.0	502.6	505.6
45°	4739.8	3846.0	1267.0	485.9	439.3	428.9	410.9	413.8	430.4	449.9	452.9
47.5°	5167.2	4076.4	1051.8	479.9	430.4	421.3	398.8	389.7	391.2	401.7	401.7
50°	5850.4	4461.5	920.8	473.9	422.9	406.2	380.7	362.6	358.2	364.2	365.7
52.5°	6869.0	5122.1	857.6	461.9	409.2	386.7	358.2	340.1	332.5	338.6	338.6
55°	8245.9	6176.9	827.6	445.4	392.8	362.6	337.1	322.0	316.0	320.4	320.4
57.5°	9815.3	7547.7	878.8	422.9	371.7	337.1	319.0	308.4	304.0	308.4	310.0
60°	11679.7	9341.3	1231.0	394.2	349.1	314.4	304.0	297.9	294.9	299.5	299.5
62.5°	14158.0	11727.8	1904.9	371.7	325.0	293.5	290.4	287.4	284.4	288.9	288.9
65°	16833.3	13899.2	1960.6	358.2	304.0	275.4	276.9	276.9	273.9	278.4	278.4
67.5°	17685.0	13711.1	1095.5	341.6	278.4	257.3	263.4	263.4	261.7	266.4	264.9
68°	17504.4	13413.1	954.0	337.1	273.9	252.8	258.8	260.4	258.8	263.4	261.7
70°	16159.2	11776.0	627.4	311.5	254.2	237.7	246.8	248.2	246.8	252.8	251.3
72.5°	13339.4	8832.7	463.5	272.4	230.2	218.2	227.3	228.7	230.2	236.2	234.7
75°	8471.6	4878.3	365.7	231.7	206.2	195.6	204.7	209.1	212.2	221.1	216.7
77.5°	2320.3	1480.7	296.4	197.1	177.5	173.0	179.0	185.0	188.2	198.7	191.1
80°	812.6	654.6	246.8	167.0	147.5	146.0	152.0	158.0	161.0	170.0	161.0
82.5°	493.6	427.3	197.1	130.9	115.9	114.4	122.0	128.0	130.9	130.9	124.9
85°	257.3	225.7	144.4	91.8	79.8	75.3	88.8	96.2	97.8	96.2	91.8
87.5°	144.4	128.0	76.7	43.6	36.2	37.5	46.7	57.2	61.7	60.2	57.2
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)