

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: P270505

Luminaire Tested: **NAV-AF-04-D-UNV-SL2-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270505  
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-04-D-UNV-SL2-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 1050mA 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: 20779.9 lumens  
Efficiency: N/A  
Efficacy: 92.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B3 - U0 - G4

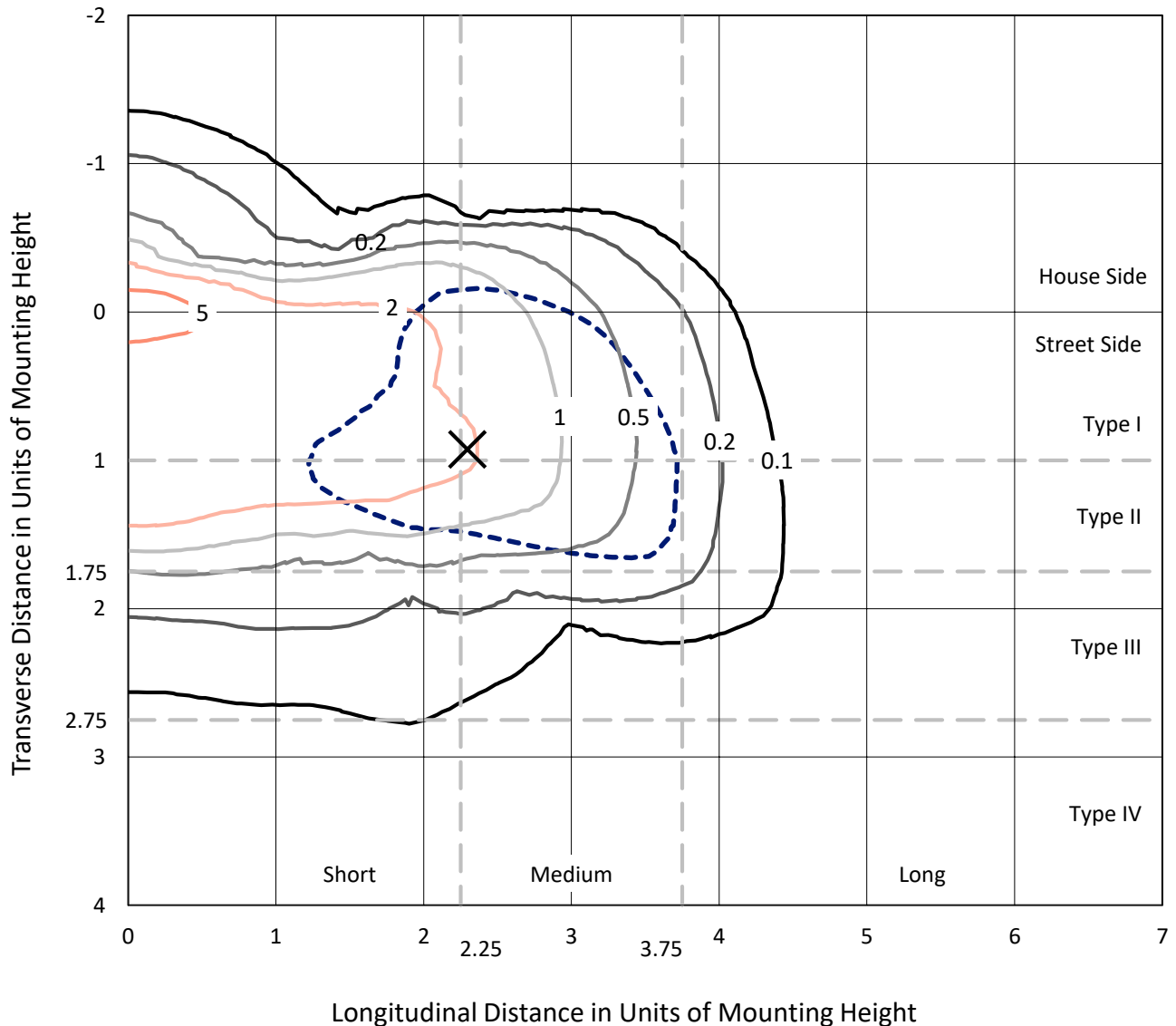
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P270505  
 CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7027

### Iso-Footcandle Lines of Horizontal Illumination

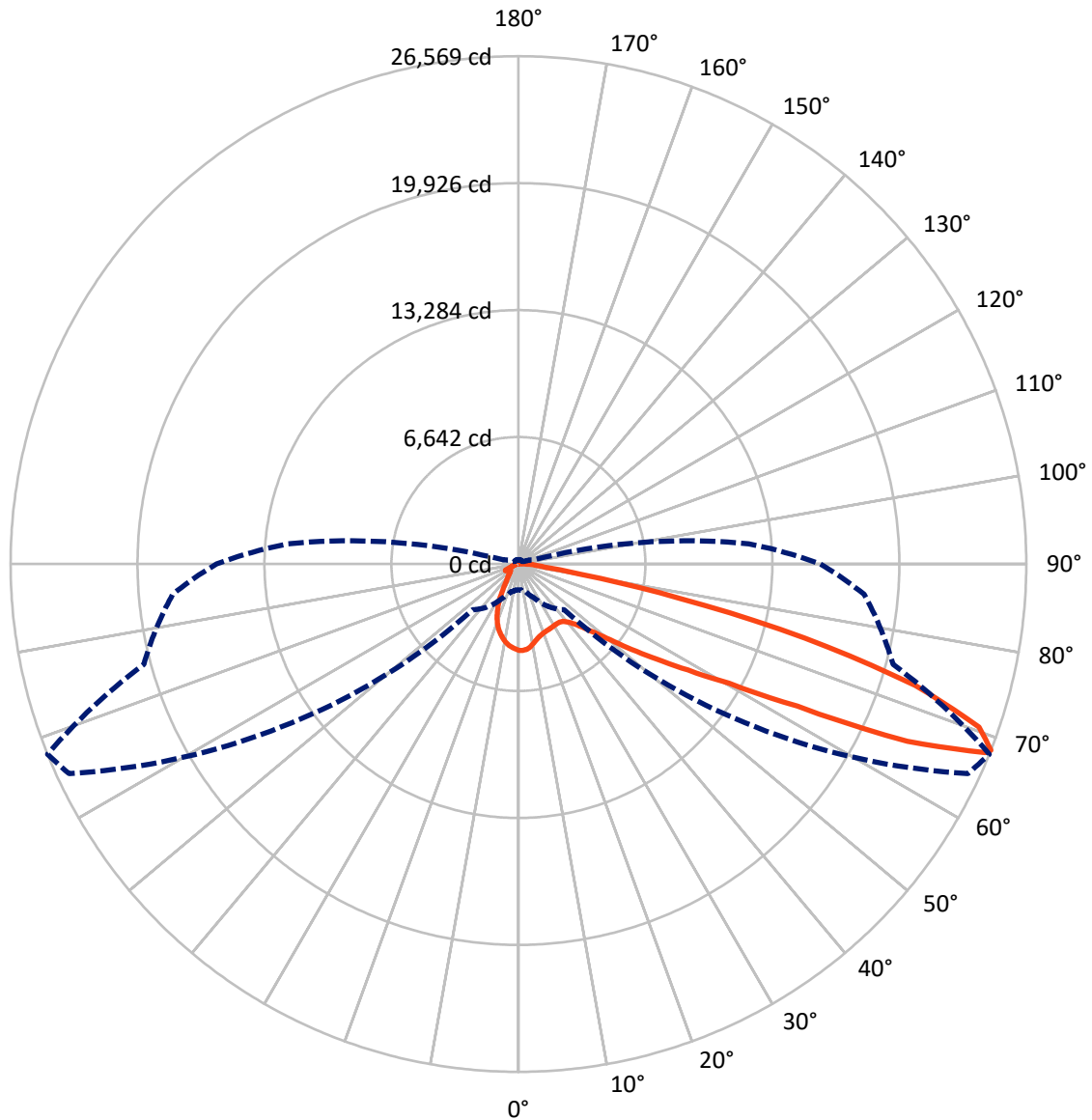
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.2 fc  
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P270505  
CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7027

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P270505

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7027

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3399.7	0.0	3399.7
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	17380.3	0.0	17380.3
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	20779.9	0.0	20779.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	387.4	1.9
10°-20°	898.6	4.3
20°-30°	1215.3	5.8
30°-40°	1713.5	8.2
40°-50°	2817.6	13.6
50°-60°	4367.6	21.0
60°-70°	5662.8	27.3
70°-80°	3249.6	15.6
80°-90°	467.6	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°	20779.9	100.0
0°-180°	20779.9	100.0

**Coefficient of Utilization**



REPORT NUMBER: P270505

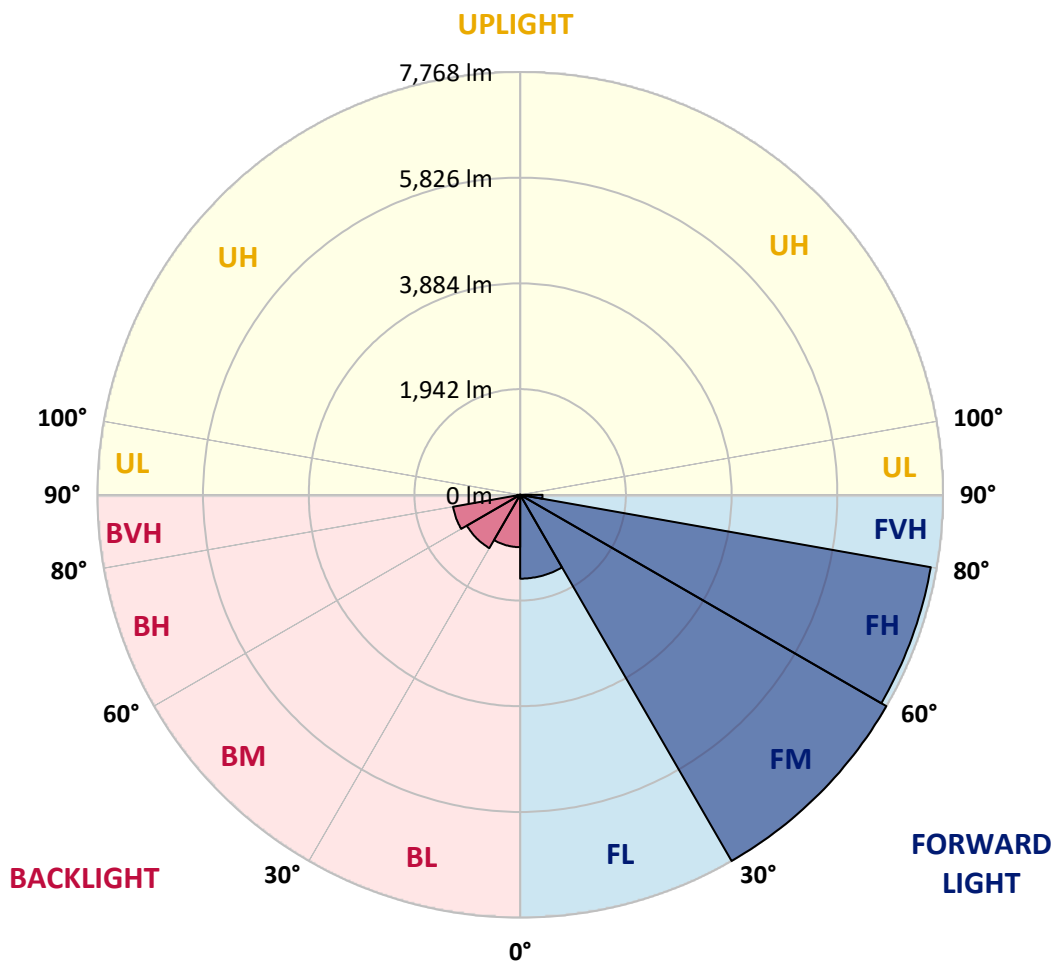
CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7027

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1540.1	7.4			
FM	(30°-60°)	7767.9	37.4			
FH	(60°-80°)	7660.4	36.9			G4/12000
FVH	(80°-90°)	411.8	2.0			G3/500
BL	(0°-30°)	961.1	4.6	B2/1000		
BM	(30°-60°)	1130.8	5.4	B2/2500		
BH	(60°-80°)	1252.0	6.0	B3/2500		G3/2500
BVH	(80°-90°)	55.7	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





REPORT NUMBER: P270505

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7027

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4
2.5°	4400.6	4436.0	4436.0	4461.8	4484.9	4503.9	4520.2	4520.2	4520.2	4509.3	4499.8
5°	3937.8	3985.3	3992.2	4057.3	4142.9	4247.4	4364.1	4467.2	4487.7	4525.7	4540.6
7.5°	3616.1	3631.0	3656.9	3701.6	3788.5	3917.5	4100.8	4331.4	4387.1	4506.5	4569.0
10°	3388.0	3400.4	3422.1	3466.7	3545.5	3662.3	3842.8	4142.9	4235.1	4446.9	4570.3
12.5°	3221.1	3230.7	3251.0	3291.7	3371.8	3476.4	3661.0	3973.2	4087.2	4387.1	4589.4
15°	3090.8	3107.1	3123.3	3162.8	3244.1	3344.7	3532.0	3849.5	3973.2	4339.6	4624.7
17.5°	3039.2	3047.4	3050.0	3070.4	3143.8	3245.5	3433.0	3762.7	3890.3	4301.7	4651.9
20°	3071.8	3073.2	3046.1	3032.5	3074.4	3168.2	3350.0	3697.6	3827.9	4267.7	4662.7
22.5°	3214.3	3214.3	3143.8	3084.1	3055.6	3113.9	3294.4	3652.8	3793.9	4241.8	4662.7
25°	3485.9	3473.6	3363.7	3245.5	3119.4	3094.9	3259.1	3624.3	3768.2	4228.3	4645.0
27.5°	3842.8	3832.0	3692.2	3517.0	3289.1	3135.7	3247.0	3601.2	3742.3	4208.0	4607.0
30°	4277.2	4267.7	4108.8	3879.5	3542.8	3264.6	3275.4	3585.0	3721.9	4174.1	4543.3
32.5°	4710.3	4704.8	4578.5	4343.8	3893.1	3483.1	3350.0	3582.3	3711.2	4133.3	4465.8
35°	5145.9	5145.9	5068.5	4870.4	4364.1	3811.6	3506.2	3632.4	3731.5	4111.6	4399.4
37.5°	5789.3	5763.5	5619.6	5414.8	4957.2	4237.8	3758.7	3738.2	3810.3	4148.3	4377.6
40°	6785.6	6711.0	6351.2	6006.5	5604.7	4783.6	4127.9	3943.3	3986.7	4273.1	4429.3
42.5°	7828.2	7710.2	7233.6	6682.5	6273.9	5456.8	4612.4	4275.8	4274.4	4514.7	4593.5
45°	8722.7	8661.5	8145.8	7446.7	7038.2	6214.2	5224.6	4769.9	4721.0	4889.4	4909.7
47.5°	9242.7	9201.9	8891.1	8255.8	7944.9	7108.7	6001.0	5455.4	5363.2	5463.6	5432.3
50°	9098.8	9138.1	9048.4	8724.1	8919.5	8365.6	6990.7	6394.8	6219.7	6320.0	6244.1
52.5°	8341.3	8447.1	8527.3	8589.7	9480.2	10047.5	8234.0	7567.5	7422.3	7404.6	7331.3
55°	6977.0	7145.4	7397.9	7856.7	9329.4	11398.1	10405.8	8986.0	8774.3	8663.0	8691.6
57.5°	4748.3	5003.4	5547.8	6420.5	8546.3	11973.7	13617.5	10818.6	10460.1	10063.8	10156.1
60°	2615.8	2828.9	3476.4	4355.9	6758.6	11888.2	16464.0	13796.7	12668.6	11618.0	11808.1
62.5°	1692.6	1738.8	2220.7	2975.5	4148.3	10495.4	18045.4	18774.2	16383.8	13667.7	13935.1
65°	1360.2	1392.7	1628.8	2399.9	2889.8	6751.8	18115.9	23937.9	22362.0	16453.1	16461.4
67.5°	1329.0	1343.9	1480.9	2018.5	2710.7	3675.9	15659.1	25974.0	26339.2	19740.9	18151.2
68°	1347.8	1365.6	1504.0	1956.0	2709.4	3388.0	14472.8	25942.8	26568.5	20290.6	18151.2
70°	1189.0	1210.8	1533.9	2023.9	2594.0	2913.1	9910.5	24565.1	25572.2	21554.3	17222.8
72.5°	621.6	604.0	758.8	1597.6	2919.9	3035.2	5235.5	20522.7	21698.2	19962.0	14880.0
75°	484.5	441.2	424.9	631.1	2568.3	3147.8	3040.7	14586.7	15474.5	14389.9	9945.8
77.5°	456.1	403.2	371.9	373.2	1130.7	3275.4	2459.6	8584.3	8584.3	6864.4	3173.6
80°	366.5	317.6	297.2	339.4	545.7	3018.8	2566.8	3912.1	3336.6	1774.2	874.2
82.5°	241.6	215.9	217.2	275.6	413.9	2015.7	2972.8	1931.5	1451.0	785.9	514.5
85°	153.4	131.7	146.7	192.7	309.5	898.7	2942.8	1342.4	961.0	441.2	256.6
87.5°	77.3	59.7	73.3	100.4	188.6	258.0	2423.0	1198.6	712.6	183.3	139.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P270505

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7027

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4	4521.4
2.5°	4499.8	4470.0	4455.1	4430.6	4400.6	4370.9	4350.5	4341.0	4335.6	4338.3	4336.8
5°	4532.4	4493.1	4429.3	4338.3	4244.6	4145.5	4069.5	4011.1	3974.6	3963.6	3960.9
7.5°	4556.8	4499.8	4380.3	4214.8	4054.6	3880.9	3732.8	3614.8	3534.7	3498.0	3496.7
10°	4552.7	4479.5	4290.8	4046.4	3811.6	3556.4	3324.3	3126.1	2982.3	2913.1	2910.2
12.5°	4556.8	4456.4	4180.8	3849.5	3513.0	3147.8	2803.0	2495.0	2280.4	2178.6	2174.5
15°	4573.1	4432.0	4068.2	3629.7	3164.1	2648.4	2155.6	1768.8	1573.2	1506.7	1506.7
17.5°	4571.7	4391.3	3937.8	3374.6	2750.2	2059.2	1471.5	1232.6	1213.5	1274.7	1284.0
20°	4544.5	4326.1	3769.5	3071.8	2264.2	1425.3	997.7	963.7	1115.8	1284.0	1303.1
22.5°	4502.6	4241.8	3575.4	2720.2	1698.2	928.5	769.7	821.2	1027.5	1236.5	1266.5
25°	4444.2	4140.1	3352.8	2311.7	1129.3	667.8	642.1	705.9	851.1	990.9	1012.6
27.5°	4358.7	4011.1	3109.8	1869.2	720.8	549.8	559.3	604.0	666.5	726.2	738.4
30°	4251.4	3860.5	2845.1	1379.1	547.1	491.5	507.6	534.9	562.0	600.0	608.2
32.5°	4142.9	3707.0	2569.6	947.4	477.8	460.1	476.5	491.5	514.5	540.2	545.7
35°	4045.1	3564.6	2285.8	661.1	448.0	439.8	448.0	457.4	480.6	506.4	509.0
37.5°	3974.6	3447.9	1989.9	522.6	430.3	422.2	426.2	430.3	457.4	495.4	499.5
40°	3964.9	3370.4	1690.0	469.6	416.8	405.9	403.2	405.9	441.2	484.5	488.7
42.5°	4057.3	3374.6	1396.8	448.0	405.9	393.6	382.8	388.2	419.5	453.4	456.1
45°	4275.8	3469.6	1143.0	438.5	396.3	386.9	370.6	373.2	388.2	405.9	408.5
47.5°	4661.3	3677.2	948.8	433.1	388.2	380.1	359.7	351.5	352.9	362.5	362.5
50°	5277.6	4024.8	830.8	427.7	381.4	366.5	343.4	327.2	323.1	328.5	329.9
52.5°	6196.6	4620.6	773.7	416.8	369.3	348.8	323.1	306.9	299.9	305.5	305.5
55°	7438.5	5572.1	746.6	401.8	354.3	327.2	304.0	290.5	285.0	289.2	289.2
57.5°	8854.4	6808.8	792.8	381.4	335.2	304.0	287.7	278.3	274.3	278.3	279.6
60°	10536.2	8426.8	1110.3	355.6	314.9	283.8	274.3	268.8	266.1	270.1	270.1
62.5°	12771.8	10579.7	1718.5	335.2	293.1	264.7	261.9	259.3	256.6	260.6	260.6
65°	15185.3	12538.5	1768.8	323.1	274.3	248.4	249.8	249.8	247.0	251.2	251.2
67.5°	15953.5	12368.8	988.1	308.1	251.2	232.1	237.5	237.5	236.2	240.2	238.9
68°	15790.8	12099.9	860.5	304.0	247.0	228.0	233.5	234.8	233.5	237.5	236.2
70°	14577.2	10623.0	566.0	281.0	229.3	214.4	222.6	223.9	222.6	228.0	226.7
72.5°	12033.4	7968.0	418.2	245.6	207.7	196.8	205.0	206.3	207.7	213.1	211.8
75°	7642.2	4400.6	329.9	209.0	185.9	176.4	184.6	188.6	191.3	199.6	195.6
77.5°	2093.1	1335.7	267.4	177.9	160.2	156.0	161.5	166.9	169.7	179.2	172.4
80°	732.9	590.5	222.6	150.6	132.9	131.7	137.1	142.6	145.3	153.4	145.3
82.5°	445.2	385.6	177.9	118.0	104.6	103.1	110.0	115.4	118.0	118.0	112.6
85°	232.1	203.6	130.3	82.9	72.0	67.9	80.0	86.9	88.3	86.9	82.9
87.5°	130.3	115.4	69.2	39.3	32.6	34.0	42.1	51.7	55.7	54.3	51.7
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)