

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: P196576

Luminaire Tested: **NAV-AF-04-D-UNV-SL2-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196576  
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-SL2-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 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: 23132.4 lumens  
Efficiency: N/A  
Efficacy: 102.8 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

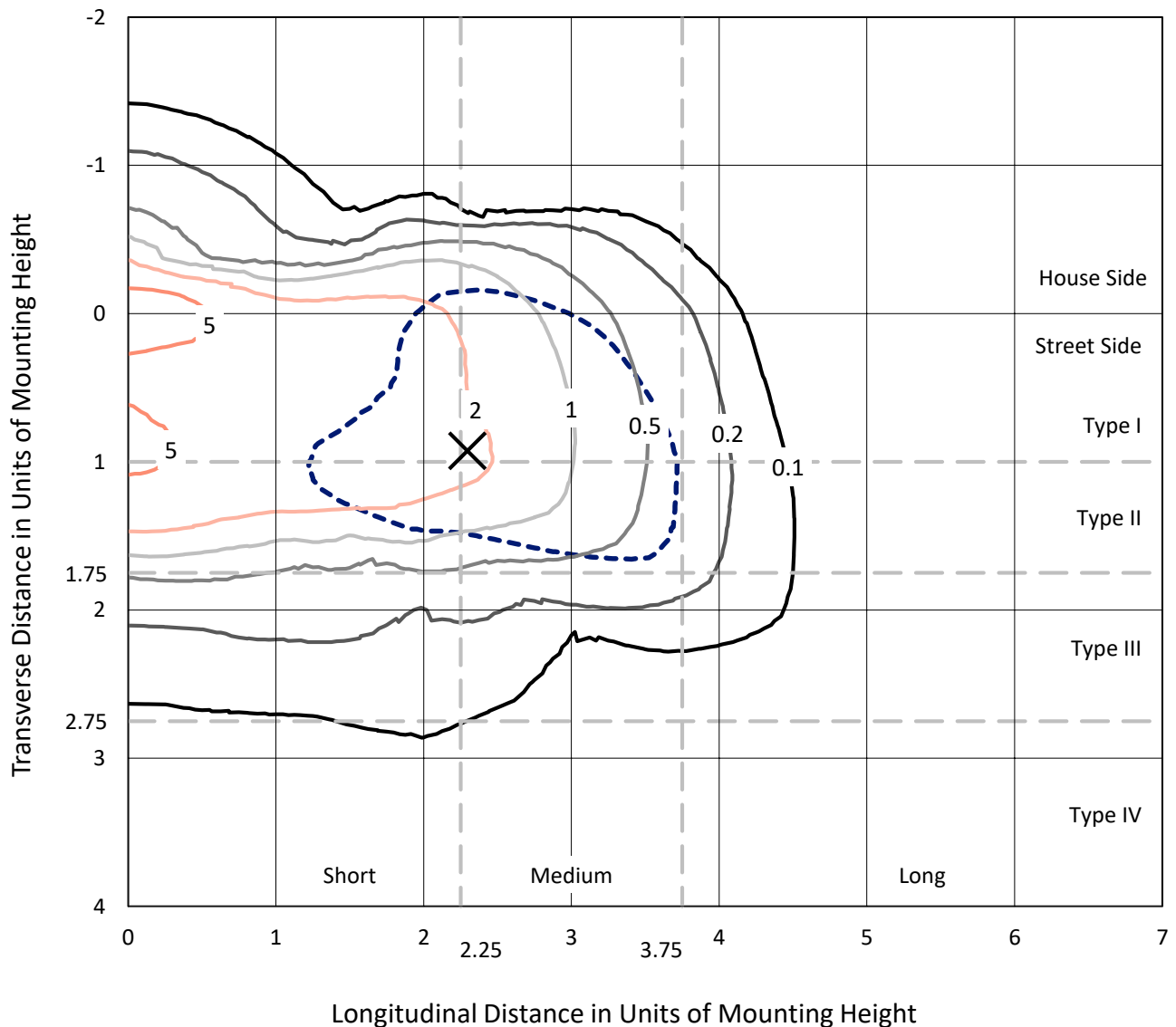
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196576  
 CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030

### Iso-Footcandle Lines of Horizontal Illumination

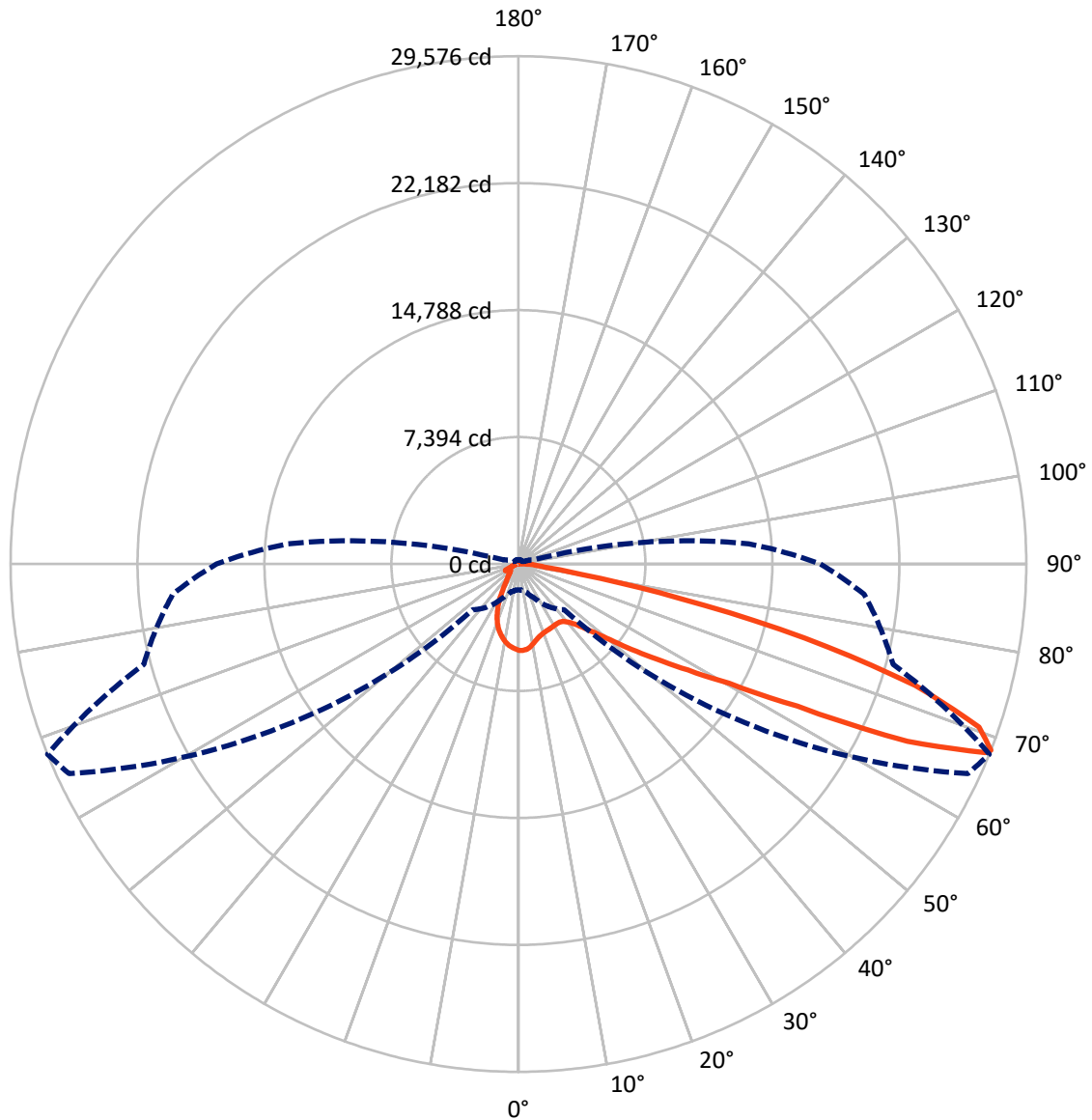
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.1 fc  
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P196576  
CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P196576

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3784.5	0.0	3784.5
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	19347.8	0.0	19347.8
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	23132.4	0.0	23132.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	431.3	1.9
10°-20°	1000.3	4.3
20°-30°	1352.9	5.8
30°-40°	1907.5	8.2
40°-50°	3136.6	13.6
50°-60°	4862.0	21.0
60°-70°	6303.9	27.3
70°-80°	3617.5	15.6
80°-90°	520.5	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°	23132.4	100.0
0°-180°	23132.4	100.0



REPORT NUMBER: P196576

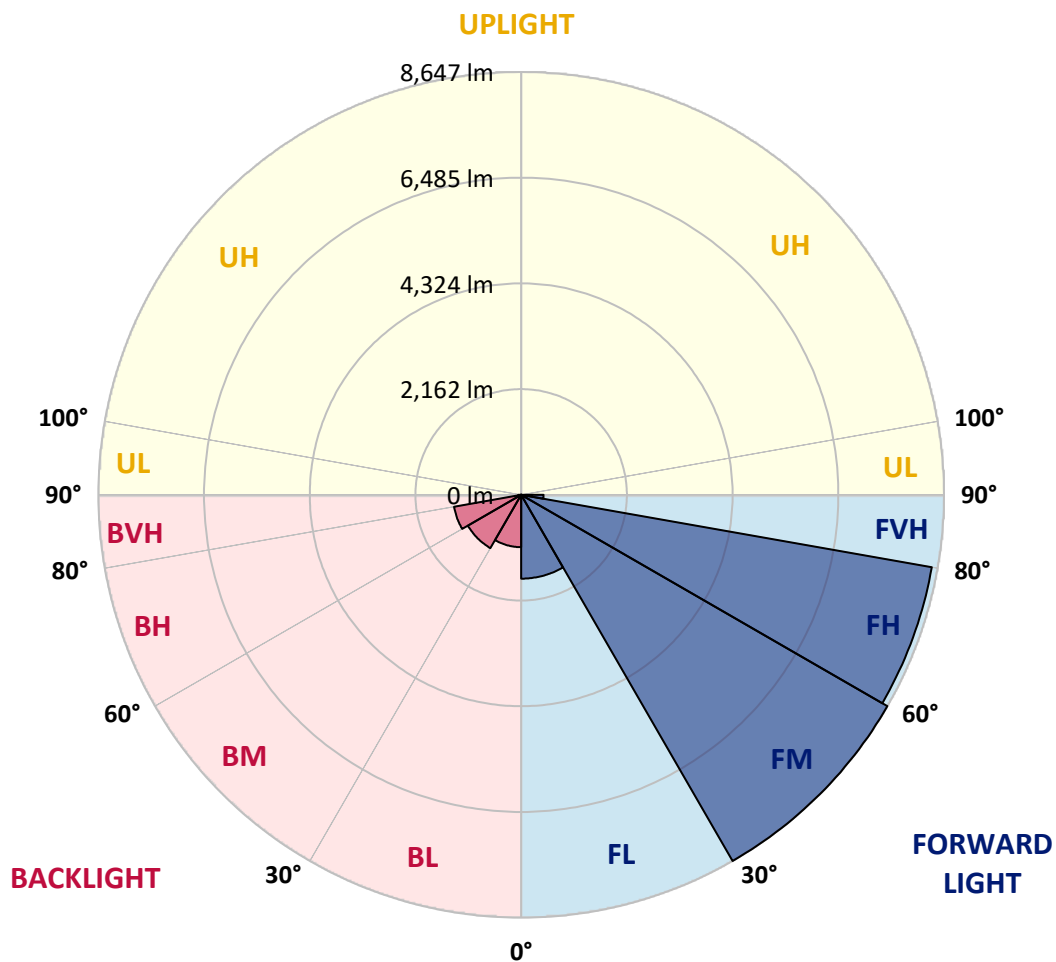
CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1714.5	7.4			
FM	(30°-60°)	8647.3	37.4			
FH	(60°-80°)	8527.7	36.9			G4/12000
FVH	(80°-90°)	458.4	2.0			G3/500
BL	(0°-30°)	1069.9	4.6	B3/2500		
BM	(30°-60°)	1258.8	5.4	B2/2500		
BH	(60°-80°)	1393.8	6.0	B3/2500		G3/2500
BVH	(80°-90°)	62.0	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: P196576

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3
2.5°	4898.8	4938.2	4938.2	4966.9	4992.6	5013.8	5031.9	5031.9	5031.9	5019.8	5009.2
5°	4383.6	4436.5	4444.1	4516.6	4611.9	4728.2	4858.1	4972.9	4995.7	5038.0	5054.6
7.5°	4025.5	4042.1	4070.9	4120.7	4217.4	4361.0	4565.0	4821.8	4883.8	5016.7	5086.2
10°	3771.6	3785.3	3809.5	3859.2	3946.9	4076.9	4277.8	4611.9	4714.5	4950.3	5087.7
12.5°	3585.8	3596.4	3619.0	3664.3	3753.5	3869.9	4075.4	4423.0	4549.9	4883.8	5109.0
15°	3440.7	3458.8	3476.9	3520.8	3611.4	3723.3	3931.8	4285.3	4423.0	4830.9	5148.2
17.5°	3383.3	3392.4	3395.3	3418.0	3499.7	3612.9	3821.6	4188.7	4330.7	4788.7	5178.5
20°	3419.6	3421.1	3390.9	3375.8	3422.5	3526.9	3729.3	4116.2	4261.2	4750.8	5190.6
22.5°	3578.2	3578.2	3499.7	3433.2	3401.5	3466.4	3667.4	4066.3	4223.4	4722.0	5190.6
25°	3880.5	3866.8	3744.5	3612.9	3472.5	3445.3	3628.1	4034.6	4194.8	4707.0	5170.9
27.5°	4277.8	4265.8	4110.2	3915.2	3661.4	3490.7	3614.6	4008.9	4166.0	4684.4	5128.6
30°	4761.4	4750.8	4574.0	4318.7	3943.9	3634.2	3646.2	3990.8	4143.3	4646.6	5057.6
32.5°	5243.5	5237.4	5096.8	4835.5	4333.8	3877.4	3729.3	3987.8	4131.3	4601.2	4971.4
35°	5728.5	5728.5	5642.3	5421.8	4858.1	4243.1	3903.1	4043.6	4153.9	4577.1	4897.4
37.5°	6444.7	6416.0	6255.8	6027.8	5518.4	4717.6	4184.2	4161.4	4241.6	4617.9	4873.2
40°	7553.8	7470.7	7070.2	6686.5	6239.2	5325.1	4595.2	4389.7	4438.0	4756.8	4930.7
42.5°	8714.4	8583.0	8052.5	7439.0	6984.2	6074.5	5134.6	4759.9	4758.3	5025.8	5113.5
45°	9710.2	9642.1	9068.0	8289.7	7835.0	6917.7	5816.1	5309.9	5255.5	5442.9	5465.5
47.5°	10289.0	10243.6	9897.6	9190.4	8844.3	7913.5	6680.4	6073.0	5970.3	6082.1	6047.3
50°	10128.8	10172.6	10072.8	9711.7	9929.3	9312.7	7782.1	7118.7	6923.8	7035.5	6951.0
52.5°	9285.6	9403.4	9492.6	9562.1	10553.4	11185.0	9166.2	8424.2	8262.6	8242.9	8161.3
55°	7766.9	7954.3	8235.4	8746.1	10385.6	12688.5	11583.8	10003.3	9767.6	9643.7	9675.5
57.5°	5285.8	5569.8	6175.8	7147.4	9513.8	13329.2	15159.1	12043.3	11644.3	11203.1	11305.9
60°	2911.9	3149.1	3869.9	4849.0	7523.7	13234.0	18327.8	15358.6	14102.8	12933.3	13144.9
62.5°	1884.2	1935.6	2472.1	3312.3	4617.9	11683.6	20088.3	20899.6	18238.6	15215.0	15512.7
65°	1514.2	1550.4	1813.2	2671.6	3217.0	7516.1	20166.8	26647.9	24893.5	18315.7	18324.9
67.5°	1479.4	1496.0	1648.6	2247.0	3017.6	4092.0	17431.8	28914.5	29321.0	21975.7	20206.1
68°	1500.4	1520.2	1674.3	2177.4	3016.1	3771.6	16111.2	28879.7	29576.3	22587.6	20206.1
70°	1323.6	1347.9	1707.5	2253.0	2887.7	3242.9	11032.4	27346.0	28467.2	23994.4	19172.6
72.5°	692.0	672.4	844.7	1778.5	3250.4	3378.8	5828.2	22846.0	24154.6	22221.9	16564.5
75°	539.4	491.1	473.0	702.6	2859.0	3504.2	3384.9	16238.0	17226.3	16018.9	11071.7
77.5°	507.7	448.8	414.0	415.5	1258.7	3646.2	2738.0	9556.1	9556.1	7641.5	3532.9
80°	408.0	353.6	330.9	377.8	607.5	3360.6	2857.4	4355.0	3714.3	1975.0	973.2
82.5°	269.0	240.3	241.8	306.8	460.8	2243.9	3309.3	2150.2	1615.3	874.9	572.7
85°	170.8	146.6	163.3	214.5	344.5	1000.4	3276.0	1494.4	1069.8	491.1	285.6
87.5°	86.1	66.5	81.6	111.8	210.0	287.2	2697.3	1334.3	793.3	204.0	155.7
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: P196576

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3	5033.3
2.5°	5009.2	4976.0	4959.4	4932.2	4898.8	4865.7	4843.0	4832.4	4826.4	4829.4	4827.8
5°	5045.5	5001.7	4930.7	4829.4	4725.1	4614.8	4530.2	4465.2	4424.5	4412.3	4409.3
7.5°	5072.7	5009.2	4876.2	4691.9	4513.6	4320.2	4155.4	4024.0	3934.9	3894.0	3892.6
10°	5068.1	4986.6	4776.5	4504.5	4243.1	3959.0	3700.6	3480.0	3319.9	3242.9	3239.7
12.5°	5072.7	4960.9	4654.1	4285.3	3910.7	3504.2	3120.3	2777.4	2538.6	2425.2	2420.7
15°	5090.8	4933.7	4528.7	4040.6	3522.3	2948.2	2399.6	1969.0	1751.3	1677.3	1677.3
17.5°	5089.3	4888.4	4383.6	3756.6	3061.5	2292.3	1638.1	1372.1	1350.9	1419.0	1429.4
20°	5059.0	4815.8	4196.2	3419.6	2520.5	1586.7	1110.6	1072.8	1242.1	1429.4	1450.6
22.5°	5012.3	4722.0	3980.2	3028.2	1890.4	1033.6	856.8	914.2	1143.8	1376.5	1409.9
25°	4947.3	4608.8	3732.4	2573.4	1257.2	743.4	714.8	785.8	947.5	1103.1	1127.2
27.5°	4852.1	4465.2	3461.9	2080.8	802.4	612.0	622.6	672.4	742.0	808.4	822.0
30°	4732.7	4297.5	3167.2	1535.2	609.0	547.1	565.1	595.4	625.6	667.9	677.0
32.5°	4611.9	4126.7	2860.5	1054.7	531.9	512.2	530.4	547.1	572.7	601.4	607.5
35°	4503.0	3968.1	2544.6	735.9	498.7	489.6	498.7	509.2	535.0	563.7	566.6
37.5°	4424.5	3838.2	2215.2	581.8	479.0	470.0	474.5	479.0	509.2	551.5	556.1
40°	4413.8	3752.0	1881.3	522.8	464.0	451.8	448.8	451.8	491.1	539.4	544.0
42.5°	4516.6	3756.6	1554.9	498.7	451.8	438.2	426.1	432.1	467.0	504.7	507.7
45°	4759.9	3862.4	1272.4	488.1	441.2	430.7	412.6	415.5	432.1	451.8	454.8
47.5°	5189.0	4093.5	1056.2	482.1	432.1	423.1	400.4	391.3	392.9	403.5	403.5
50°	5875.1	4480.4	924.8	476.1	424.6	408.0	382.3	364.2	359.7	365.7	367.2
52.5°	6898.1	5143.7	861.3	464.0	411.1	388.3	359.7	341.6	333.9	340.1	340.1
55°	8280.6	6202.9	831.1	447.3	394.4	364.2	338.4	323.4	317.3	321.9	321.9
57.5°	9856.8	7579.6	882.5	424.6	373.2	338.4	320.3	309.8	305.3	309.8	311.3
60°	11729.0	9380.8	1236.0	395.9	350.6	315.9	305.3	299.2	296.2	300.7	300.7
62.5°	14217.7	11777.4	1913.0	373.2	326.3	294.7	291.6	288.7	285.6	290.1	290.1
65°	16904.4	13957.9	1969.0	359.7	305.3	276.5	278.1	278.1	275.0	279.6	279.6
67.5°	17759.6	13769.0	1100.0	343.0	279.6	258.4	264.4	264.4	262.9	267.4	265.9
68°	17578.4	13469.7	957.9	338.4	275.0	253.8	259.9	261.4	259.9	264.4	262.9
70°	16227.4	11825.6	630.1	312.8	255.3	238.7	247.8	249.3	247.8	253.8	252.4
72.5°	13395.7	8870.0	465.5	273.4	231.2	219.1	228.2	229.7	231.2	237.2	235.8
75°	8507.4	4898.8	367.2	232.7	207.0	196.4	205.5	210.0	213.0	222.2	217.7
77.5°	2330.1	1486.9	297.7	198.0	178.3	173.7	179.8	185.8	188.9	199.5	191.9
80°	815.9	657.3	247.8	167.7	148.0	146.6	152.6	158.7	161.7	170.8	161.7
82.5°	495.6	429.2	198.0	131.4	116.4	114.8	122.4	128.5	131.4	131.4	125.4
85°	258.4	226.7	145.1	92.3	80.1	75.6	89.1	96.7	98.3	96.7	92.3
87.5°	145.1	128.5	77.0	43.8	36.3	37.8	46.9	57.5	62.0	60.4	57.5
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)