

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: P196678

Luminaire Tested: **NAV-AF-04-D-UNV-SL4-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196678  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)  
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-SL4-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24693.7 lumens  
Efficiency: N/A  
Efficacy: 95.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G4

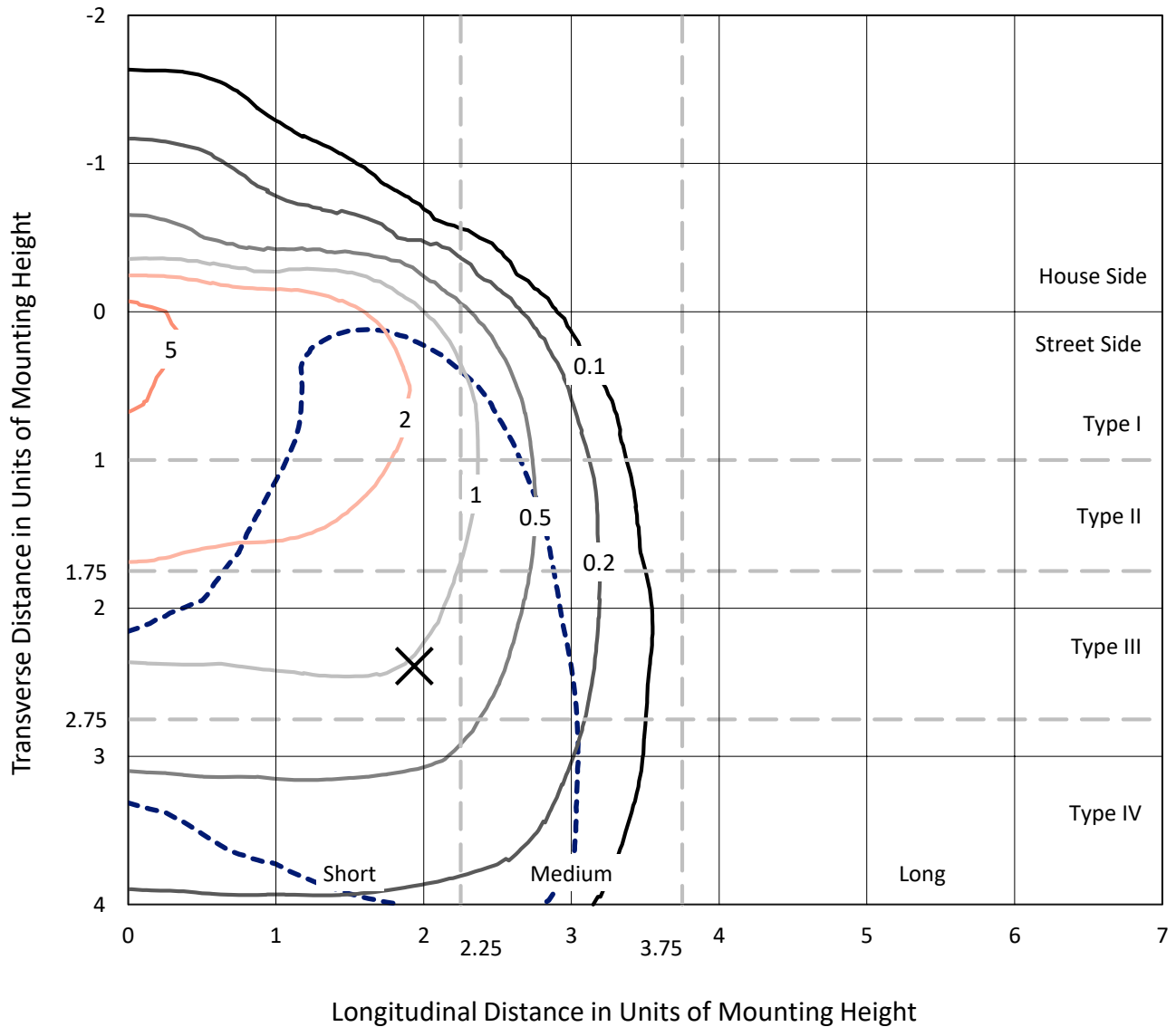
Input Watts (W): 258  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

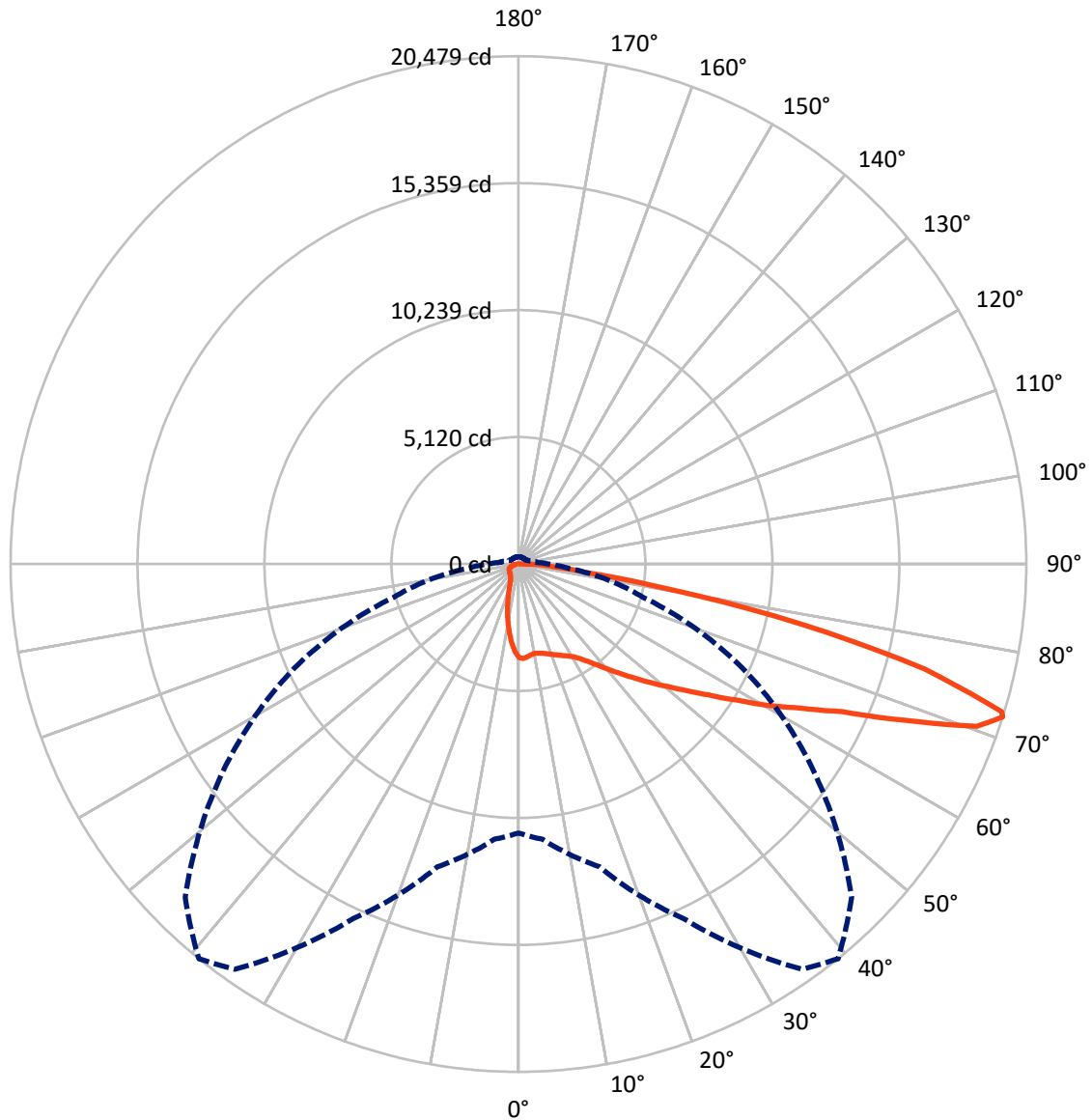
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral      - - - Horizontal Cone Through 72-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2831.5	0.0	2831.5
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	21862.2	0.0	21862.2
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	24693.7	0.0	24693.7
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	324.1	1.3
10°-20°	814.3	3.3
20°-30°	1269.1	5.1
30°-40°	1954.0	7.9
40°-50°	3185.4	12.9
50°-60°	4949.8	20.0
60°-70°	6625.0	26.8
70°-80°	4764.4	19.3
80°-90°	807.7	3.3
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°	24693.7	100.0
0°-180°	24693.7	100.0

**Coefficient of Utilization**



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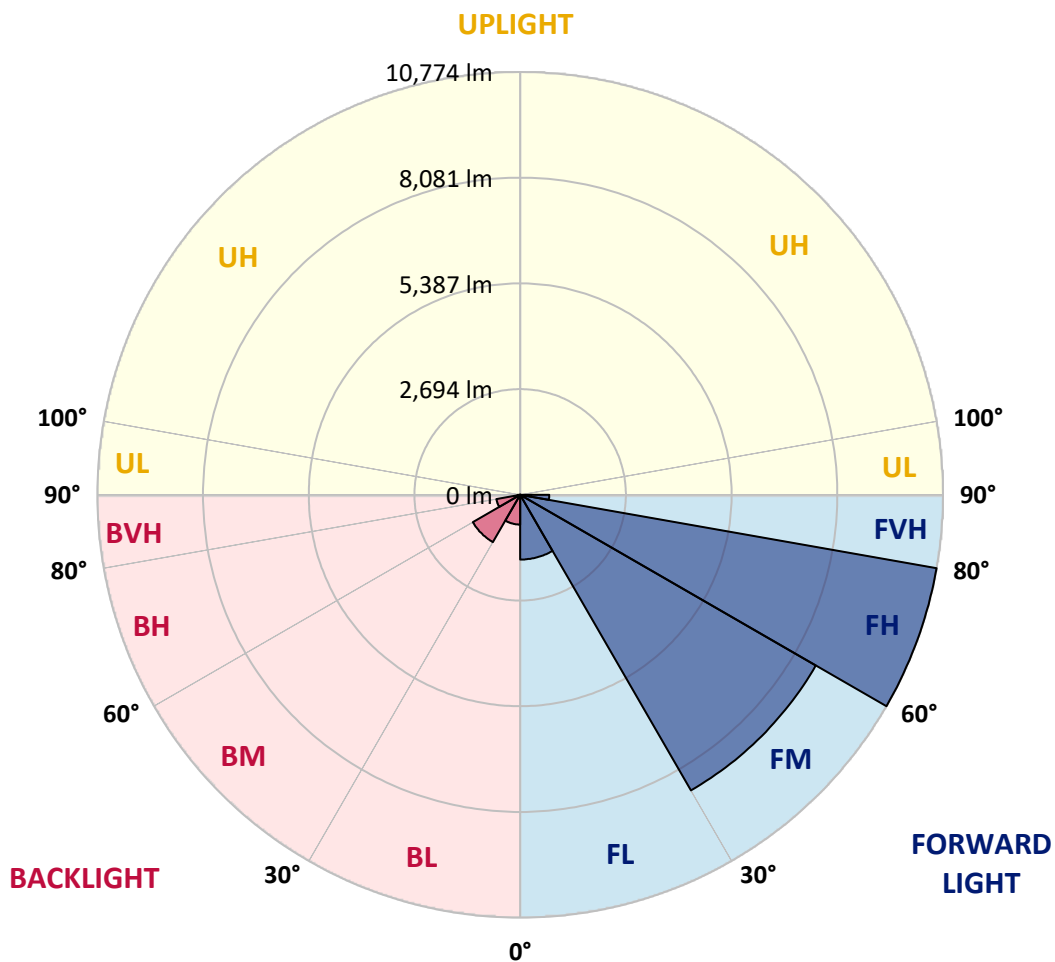
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1649.5	6.7			
FM	(30°-60°)	8697.6	35.2			
FH	(60°-80°)	10774.2	43.6			G4/12000
FVH	(80°-90°)	740.9	3.0			G4/750
BL	(0°-30°)	758.0	3.1	B2/1000		
BM	(30°-60°)	1391.5	5.6	B2/2500		
BH	(60°-80°)	615.2	2.5	B2/1000		G2/1000
BVH	(80°-90°)	66.8	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2
2.5°	3852.4	3854.0	3849.1	3834.1	3820.9	3814.2	3802.7	3782.8	3756.3	3738.0	3723.1
5°	3815.9	3820.9	3817.6	3792.7	3769.6	3756.3	3738.0	3709.8	3675.1	3660.0	3625.3
7.5°	3787.8	3791.1	3781.1	3752.9	3708.2	3691.7	3658.4	3622.0	3590.5	3569.0	3527.6
10°	3767.8	3771.2	3762.9	3734.7	3685.0	3665.1	3625.3	3585.6	3544.1	3517.6	3471.1
12.5°	3739.7	3746.3	3746.3	3733.1	3699.8	3686.6	3646.8	3603.7	3565.5	3537.5	3479.5
15°	3734.7	3743.0	3757.9	3756.3	3746.3	3736.3	3704.9	3661.8	3628.6	3595.5	3524.1
17.5°	3776.1	3794.3	3824.2	3834.1	3827.6	3805.9	3769.6	3729.7	3693.3	3661.8	3573.9
20°	3880.6	3890.5	3935.3	3955.1	3922.0	3890.5	3842.4	3791.1	3757.9	3733.1	3620.3
22.5°	4038.0	4051.4	4087.8	4089.5	4019.8	3981.7	3920.3	3857.4	3825.8	3815.9	3683.3
25°	4290.1	4286.7	4296.6	4255.2	4129.2	4084.4	4010.0	3936.9	3915.5	3935.3	3776.1
27.5°	4591.7	4583.4	4552.0	4444.2	4253.6	4195.5	4106.0	4041.4	4041.4	4087.8	3902.0
30°	4939.8	4931.5	4828.7	4648.1	4401.1	4334.8	4240.3	4172.3	4207.1	4296.6	4072.8
32.5°	5307.9	5278.0	5133.8	4891.7	4611.7	4538.6	4447.5	4377.9	4444.2	4596.6	4318.2
35°	5654.2	5637.7	5460.3	5173.5	4883.5	4822.1	4759.2	4672.9	4779.0	5016.1	4664.6
37.5°	6012.3	5999.1	5781.9	5476.9	5215.0	5173.5	5120.6	5060.8	5231.6	5543.2	5133.8
40°	6411.8	6385.3	6111.8	5806.8	5601.1	5581.3	5553.1	5536.6	5811.7	6275.9	5727.2
42.5°	6864.3	6813.0	6459.9	6169.8	6022.3	6038.9	6023.9	6090.2	6511.3	7121.3	6433.4
45°	7381.5	7278.8	6806.3	6556.0	6488.1	6554.4	6585.8	6755.0	7338.4	8097.6	7222.4
47.5°	7865.6	7733.0	7186.0	6975.4	7013.6	7128.0	7217.4	7515.8	8245.1	9062.4	8028.1
50°	8311.5	8162.3	7592.1	7409.8	7595.3	7757.9	7943.4	8364.6	9209.9	10055.3	8767.4
52.5°	8641.4	8533.5	7998.3	7883.8	8263.4	8478.9	8775.6	9307.8	10184.6	11001.9	9427.1
55°	8896.7	8838.6	8394.4	8427.5	9019.4	9327.7	9687.4	10299.0	11215.7	11850.6	9957.6
57.5°	9191.7	9148.6	8846.9	9084.0	9957.6	10345.4	10769.8	11449.4	12197.0	12598.1	10373.6
60°	9503.4	9503.4	9350.9	9874.7	11131.2	11575.4	11998.1	12526.9	13175.0	13271.1	10542.7
62.5°	9738.8	9800.1	9854.7	10716.8	12245.1	12797.1	13261.3	13768.6	14187.9	13602.8	10144.8
65°	10080.3	10211.2	10519.5	11689.7	13624.3	14347.1	14973.7	15399.6	15008.4	13339.1	8846.9
67.5°	10667.0	10860.9	11517.3	13138.5	15736.2	16818.6	17427.0	16691.0	14847.7	11679.9	6776.5
70°	11195.8	11469.4	12591.6	14976.9	18481.2	19605.2	19325.0	16390.8	12931.4	8561.8	4169.0
72°	10844.4	11142.8	12641.3	15777.6	19948.2	20478.7	19001.8	14526.0	9992.3	5224.9	2055.5
72.5°	10614.0	10924.0	12480.4	15757.7	19988.0	20367.7	18552.4	13785.0	9070.7	4571.9	1662.6
75°	8866.8	9132.0	10731.7	13965.7	17614.2	16918.0	14478.0	8921.4	4169.0	1476.9	855.4
77.5°	5790.2	5992.5	7399.8	9675.8	12338.0	11668.3	8812.1	4177.3	1563.2	896.8	643.2
80°	2909.1	3053.4	3960.1	5087.3	6658.8	6126.7	4067.9	2020.6	1045.9	648.1	505.6
82.5°	2024.0	2156.6	2726.9	2597.5	2783.2	2693.7	1912.9	1685.9	782.4	409.4	265.2
85°	1697.5	1835.0	2256.1	1851.6	1515.1	1380.8	1370.8	1593.0	517.3	202.2	223.8
87.5°	1480.3	1689.1	1861.6	1352.6	1039.4	916.6	1009.5	1460.4	164.1	111.1	68.0
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°	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2	3771.2
2.5°	3698.2	3693.3	3668.4	3630.2	3602.1	3583.8	3549.1	3547.4	3550.7	3520.9	3532.5
5°	3593.7	3573.9	3509.3	3421.5	3350.1	3282.1	3207.6	3182.7	3161.2	3116.4	3121.3
7.5°	3484.4	3449.6	3336.9	3192.7	3055.1	2929.1	2804.8	2743.4	2696.9	2638.9	2638.9
10°	3419.7	3365.0	3192.7	2982.1	2763.2	2579.3	2393.7	2282.7	2201.3	2126.7	2121.9
12.5°	3416.4	3333.5	3093.2	2803.0	2503.0	2244.5	1990.8	1820.2	1699.1	1611.2	1603.0
15°	3443.0	3327.0	3010.3	2635.7	2257.8	1921.3	1608.0	1390.8	1236.6	1138.8	1128.8
17.5°	3466.1	3318.6	2920.8	2460.0	2019.0	1609.6	1261.5	1036.0	890.1	810.6	802.3
20°	3487.7	3300.4	2806.5	2274.3	1755.5	1317.8	986.3	803.9	707.8	663.1	658.1
22.5°	3519.2	3283.8	2687.0	2065.4	1496.9	1072.5	813.9	683.0	631.5	610.0	606.7
25°	3570.6	3285.4	2571.0	1851.6	1259.9	893.5	704.5	623.4	595.1	580.1	580.1
27.5°	3645.2	3305.4	2456.7	1634.4	1059.3	770.9	639.8	591.7	573.5	561.9	558.7
30°	3754.5	3341.8	2335.6	1428.9	900.1	686.2	601.7	571.9	557.0	547.1	545.4
32.5°	3913.7	3406.4	2208.0	1241.6	779.1	626.6	573.5	555.4	543.7	535.4	533.7
35°	4150.8	3520.9	2083.7	1082.4	692.9	583.5	550.3	535.4	528.9	525.4	523.8
37.5°	4498.9	3704.9	1966.0	958.1	636.6	555.4	527.1	518.9	515.4	515.4	515.4
40°	4936.6	3946.9	1859.9	870.2	605.1	533.7	510.6	503.9	503.9	505.6	505.6
42.5°	5468.7	4250.1	1768.7	810.6	586.8	518.9	499.0	495.6	494.0	494.0	495.6
45°	6087.0	4608.3	1712.3	764.2	573.5	510.6	490.7	489.1	482.4	479.1	479.1
47.5°	6708.5	4991.2	1709.1	737.6	557.0	500.6	482.4	482.4	469.2	462.5	464.2
50°	7288.6	5334.4	1745.5	731.1	547.1	485.6	474.0	475.8	457.5	449.3	447.5
52.5°	7756.2	5596.3	1790.3	739.3	547.1	472.4	459.2	467.4	447.5	437.6	436.0
55°	8117.5	5778.6	1806.8	757.6	553.6	460.8	445.9	459.2	444.2	431.0	431.0
57.5°	8376.2	5836.6	1735.6	765.8	563.6	459.2	432.6	457.5	449.3	432.6	432.6
60°	8281.7	5500.1	1470.3	734.3	561.9	455.8	422.8	460.8	465.8	447.5	447.5
62.5°	7544.1	4601.7	1180.2	663.1	533.7	444.2	411.2	457.5	477.4	470.8	467.4
65°	6141.6	3375.0	915.0	578.5	485.6	419.3	386.2	427.6	450.9	457.5	459.2
67.5°	4328.2	2136.7	711.2	492.3	426.0	383.0	358.1	377.9	386.2	389.5	396.2
70°	2367.1	1157.0	565.3	414.4	364.7	346.5	328.3	329.9	326.5	323.2	326.5
72°	1188.5	755.8	477.4	359.7	323.2	311.6	303.3	298.4	298.4	293.4	295.1
72.5°	1022.7	702.9	460.8	346.5	313.2	303.3	296.7	291.7	290.1	286.8	288.5
75°	681.3	557.0	384.6	290.1	266.9	260.2	263.6	258.6	260.2	257.0	258.6
77.5°	550.3	479.1	326.5	245.3	228.8	218.8	225.4	227.2	230.4	227.2	225.4
80°	460.8	407.7	273.4	202.2	190.6	182.4	185.6	197.2	199.0	189.0	187.3
82.5°	298.4	328.3	215.5	157.5	145.9	142.6	150.9	162.5	165.7	152.5	149.1
85°	250.3	263.6	155.8	107.7	96.1	92.9	109.4	121.1	129.3	116.1	112.7
87.5°	69.6	129.3	76.3	51.4	43.0	43.0	53.0	63.1	74.7	76.3	76.3
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)