

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: P195718

Luminaire Tested: **NAV-AF-04-D-UNV-SL4-7050-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195718  
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-SL4-7050-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 5000K, 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: 25532 lumens  
Efficiency: N/A  
Efficacy: 99.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G5

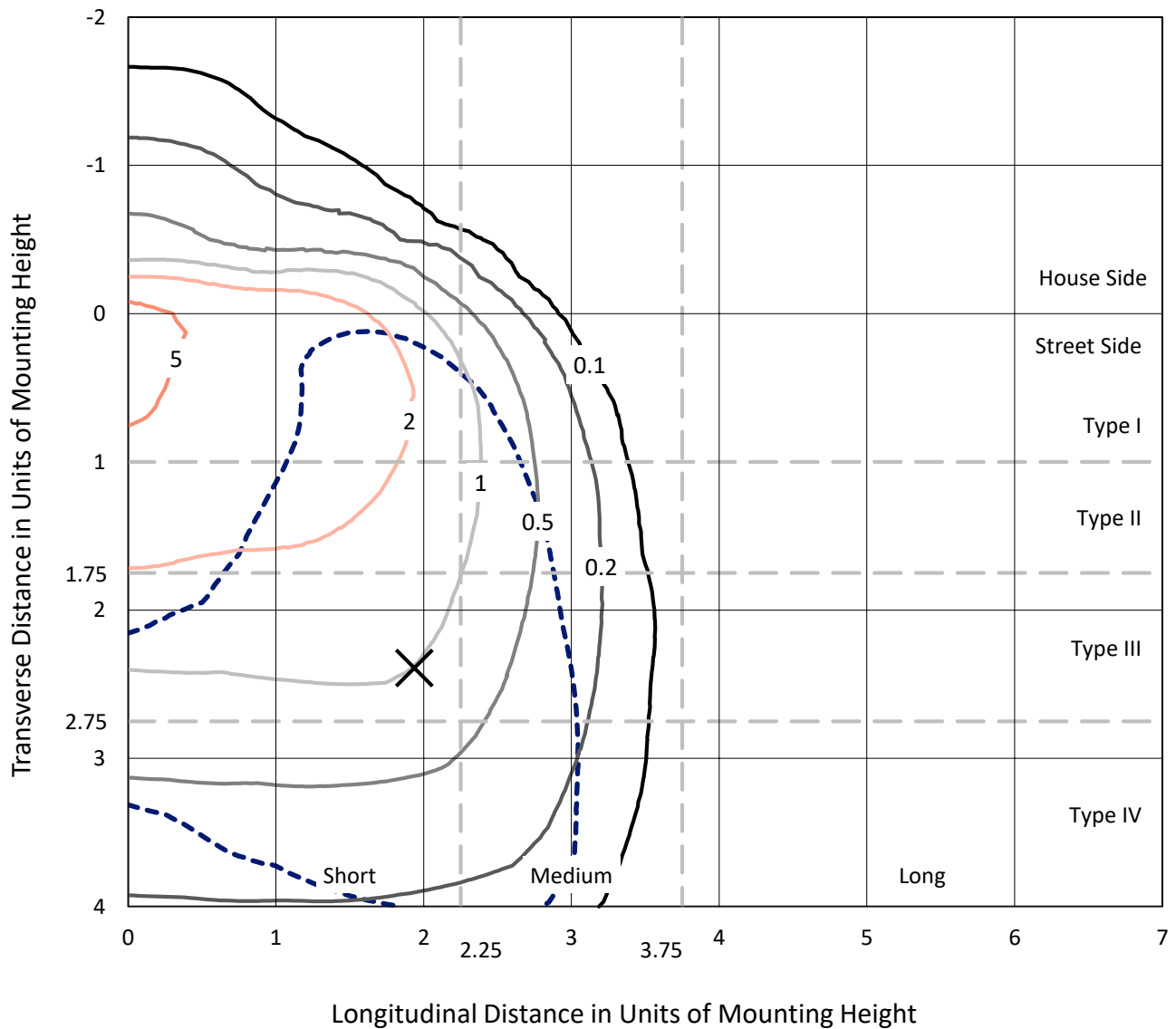
Input Watts (W): 258  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

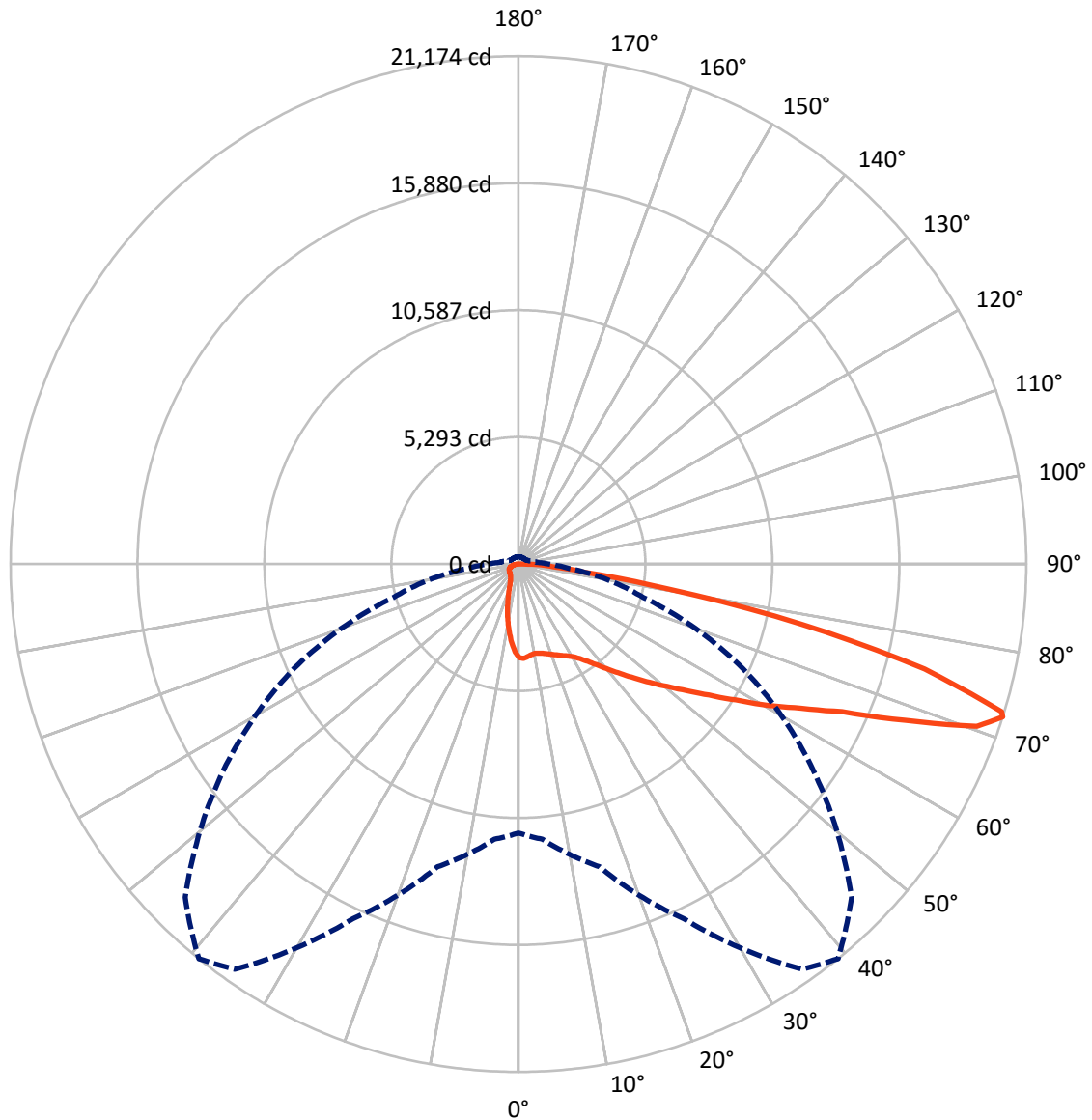
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.2 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	2927.6	0.0	2927.6
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	22604.4	0.0	22604.4
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	25532.0	0.0	25532.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	335.1	1.3
10°-20°	842.0	3.3
20°-30°	1312.1	5.1
30°-40°	2020.3	7.9
40°-50°	3293.5	12.9
50°-60°	5117.8	20.0
60°-70°	6850.0	26.8
70°-80°	4926.1	19.3
80°-90°	835.1	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°	25532.0	100.0
0°-180°	25532.0	100.0

**Coefficient of Utilization**



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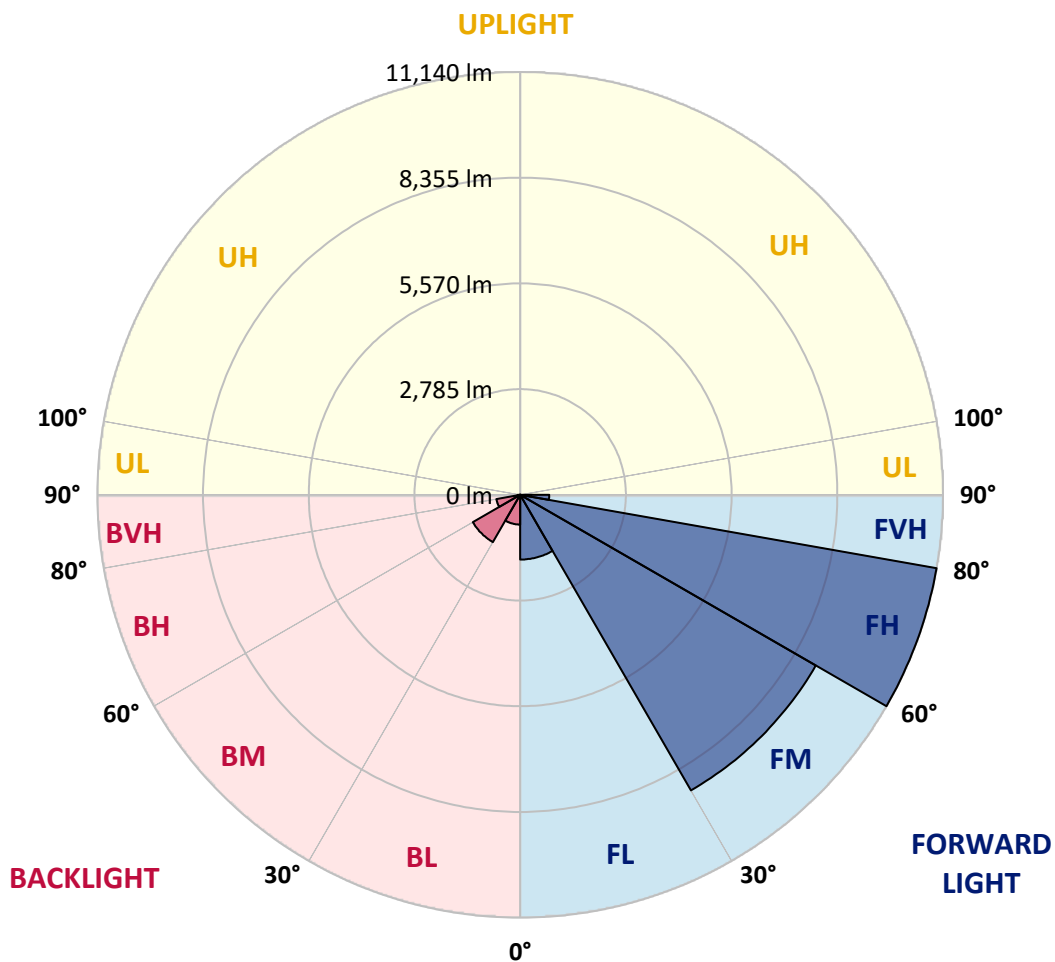
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1705.5	6.7			
FM	(30°-60°)	8992.9	35.2			
FH	(60°-80°)	11140.0	43.6			G4/12000
FVH	(80°-90°)	766.0	3.0			G5
BL	(0°-30°)	783.7	3.1	B2/1000		
BM	(30°-60°)	1438.8	5.6	B2/2500		
BH	(60°-80°)	636.1	2.5	B2/1000		G2/1000
BVH	(80°-90°)	69.0	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2
2.5°	3983.2	3984.9	3979.7	3964.3	3950.6	3943.8	3931.8	3911.2	3883.8	3864.9	3849.5
5°	3945.5	3950.6	3947.2	3921.5	3897.5	3883.8	3864.9	3835.8	3799.8	3784.4	3748.4
7.5°	3916.3	3919.8	3909.5	3880.3	3834.1	3816.9	3782.6	3744.9	3712.4	3690.1	3647.2
10°	3895.8	3899.2	3890.6	3861.5	3810.1	3789.5	3748.4	3707.2	3664.4	3637.0	3589.0
12.5°	3866.6	3873.5	3873.5	3859.8	3825.5	3811.8	3770.6	3726.1	3686.7	3657.5	3597.5
15°	3861.5	3870.1	3885.5	3883.8	3873.5	3863.2	3830.6	3786.1	3751.8	3717.5	3643.8
17.5°	3904.3	3923.2	3954.0	3964.3	3957.5	3935.2	3897.5	3856.3	3818.6	3786.1	3695.2
20°	4012.3	4022.6	4068.9	4089.4	4055.2	4022.6	3972.9	3919.8	3885.5	3859.8	3743.2
22.5°	4175.1	4188.8	4226.6	4228.3	4156.3	4116.9	4053.4	3988.3	3955.8	3945.5	3808.4
25°	4435.7	4432.2	4442.5	4399.7	4269.4	4223.1	4146.0	4070.6	4048.3	4068.9	3904.3
27.5°	4747.6	4739.0	4706.5	4595.1	4397.9	4338.0	4245.4	4178.6	4178.6	4226.6	4034.6
30°	5107.5	5098.9	4992.7	4805.9	4550.5	4481.9	4384.2	4314.0	4350.0	4442.5	4211.1
32.5°	5488.0	5457.2	5308.0	5057.8	4768.2	4692.7	4598.5	4526.5	4595.1	4752.7	4464.8
35°	5846.2	5829.1	5645.7	5349.2	5049.2	4985.8	4920.7	4831.6	4941.3	5186.4	4823.0
37.5°	6216.4	6202.7	5978.2	5662.8	5392.0	5349.2	5294.3	5232.6	5409.2	5731.4	5308.0
40°	6629.5	6602.1	6319.3	6003.9	5791.4	5770.8	5741.7	5724.5	6009.0	6488.9	5921.6
42.5°	7097.4	7044.3	6679.2	6379.3	6226.7	6243.9	6228.4	6297.0	6732.3	7363.1	6651.8
45°	7632.1	7525.9	7037.4	6778.6	6708.3	6776.9	6809.5	6984.3	7587.6	8372.6	7467.6
47.5°	8132.6	7995.5	7429.9	7212.2	7251.6	7369.9	7462.5	7771.0	8525.1	9370.1	8300.6
50°	8593.7	8439.4	7849.8	7661.3	7853.2	8021.2	8213.2	8648.5	9522.6	10396.7	9065.0
52.5°	8934.7	8823.3	8269.7	8151.5	8544.0	8766.8	9073.6	9623.7	10530.4	11375.4	9747.1
55°	9198.7	9138.7	8679.4	8713.6	9325.5	9644.3	10016.2	10648.7	11596.5	12252.9	10295.6
57.5°	9503.8	9459.2	9147.3	9392.3	10295.6	10696.6	11135.4	11838.1	12611.1	13025.9	10725.8
60°	9826.0	9826.0	9668.3	10209.9	11509.1	11968.4	12405.4	12952.2	13622.3	13721.7	10900.6
62.5°	10069.3	10132.8	10189.3	11080.6	12660.8	13231.6	13711.5	14235.9	14669.5	14064.5	10489.3
65°	10422.4	10557.8	10876.6	12086.6	14086.8	14834.1	15481.9	15922.4	15517.9	13792.0	9147.3
67.5°	11029.2	11229.7	11908.4	13584.6	16270.4	17389.6	18018.6	17257.6	15351.7	12076.4	7006.6
70°	11575.9	11858.7	13019.0	15485.4	19108.6	20270.7	19981.0	16947.4	13370.4	8852.5	4310.5
72°	11212.5	11521.0	13070.4	16313.2	20625.5	21173.9	19646.8	15019.2	10331.6	5402.3	2125.3
72.5°	10974.3	11294.8	12904.2	16292.6	20666.6	21059.1	19182.3	14253.1	9378.6	4727.0	1719.1
75°	9167.8	9442.1	11096.0	14439.9	18212.2	17492.4	14969.5	9224.4	4310.5	1527.1	884.4
77.5°	5986.8	6195.9	7651.0	10004.2	12756.8	12064.4	9111.3	4319.1	1616.2	927.2	665.0
80°	3008.0	3157.1	4094.6	5260.1	6884.9	6334.7	4206.0	2089.3	1081.5	670.1	522.7
82.5°	2092.7	2229.8	2819.4	2685.7	2877.7	2785.1	1977.9	1743.1	809.0	423.3	274.2
85°	1755.1	1897.3	2332.7	1914.5	1566.5	1427.7	1417.4	1647.1	534.7	209.1	231.4
87.5°	1530.5	1746.5	1924.7	1398.6	1074.6	947.8	1043.8	1510.0	169.7	114.8	70.3
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°	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2	3899.2
2.5°	3823.8	3818.6	3792.9	3753.5	3724.4	3705.5	3669.5	3667.8	3671.2	3640.4	3652.4
5°	3715.8	3695.2	3628.4	3537.6	3463.9	3393.6	3316.5	3290.7	3268.5	3222.2	3227.3
7.5°	3602.7	3566.7	3450.1	3301.0	3158.8	3028.5	2900.0	2836.6	2788.6	2728.6	2728.6
10°	3535.8	3479.3	3301.0	3083.4	2857.1	2666.9	2474.9	2360.1	2276.1	2199.0	2193.8
12.5°	3532.4	3446.7	3198.2	2898.3	2588.0	2320.7	2058.4	1881.9	1756.8	1665.9	1657.4
15°	3559.8	3439.9	3112.5	2725.2	2334.4	1986.4	1662.5	1438.0	1278.6	1177.5	1167.2
17.5°	3583.8	3431.3	3019.9	2543.5	2087.6	1664.2	1304.3	1071.2	920.4	838.1	829.5
20°	3606.1	3412.4	2901.7	2351.5	1815.1	1362.6	1019.8	831.3	731.8	685.6	680.4
22.5°	3638.7	3395.3	2778.3	2135.6	1547.7	1108.9	841.5	706.1	653.0	630.7	627.3
25°	3691.8	3397.0	2658.3	1914.5	1302.6	923.8	728.4	644.4	615.3	599.9	599.9
27.5°	3768.9	3417.6	2540.0	1689.9	1095.2	797.0	661.6	611.9	593.0	581.0	577.6
30°	3882.1	3455.3	2414.9	1477.4	930.7	709.6	622.2	591.3	575.9	565.6	563.9
32.5°	4046.6	3522.1	2283.0	1283.7	805.5	647.9	593.0	574.2	562.2	553.6	551.9
35°	4291.7	3640.4	2154.4	1119.2	716.4	603.3	569.0	553.6	546.7	543.3	541.6
37.5°	4651.6	3830.6	2032.7	990.7	658.1	574.2	545.0	536.5	533.0	533.0	533.0
40°	5104.1	4080.9	1923.0	899.8	625.6	551.9	527.9	521.0	521.0	522.7	522.7
42.5°	5654.3	4394.5	1828.8	838.1	606.7	536.5	515.9	512.5	510.8	510.8	512.5
45°	6293.6	4764.7	1770.5	790.1	593.0	527.9	507.3	505.6	498.8	495.3	495.3
47.5°	6936.3	5160.6	1767.1	762.7	575.9	517.6	498.8	498.8	485.0	478.2	479.9
50°	7536.2	5515.4	1804.8	755.8	565.6	502.2	490.2	491.9	473.0	464.5	462.8
52.5°	8019.5	5786.2	1851.0	764.4	565.6	488.5	474.8	483.3	462.8	452.5	450.8
55°	8393.1	5974.8	1868.2	783.3	572.5	476.5	461.0	474.8	459.3	445.6	445.6
57.5°	8660.5	6034.8	1794.5	791.8	582.7	474.8	447.3	473.0	464.5	447.3	447.3
60°	8562.8	5686.8	1520.3	759.3	581.0	471.3	437.1	476.5	481.6	462.8	462.8
62.5°	7800.1	4757.9	1220.3	685.6	551.9	459.3	425.1	473.0	493.6	486.8	483.3
65°	6350.1	3489.6	946.1	598.2	502.2	433.6	399.3	442.2	466.2	473.0	474.8
67.5°	4475.1	2209.3	735.3	509.0	440.5	395.9	370.2	390.8	399.3	402.8	409.6
70°	2447.5	1196.3	584.5	428.5	377.1	358.2	339.4	341.1	337.6	334.2	337.6
72°	1228.9	781.6	493.6	371.9	334.2	322.2	313.6	308.5	308.5	303.4	305.1
72.5°	1057.5	726.7	476.5	358.2	323.9	313.6	306.8	301.7	299.9	296.5	298.2
75°	704.4	575.9	397.6	299.9	275.9	269.1	272.5	267.4	269.1	265.7	267.4
77.5°	569.0	495.3	337.6	253.7	236.5	226.2	233.1	234.8	238.2	234.8	233.1
80°	476.5	421.6	282.8	209.1	197.1	188.5	192.0	204.0	205.7	195.4	193.7
82.5°	308.5	339.4	222.8	162.8	150.8	147.4	156.0	168.0	171.4	157.7	154.3
85°	258.8	272.5	161.1	111.4	99.4	96.0	113.1	125.1	133.7	120.0	116.5
87.5°	72.0	133.7	78.8	53.1	44.6	44.6	54.8	65.1	77.1	78.8	78.8
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)