

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: P195929

Luminaire Tested: **NAV-AF-05-D-UNV-5MQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195929
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32757.9 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 279
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

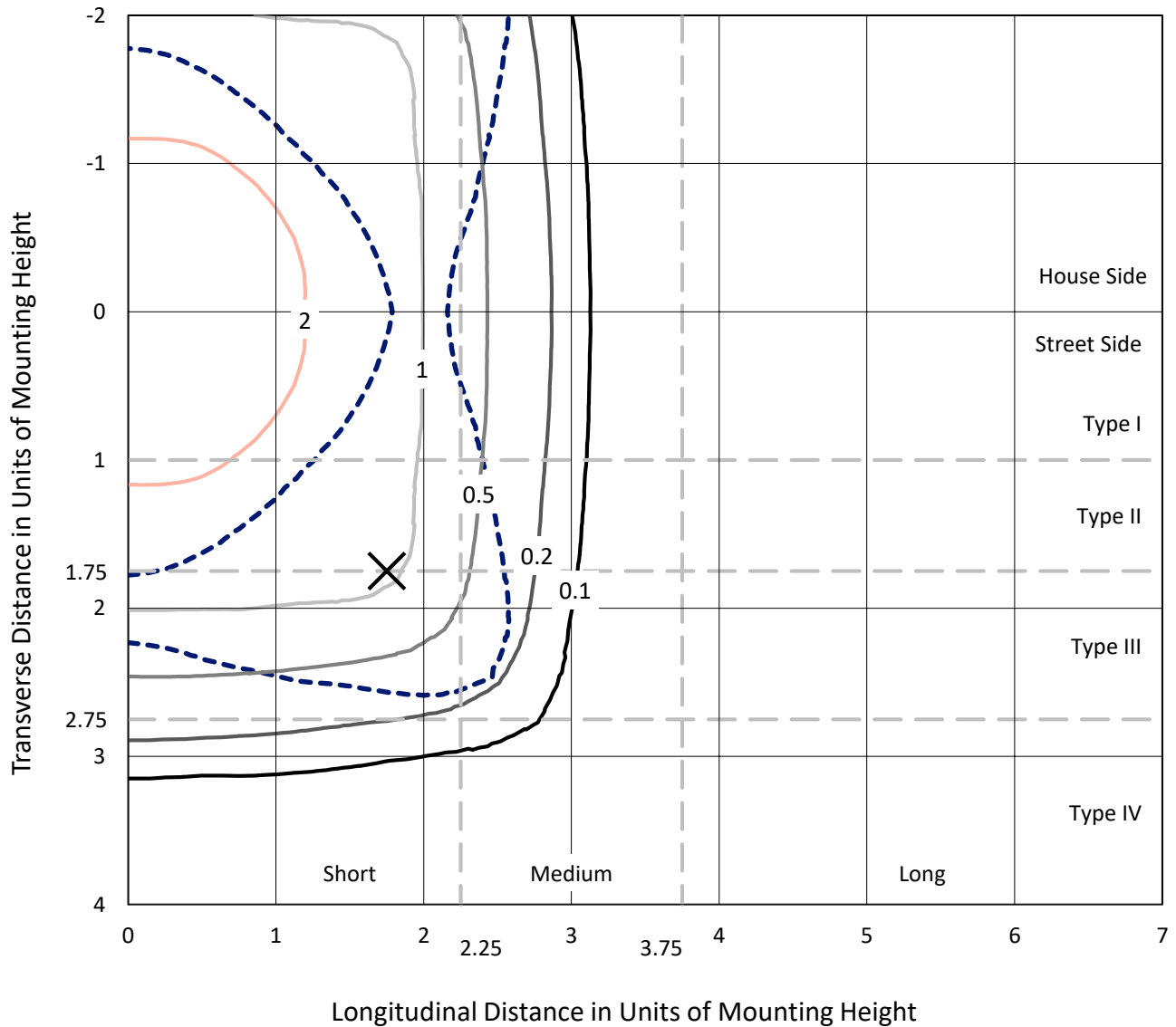


REPORT NUMBER: P195929

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

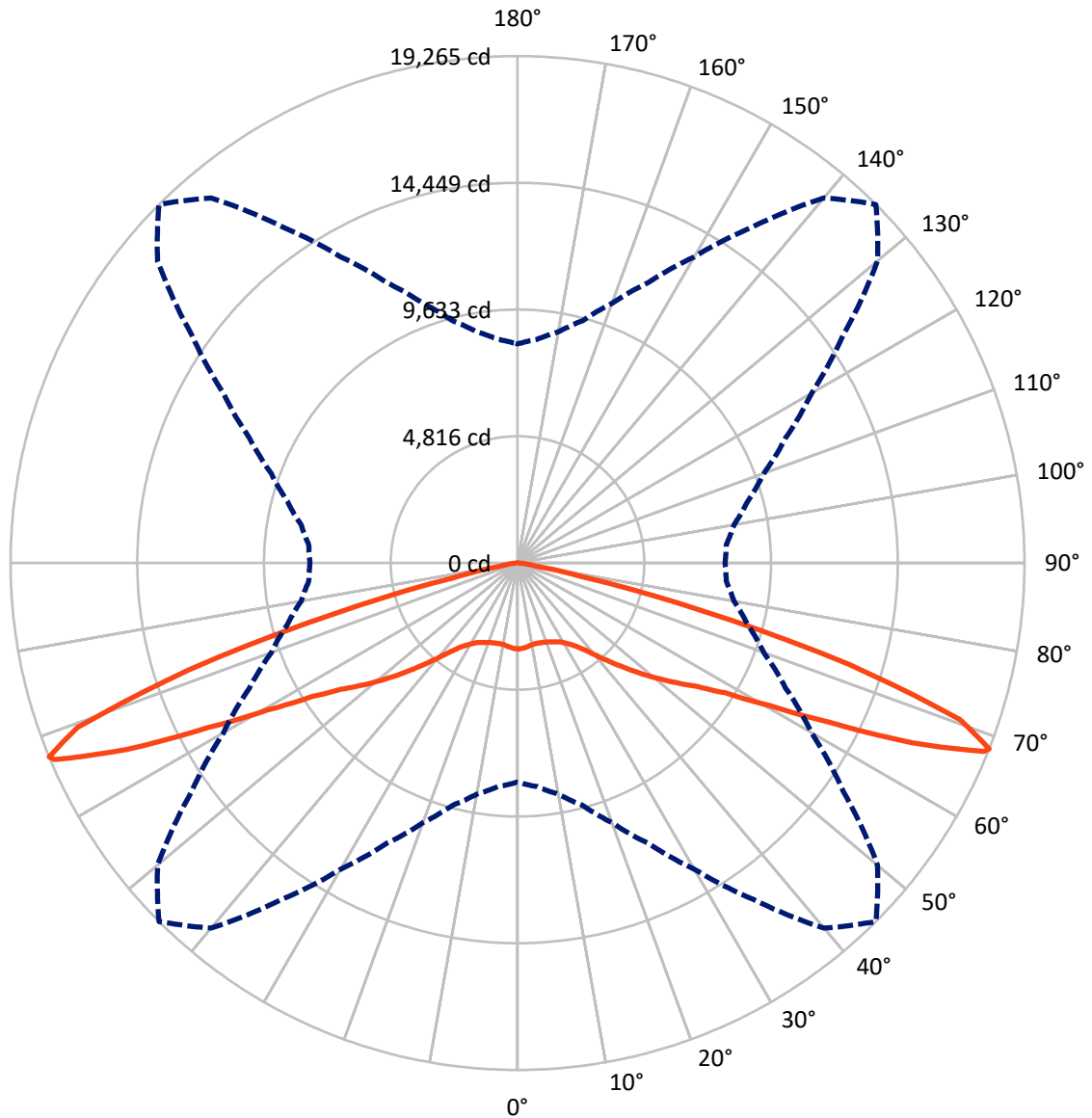


Based on 30 foot mounting height. Maximum calculated value = 3.6 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P195929

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P195929

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	16379.0	0.0	16379.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	16379.0	0.0	16379.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	32757.9	0.0	32757.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.8	0.9
10°-20°	886.8	2.7
20°-30°	1507.6	4.6
30°-40°	2467.2	7.5
40°-50°	4409.2	13.5
50°-60°	7446.5	22.7
60°-70°	11546.7	35.2
70°-80°	3970.0	12.1
80°-90°	218.2	0.7
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°	32757.9	100.0
0°-180°	32757.9	100.0



REPORT NUMBER: P195929

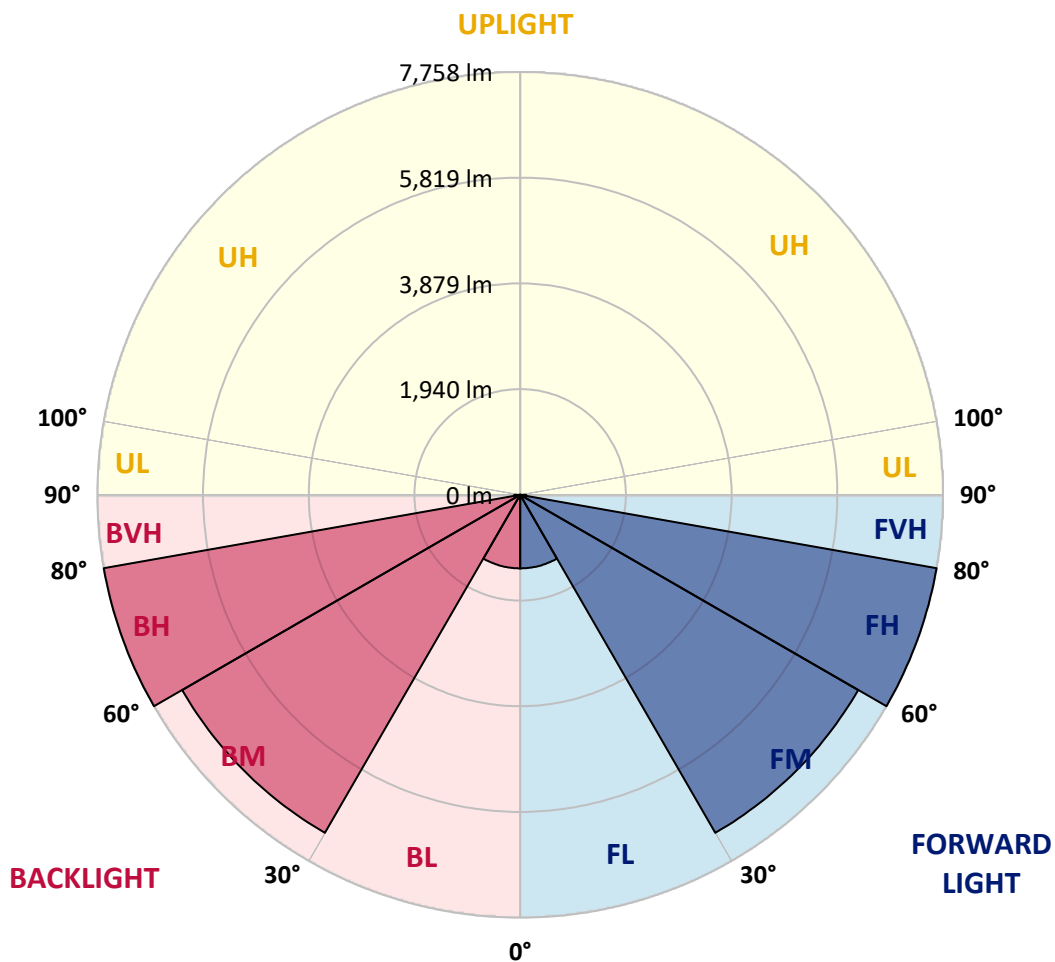
CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1350.1	4.1			
FM	(30°-60°)	7161.4	21.9			
FH	(60°-80°)	7758.4	23.7			G4/12000
FVH	(80°-90°)	109.1	0.3			G2/225
BL	(0°-30°)	1350.1	4.1	B3/2500		
BM	(30°-60°)	7161.4	21.9	B4/8500		
BH	(60°-80°)	7758.4	23.7	B5		G4/12000
BVH	(80°-90°)	109.1	0.3			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G4

Type V Short





REPORT NUMBER: P195929

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3267.7	3267.7	3267.7	3267.7	3267.7	3267.7	3267.7	3267.7	3267.7	3267.7	3267.7
2.5°	3281.7	3281.7	3285.7	3283.8	3277.7	3271.7	3265.7	3259.6	3255.6	3251.7	3247.7
5°	3247.7	3247.7	3253.7	3249.6	3245.6	3239.6	3235.6	3229.6	3225.6	3221.6	3223.5
7.5°	3203.5	3207.6	3211.6	3209.5	3201.5	3199.5	3193.4	3191.5	3187.5	3181.5	3183.4
10°	3165.4	3167.4	3171.5	3169.4	3167.4	3161.4	3159.4	3157.3	3155.4	3147.3	3145.4
12.5°	3127.3	3131.3	3135.3	3137.3	3135.3	3137.3	3139.3	3141.3	3139.3	3135.3	3135.3
15°	3097.2	3101.2	3107.2	3113.2	3115.3	3127.3	3135.3	3143.3	3149.4	3151.4	3145.4
17.5°	3081.1	3087.2	3095.1	3107.2	3117.2	3131.3	3145.4	3157.3	3167.4	3169.4	3163.4
20°	3079.2	3085.1	3097.2	3111.2	3129.3	3147.3	3169.4	3187.5	3197.5	3203.5	3197.5
22.5°	3093.2	3101.2	3117.2	3135.3	3157.3	3181.5	3209.5	3229.6	3249.6	3257.7	3251.7
25°	3133.3	3141.3	3159.4	3181.5	3205.5	3235.6	3263.7	3289.8	3309.9	3319.9	3311.8
27.5°	3217.6	3219.5	3239.6	3263.7	3291.8	3317.8	3353.9	3366.0	3382.1	3392.1	3382.1
30°	3335.9	3339.9	3357.9	3396.1	3422.2	3456.2	3476.3	3488.4	3506.4	3516.4	3504.4
32.5°	3516.4	3520.5	3536.5	3572.7	3596.7	3622.8	3646.8	3654.9	3672.9	3685.0	3670.9
35°	3771.2	3779.2	3793.3	3817.3	3837.4	3857.4	3875.6	3869.5	3881.5	3897.5	3883.5
37.5°	4120.2	4118.2	4122.3	4140.3	4160.3	4172.4	4200.4	4186.4	4198.5	4212.5	4204.5
40°	4527.5	4527.5	4525.4	4557.6	4565.5	4577.6	4607.7	4589.7	4605.6	4621.7	4607.7
42.5°	4990.8	4998.9	5008.9	5035.0	5057.1	5061.0	5075.1	5067.1	5087.1	5101.1	5087.1
45°	5524.4	5536.4	5548.5	5608.6	5618.7	5626.7	5636.8	5610.7	5632.8	5644.7	5640.8
47.5°	6078.1	6100.2	6126.1	6188.3	6228.5	6246.5	6254.5	6224.5	6226.5	6244.5	6246.5
50°	6703.9	6727.9	6754.0	6824.3	6862.4	6894.5	6904.5	6870.4	6874.4	6888.4	6892.4
52.5°	7281.7	7309.7	7365.9	7460.2	7514.3	7570.4	7574.5	7532.4	7550.4	7560.4	7552.4
55°	7825.3	7861.4	7935.5	8062.0	8160.2	8270.6	8320.7	8274.5	8274.5	8266.6	8262.6
57.5°	8459.1	8499.3	8575.5	8721.9	8858.3	9016.8	9153.2	9199.3	9283.6	9311.6	9267.5
60°	9413.9	9456.1	9534.3	9726.9	9899.4	10130.1	10354.7	10537.3	10834.2	10994.7	10850.2
62.5°	10286.6	10350.7	10535.3	10872.3	11245.4	11672.7	12168.1	12521.2	13060.8	13329.6	12966.5
65°	10087.9	10218.4	10579.5	11108.9	11879.3	12806.0	13815.1	14783.9	15899.2	16470.9	15732.7
67.5°	8812.2	8922.5	9311.6	9927.4	10888.3	12166.2	13734.8	15740.8	18041.6	19112.7	17806.9
68°	8324.7	8531.3	8918.5	9530.3	10499.2	11754.9	13429.9	15596.3	18107.8	19265.2	17855.0
70°	6382.9	6457.2	6828.3	7377.9	8423.0	9654.7	11345.6	13815.1	16653.4	17845.0	16394.7
72.5°	3033.0	3077.1	3317.8	3859.5	4523.4	5526.4	7018.9	9347.7	11905.3	13145.0	11698.8
75°	1111.3	1121.4	1177.5	1305.9	1554.6	1931.7	2647.9	4096.2	6064.1	7231.4	6088.1
77.5°	599.8	601.8	623.9	655.9	700.1	750.2	858.6	1151.4	1857.5	2527.5	1961.8
80°	377.2	375.1	397.2	423.3	453.4	477.4	487.4	521.5	587.8	688.0	631.9
82.5°	192.6	210.6	260.8	288.9	333.0	341.1	331.0	329.0	349.0	377.2	389.1
85°	106.3	94.3	138.4	184.5	200.6	206.6	208.6	196.6	192.6	188.5	198.6
87.5°	54.1	50.1	60.1	92.3	98.3	80.2	82.2	70.2	48.2	48.2	50.1
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: P195929

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3267.7	3267.7	3267.7	3267.7	3267.7	3267.7	3267.7	3267.7
2.5°	3243.7	3245.6	3241.6	3241.6	3241.6	3243.7	3241.6	3239.6
5°	3217.6	3221.6	3221.6	3223.5	3225.6	3225.6	3225.6	3225.6
7.5°	3179.4	3181.5	3185.5	3185.5	3185.5	3185.5	3185.5	3185.5
10°	3143.3	3139.3	3137.3	3133.3	3133.3	3127.3	3129.3	3131.3
12.5°	3125.3	3117.2	3113.2	3107.2	3103.2	3097.2	3097.2	3099.2
15°	3133.3	3121.2	3109.3	3105.3	3101.2	3097.2	3093.2	3095.1
17.5°	3149.4	3135.3	3121.2	3113.2	3105.3	3099.2	3097.2	3099.2
20°	3183.4	3163.4	3141.3	3127.3	3111.2	3107.2	3101.2	3107.2
22.5°	3229.6	3205.5	3177.4	3151.4	3133.3	3125.3	3117.2	3123.3
25°	3285.7	3259.6	3231.6	3201.5	3181.5	3175.4	3165.4	3165.4
27.5°	3364.0	3341.9	3317.8	3289.8	3269.8	3263.7	3247.7	3247.7
30°	3488.4	3466.3	3444.3	3420.1	3400.1	3394.0	3374.0	3374.0
32.5°	3652.9	3628.8	3614.7	3594.6	3578.6	3568.6	3544.5	3542.5
35°	3873.5	3851.4	3849.5	3835.3	3819.4	3821.3	3797.3	3793.3
37.5°	4190.4	4172.4	4178.4	4166.4	4152.4	4164.3	4150.3	4150.3
40°	4595.6	4589.7	4595.6	4587.6	4589.7	4591.6	4579.6	4583.6
42.5°	5085.1	5069.0	5105.1	5101.1	5095.1	5111.2	5083.1	5063.0
45°	5648.7	5642.8	5678.9	5684.8	5672.9	5682.9	5632.8	5630.7
47.5°	6260.6	6260.6	6292.7	6288.7	6276.6	6278.7	6218.4	6180.4
50°	6898.5	6894.5	6926.6	6918.5	6902.5	6900.5	6838.3	6800.2
52.5°	7562.5	7562.5	7608.6	7586.5	7548.5	7530.4	7454.1	7404.0
55°	8296.6	8286.6	8300.6	8228.4	8154.2	8100.0	8005.8	7967.7
57.5°	9225.4	9109.1	9008.7	8916.4	8812.2	8748.0	8637.7	8597.5
60°	10543.3	10232.4	10098.0	9913.4	9740.9	9654.7	9508.2	9430.0
62.5°	12368.7	11853.2	11488.1	11080.9	10687.7	10410.9	10188.3	10090.0
65°	14478.9	13355.6	12426.9	11554.3	10814.1	10226.3	9899.4	9797.1
67.5°	15281.4	13219.3	11616.5	10364.7	9466.1	8766.1	8374.9	8292.7
68°	15110.8	12906.4	11241.4	9959.6	9056.9	8350.8	7961.6	7887.5
70°	13329.6	10888.3	9131.2	7855.3	7012.8	6340.9	6066.0	5947.6
72.5°	9087.0	6992.8	5363.9	4290.8	3660.8	3235.6	2982.8	2896.6
75°	4182.4	2826.4	1887.7	1410.1	1197.6	1095.3	1017.0	997.0
77.5°	1219.7	886.6	762.3	706.1	664.0	627.9	601.8	599.8
80°	579.7	543.6	527.5	491.4	453.4	419.2	395.2	399.2
82.5°	389.1	379.1	379.1	343.0	282.8	242.7	200.6	180.6
85°	206.6	214.6	226.7	214.6	186.6	138.4	90.2	98.3
87.5°	70.2	80.2	84.3	82.2	74.3	56.2	42.1	42.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)