

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: P197109

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197109
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-SL3-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16194 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G3

Input Watts (W): 191
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

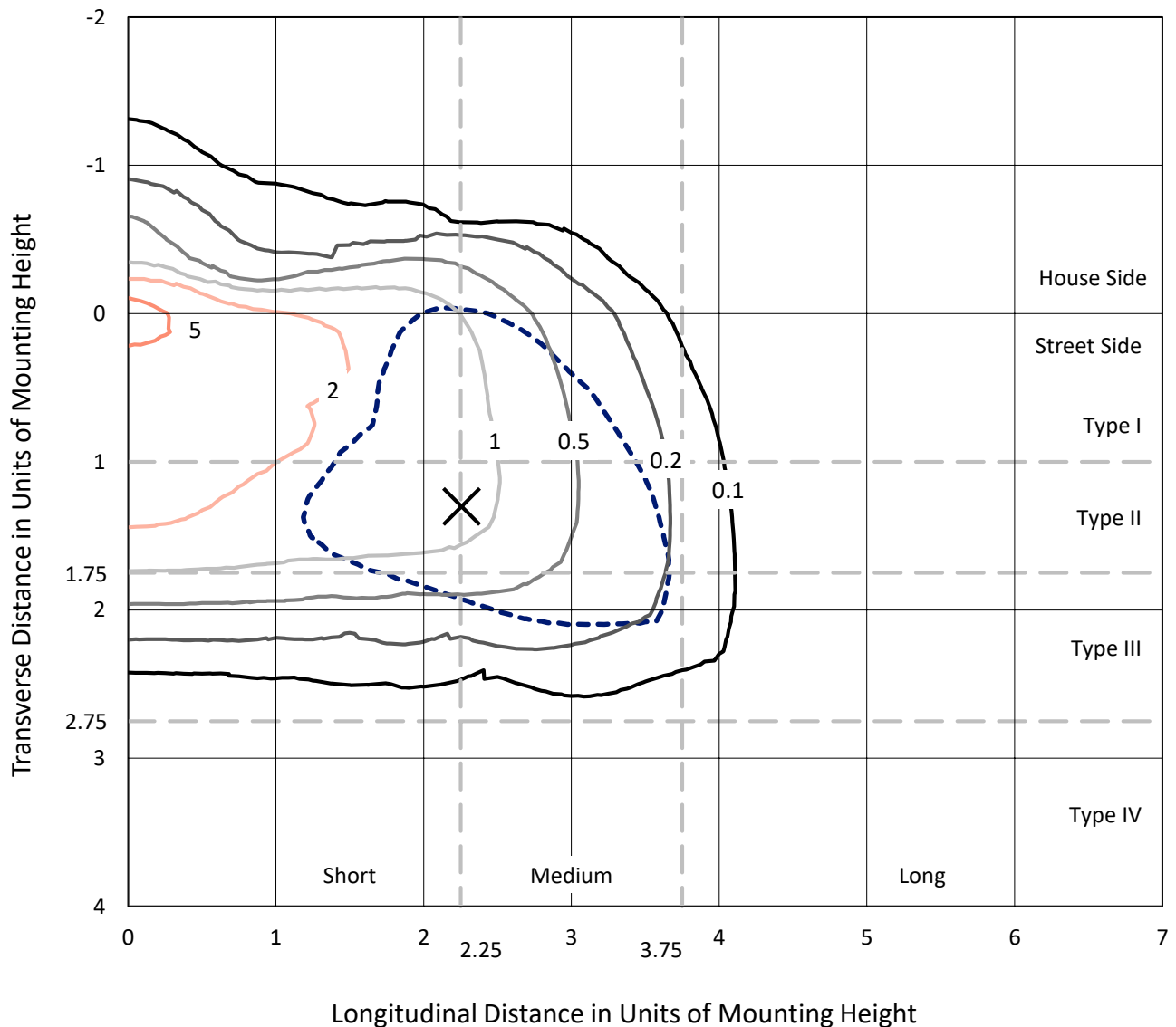


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Iso-Footcandle Lines of Horizontal Illumination

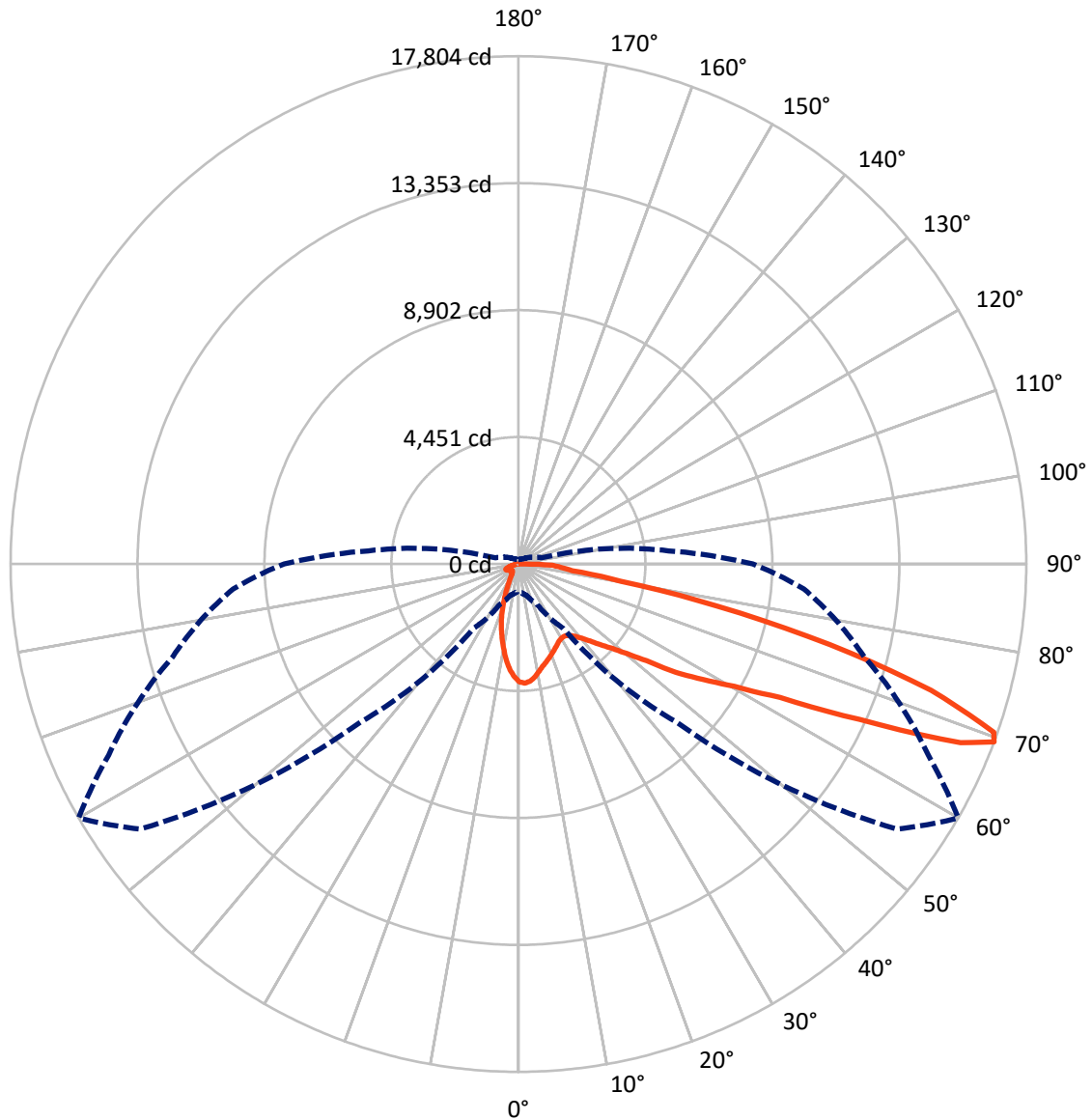
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2309.8	0.0	2309.8
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	13884.2	0.0	13884.2
	% Fixture	85.7	0.0	85.7
Total	Lumens	16194.0	0.0	16194.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.5	2.2
10°-20°	750.5	4.6
20°-30°	957.4	5.9
30°-40°	1317.5	8.1
40°-50°	2134.1	13.2
50°-60°	3349.4	20.7
60°-70°	4465.4	27.6
70°-80°	2483.8	15.3
80°-90°	385.2	2.4
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°	16194.0	100.0
0°-180°	16194.0	100.0

Coefficient of Utilization



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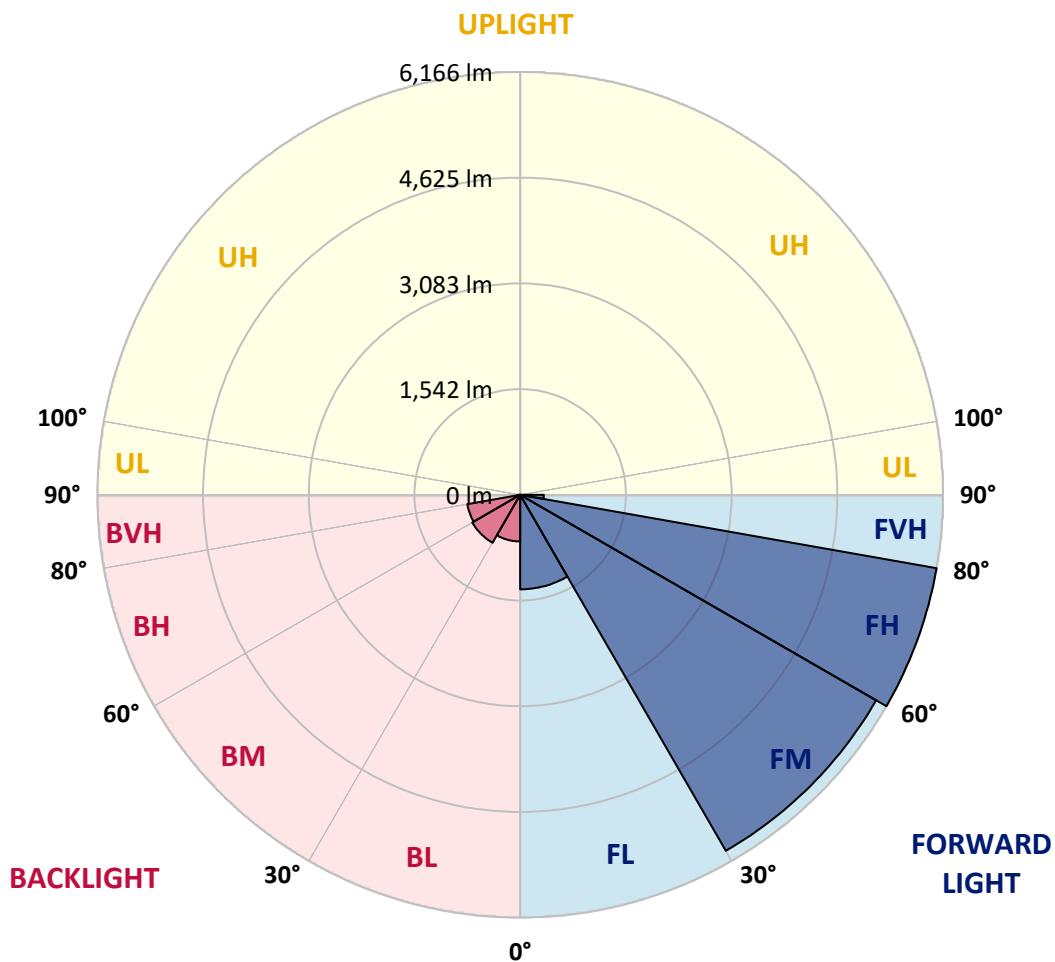
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1377.8	8.5			
FM	(30°-60°)	5994.2	37.0			
FH	(60°-80°)	6166.1	38.1			G3/7500
FVH	(80°-90°)	346.2	2.1			G3/500
BL	(0°-30°)	680.7	4.2	B2/1000		
BM	(30°-60°)	806.9	5.0	B1/1000		
BH	(60°-80°)	783.1	4.8	B2/1000		G2/1000
BVH	(80°-90°)	39.0	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0
2.5°	4242.0	4253.4	4253.4	4244.1	4238.9	4208.8	4191.1	4178.7	4156.9	4116.4	4080.0
5°	4090.4	4112.2	4121.6	4125.7	4152.7	4143.4	4144.4	4136.1	4117.4	4073.8	4014.6
7.5°	3812.1	3816.3	3832.9	3860.9	3926.3	3972.0	4009.4	4016.7	4012.5	3980.3	3897.3
10°	3538.0	3545.2	3565.0	3612.7	3675.0	3740.5	3821.5	3854.7	3879.6	3869.2	3764.3
12.5°	3310.5	3311.6	3333.4	3388.4	3458.0	3540.0	3650.1	3702.0	3761.2	3785.1	3667.8
15°	3091.4	3106.0	3126.7	3193.2	3279.4	3383.2	3509.9	3581.6	3659.5	3728.0	3593.0
17.5°	2925.3	2936.7	2949.2	3004.2	3103.9	3233.7	3390.5	3467.3	3570.2	3675.0	3516.2
20°	2833.9	2838.1	2828.7	2855.7	2939.8	3080.0	3261.7	3354.2	3476.7	3624.2	3437.2
22.5°	2815.2	2815.2	2780.9	2775.7	2813.1	2931.5	3128.8	3242.0	3391.5	3588.8	3366.6
25°	2902.4	2896.2	2831.8	2772.6	2759.1	2819.4	3002.1	3141.3	3318.9	3587.8	3313.7
27.5°	3067.6	3059.2	2979.3	2879.6	2793.4	2767.4	2904.5	3046.8	3261.7	3623.1	3286.7
30°	3273.2	3270.0	3189.0	3064.4	2922.2	2788.2	2866.1	2998.0	3223.3	3688.5	3285.6
32.5°	3498.5	3484.0	3434.1	3309.5	3124.7	2903.5	2888.9	3000.1	3212.9	3784.1	3309.5
35°	3738.4	3728.0	3715.5	3589.9	3382.2	3107.0	2989.7	3071.7	3263.8	3917.0	3377.0
37.5°	4043.7	4032.3	4053.0	3916.0	3688.5	3373.9	3160.0	3215.0	3367.7	4110.1	3502.7
40°	4586.8	4553.6	4495.4	4284.6	4045.8	3701.0	3406.1	3414.4	3545.2	4368.7	3704.1
42.5°	5478.8	5371.8	5084.2	4696.9	4422.7	4081.1	3727.0	3687.5	3790.3	4710.4	3997.0
45°	6372.9	6252.4	5766.5	5146.5	4813.2	4489.2	4123.6	4029.1	4095.6	5108.1	4373.9
47.5°	6950.3	6891.1	6342.8	5596.1	5222.3	4933.6	4577.4	4421.7	4469.4	5558.8	4839.1
50°	7119.5	7068.7	6637.7	5948.2	5608.6	5470.5	5139.2	4932.6	4940.9	6085.3	5396.8
52.5°	6992.9	6972.1	6686.5	6166.3	5963.8	6036.4	5917.0	5629.4	5560.8	6662.6	6001.1
55°	6823.6	6830.9	6720.8	6385.4	6325.1	6564.0	6934.7	6703.1	6412.4	7263.9	6630.4
57.5°	6290.9	6296.1	6584.7	6802.8	7014.7	7303.3	7727.0	7629.4	7290.9	7912.9	7335.5
60°	5065.5	5106.0	5748.8	6716.6	7802.8	8760.3	8864.1	8695.9	8225.5	8660.6	8252.5
62.5°	3619.0	3655.3	4399.9	5830.8	7710.4	10409.3	10963.8	10295.1	9493.4	9779.0	9542.2
65°	1901.4	1895.2	2471.5	4029.1	6494.4	10791.5	14272.3	13134.2	11629.5	11316.9	10788.3
67.5°	1062.3	1096.6	1319.9	2032.2	4232.7	9497.6	16385.5	16721.0	14599.4	12537.1	10734.3
69°	982.4	993.8	1143.3	1571.2	2759.1	7836.1	16203.8	17804.0	15851.8	12542.3	10042.7
70°	954.3	966.8	1102.8	1447.6	2317.8	6420.7	15542.3	17677.4	16156.0	12264.0	9413.5
72.5°	855.7	872.3	1004.2	1301.2	1953.3	3309.5	12519.4	15130.1	14634.7	10718.8	7299.2
75°	730.0	758.1	957.4	1291.8	1850.5	2103.9	8349.1	11272.3	10892.2	7665.8	4141.3
77.5°	302.2	305.3	418.5	946.0	1941.9	2013.5	4487.1	7140.3	6321.0	3361.4	1247.2
80°	210.8	206.6	208.7	276.2	1567.0	2027.0	2302.2	3631.4	2822.5	886.8	583.6
82.5°	177.6	175.5	183.8	173.4	530.6	2300.1	1925.3	1893.1	1329.2	477.7	278.3
85°	117.3	114.2	150.6	157.8	252.3	1826.6	2070.6	1488.1	990.7	255.5	118.4
87.5°	57.1	58.2	86.2	107.0	134.0	578.4	1983.4	1176.6	765.3	111.1	47.8
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°	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0	4132.0
2.5°	4065.5	4034.3	4006.3	3971.0	3944.0	3921.1	3890.0	3889.0	3883.8	3891.0	3893.1
5°	3975.1	3923.2	3844.3	3756.0	3693.7	3611.7	3531.7	3504.7	3474.6	3471.5	3480.8
7.5°	3839.1	3758.1	3623.1	3488.1	3353.1	3215.0	3084.2	3017.7	2953.3	2933.6	2942.9
10°	3687.5	3584.7	3378.0	3157.9	2967.9	2762.2	2562.9	2434.1	2316.8	2266.9	2279.4
12.5°	3569.1	3438.3	3147.5	2861.9	2577.4	2282.5	2019.8	1765.3	1573.2	1487.0	1492.2
15°	3467.3	3300.2	2931.5	2551.4	2195.3	1791.3	1426.8	1131.9	963.7	901.4	899.3
17.5°	3357.3	3154.8	2706.2	2262.8	1800.7	1301.2	955.4	780.9	714.4	693.7	693.7
20°	3239.9	3005.2	2470.4	1948.1	1385.3	908.6	718.6	651.1	626.2	619.9	618.9
22.5°	3130.9	2858.8	2233.7	1612.7	1002.1	689.5	611.6	585.7	581.5	586.7	586.7
25°	3044.7	2730.1	1993.8	1259.6	729.0	577.4	544.1	541.0	556.6	575.3	578.4
27.5°	2980.3	2614.8	1757.0	920.1	573.2	502.6	491.2	504.7	541.0	578.4	585.7
30°	2935.7	2516.1	1473.5	661.5	477.7	440.3	445.5	469.4	524.4	581.5	597.1
32.5°	2915.9	2436.2	1188.0	507.8	408.1	387.3	400.8	432.0	489.1	546.2	564.9
35°	2934.6	2378.0	924.2	421.6	357.2	341.6	357.2	389.4	426.8	454.8	466.3
37.5°	3002.1	2357.3	695.8	373.8	324.0	308.4	320.9	342.7	359.3	369.7	374.9
40°	3144.4	2379.1	545.2	348.9	305.3	287.6	290.8	301.1	312.6	320.9	321.9
42.5°	3370.8	2450.7	485.0	339.6	293.9	271.0	265.8	273.1	285.6	297.0	299.1
45°	3671.9	2570.1	478.7	342.7	288.7	257.5	247.1	254.4	271.0	289.7	292.8
47.5°	4061.3	2759.1	507.8	359.3	291.8	250.3	234.7	242.0	263.8	288.7	292.8
50°	4522.4	3020.8	561.8	384.2	306.3	250.3	229.5	235.7	258.6	286.6	290.8
52.5°	5065.5	3385.3	617.9	409.1	327.1	259.6	231.6	230.5	251.3	277.3	282.5
55°	5664.7	3838.1	671.9	431.0	338.5	272.1	236.8	224.3	240.9	261.7	265.8
57.5°	6369.8	4458.0	766.4	451.7	344.8	281.4	243.0	218.1	227.4	242.0	245.1
60°	7326.2	5368.7	950.2	487.0	356.2	285.6	244.0	211.8	210.8	221.2	222.2
62.5°	8573.4	6435.2	1125.7	528.6	379.0	286.6	239.9	207.7	197.3	200.4	200.4
65°	9460.2	6827.7	1074.8	563.9	399.8	285.6	235.7	204.6	186.9	181.7	181.7
67.5°	8955.5	6031.3	912.8	573.2	401.9	274.1	226.4	197.3	177.6	165.1	165.1
69°	8214.1	5286.7	838.0	556.6	385.3	260.6	216.0	190.0	171.3	156.8	156.8
70°	7609.7	4722.8	792.3	536.9	365.5	249.2	206.6	182.8	165.1	152.7	151.6
72.5°	5681.3	3151.7	677.1	463.1	300.1	210.8	180.7	163.0	148.5	140.2	140.2
75°	2998.0	1579.5	554.5	378.0	231.6	168.2	148.5	137.1	128.8	127.7	126.7
77.5°	982.4	714.4	398.8	284.5	170.3	130.8	118.4	111.1	110.1	114.2	114.2
80°	530.6	426.8	256.5	192.1	118.4	97.6	91.4	90.3	93.5	99.7	99.7
82.5°	257.5	210.8	152.7	118.4	81.0	71.7	71.7	72.7	76.8	84.1	84.1
85°	111.1	99.7	88.3	66.5	49.8	44.7	50.9	56.1	59.2	64.4	66.5
87.5°	53.0	46.7	40.5	26.0	21.8	22.8	27.0	33.2	39.5	43.6	44.7
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)