

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: P195117

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-7060-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195117
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
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-SL2-7060-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16209 lumens
Efficiency: N/A
Efficacy: 84.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-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

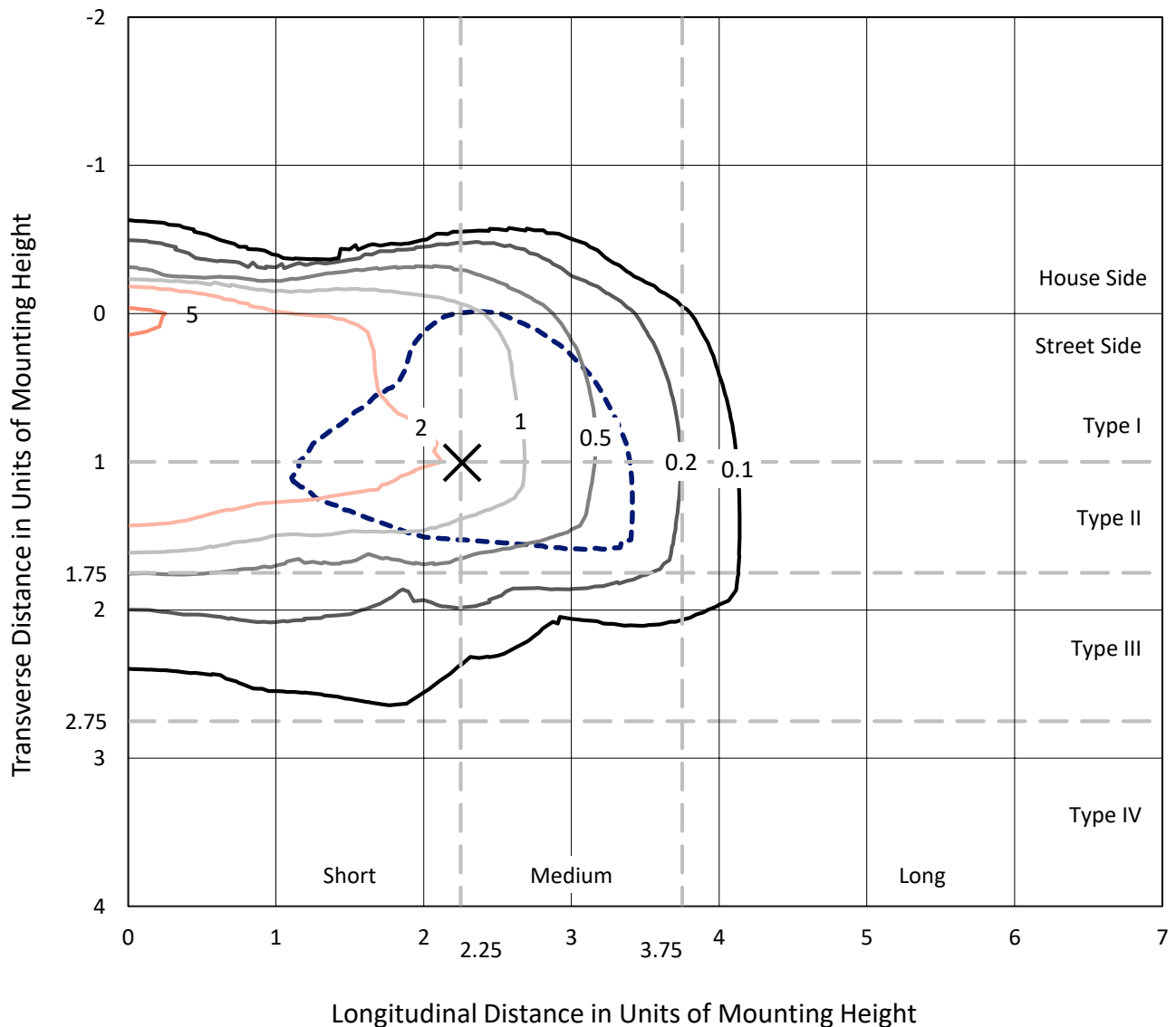


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

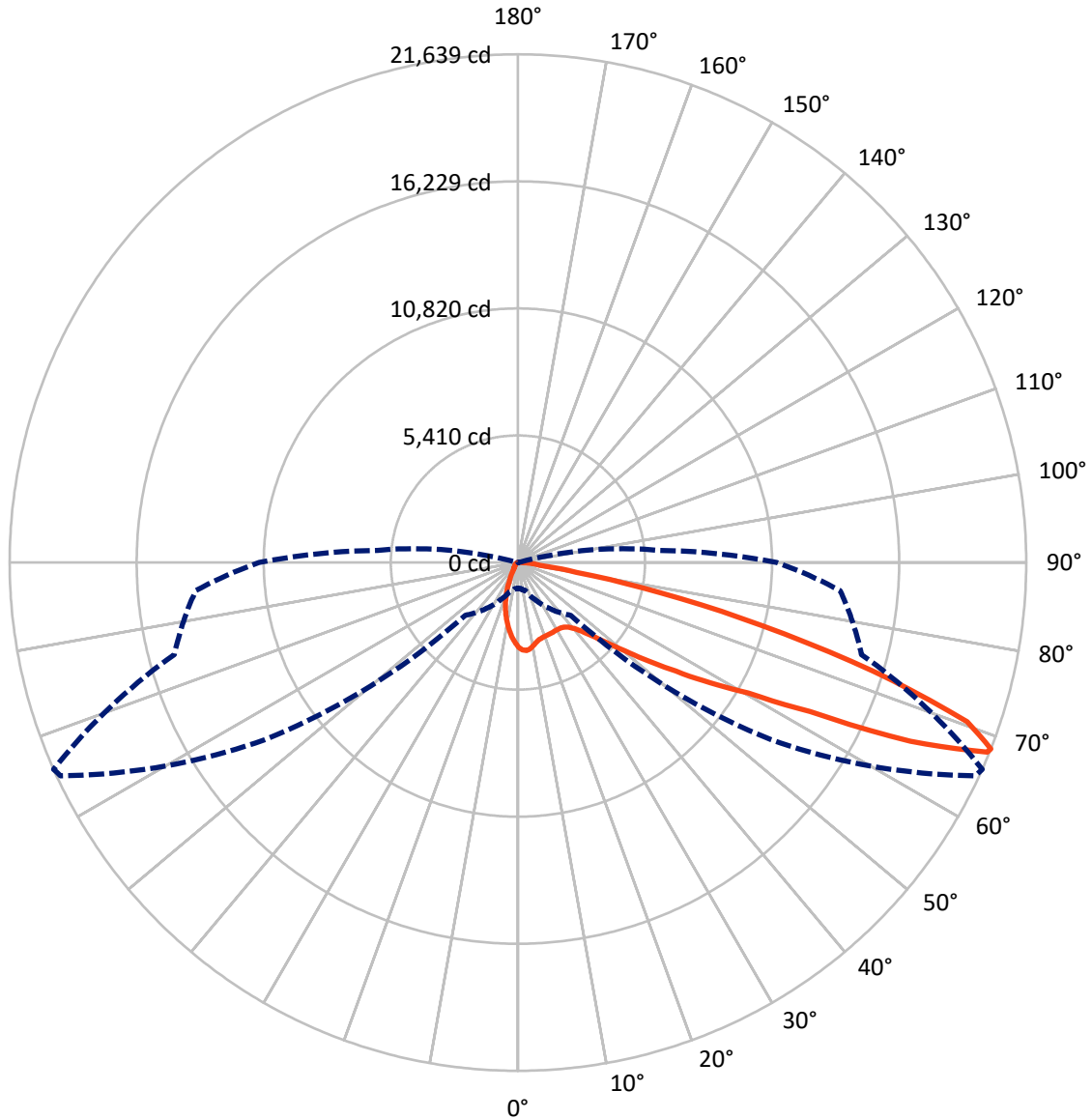


Based on 25 foot mounting height. Maximum calculated value = 5.8 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1641.8	0.0	1641.8
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	14567.2	0.0	14567.2
	% Fixture	89.9	0.0	89.9
Total	Lumens	16209.0	0.0	16209.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	296.0	1.8
10°-20°	637.0	3.9
20°-30°	923.0	5.7
30°-40°	1413.0	8.7
40°-50°	2416.8	14.9
50°-60°	3780.6	23.3
60°-70°	4353.2	26.9
70°-80°	2178.4	13.4
80°-90°	211.0	1.3
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°	16209.0	100.0
0°-180°	16209.0	100.0

Coefficient of Utilization



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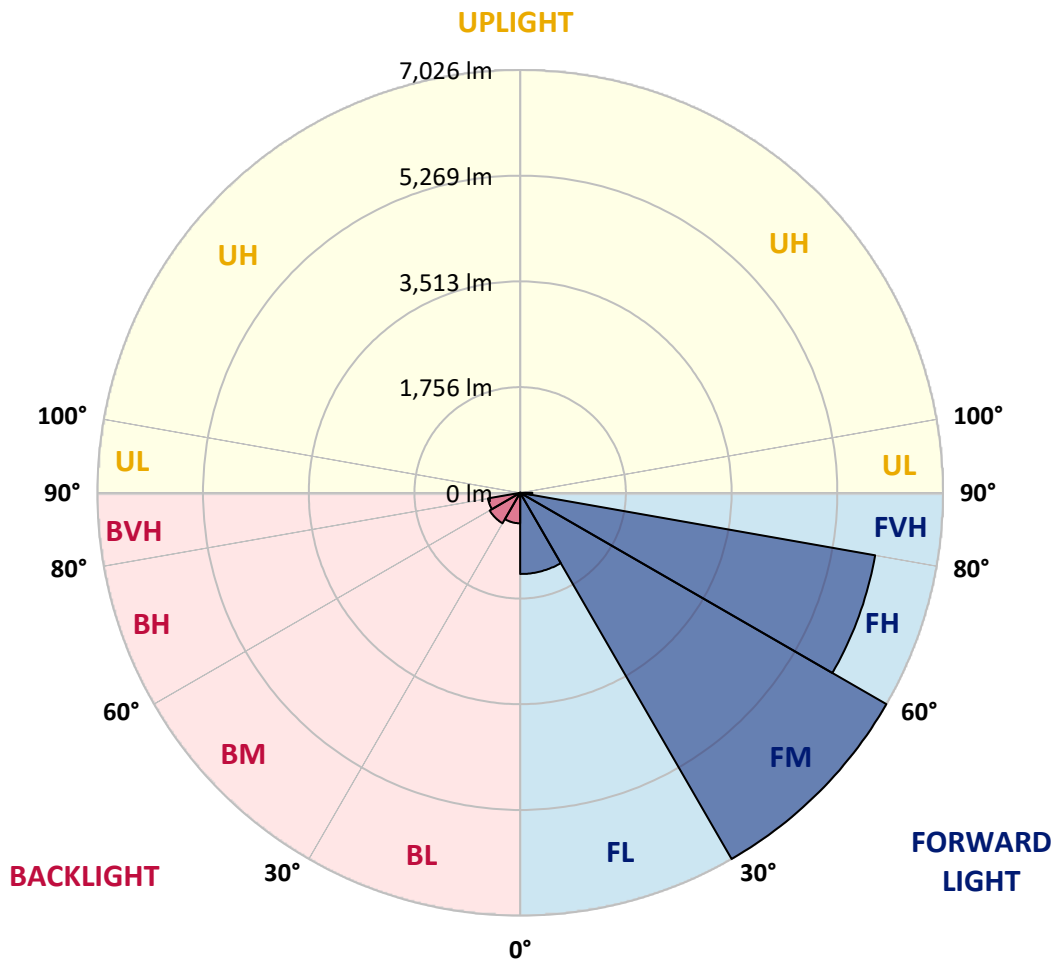
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1349.3	8.3			
FM (30°-60°)	7025.7	43.3			
FH (60°-80°)	5989.2	36.9			G3/7500
FVH (80°-90°)	203.0	1.3			G2/225
BL (0°-30°)	506.7	3.1	B2/1000		
BM (30°-60°)	584.6	3.6	B1/1000		
BH (60°-80°)	542.4	3.3	B2/1000		G2/1000
BVH (80°-90°)	8.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2
2.5°	3798.3	3800.8	3799.5	3803.4	3800.8	3781.7	3761.4	3718.1	3721.9	3665.9	3603.6
5°	3531.0	3552.7	3574.3	3595.9	3648.1	3693.9	3748.6	3761.4	3761.4	3713.0	3621.4
7.5°	3258.7	3260.0	3284.2	3313.5	3383.4	3467.4	3594.7	3709.2	3711.7	3724.5	3623.9
10°	3053.9	3060.2	3076.8	3108.6	3178.6	3261.3	3403.8	3583.2	3597.2	3691.4	3598.5
12.5°	2894.8	2902.5	2920.3	2957.2	3020.8	3106.0	3256.2	3461.1	3480.1	3659.6	3590.9
15°	2772.7	2782.8	2796.8	2833.7	2902.5	2992.8	3156.9	3379.6	3402.5	3646.8	3615.0
17.5°	2721.8	2721.8	2720.5	2745.9	2814.7	2906.3	3078.1	3336.4	3365.6	3657.0	3655.7
20°	2743.4	2739.6	2712.9	2706.5	2748.5	2840.1	3015.7	3308.4	3341.5	3676.1	3705.4
22.5°	2857.9	2850.3	2790.5	2740.9	2728.1	2789.2	2973.7	3289.3	3328.7	3715.6	3771.5
25°	3101.0	3078.1	2995.3	2883.4	2782.8	2776.5	2944.4	3279.1	3321.1	3761.4	3844.1
27.5°	3416.5	3410.2	3277.8	3127.7	2934.3	2818.5	2935.5	3271.5	3313.5	3794.4	3902.6
30°	3808.4	3811.0	3658.3	3462.3	3169.7	2936.8	2963.5	3267.7	3310.9	3797.0	3928.1
32.5°	4213.1	4215.6	4088.4	3878.4	3491.6	3140.4	3042.4	3285.5	3324.9	3786.8	3926.8
35°	4602.5	4606.3	4529.9	4360.7	3921.7	3422.9	3191.3	3346.5	3374.5	3793.2	3924.2
37.5°	5094.9	5110.2	5016.0	4858.2	4461.2	3837.7	3434.3	3470.0	3492.9	3845.3	3943.3
40°	5934.7	5914.3	5644.6	5377.4	5046.5	4342.9	3785.5	3682.5	3690.1	3980.2	4015.9
42.5°	6913.2	6887.8	6425.9	5965.2	5648.4	4952.4	4234.7	4008.2	4006.9	4206.7	4173.6
45°	7755.6	7740.3	7254.2	6639.6	6315.2	5625.5	4788.2	4477.8	4462.5	4598.6	4461.2
47.5°	8353.6	8340.9	7973.2	7357.3	7086.3	6366.1	5479.2	5117.8	5086.0	5111.4	4928.2
50°	8412.2	8398.2	8269.6	7873.9	7987.2	7452.7	6333.0	5956.3	5915.6	5876.2	5634.4
52.5°	7865.0	7863.7	7931.2	7905.7	8618.3	8851.2	7380.2	6993.4	6945.0	6844.5	6604.0
55°	6746.5	6740.2	6995.9	7367.5	8604.3	10294.1	8977.1	8227.7	8164.0	7963.0	7647.4
57.5°	4929.5	4896.4	5430.8	6218.5	7999.9	10925.3	11513.1	9761.0	9655.3	9017.9	8531.8
60°	2721.8	2734.5	3421.6	4354.3	6568.4	10800.6	13846.8	11548.8	11271.4	9927.7	9437.8
62.5°	1525.7	1557.5	2069.0	2829.9	4187.6	9789.0	15098.9	14625.5	13957.5	10988.9	10583.0
65°	1154.1	1173.2	1430.2	2183.5	2640.3	6840.7	15298.7	18927.7	18351.3	12597.3	12406.4
67.5°	1086.7	1101.9	1227.9	1810.7	2404.9	3547.6	13794.6	21472.6	21545.1	14791.0	13818.8
68°	1094.3	1113.4	1239.4	1742.0	2401.1	3173.5	13153.3	21485.3	21639.3	15144.7	13770.4
70°	1005.2	1010.3	1310.6	1708.9	2327.3	2500.4	9515.4	20013.1	20289.2	15565.9	12500.5
72.5°	384.3	385.6	587.9	1479.9	2438.0	2514.4	4793.3	15817.8	15831.8	13546.5	9745.7
75°	199.8	168.0	184.5	463.2	2328.6	2450.7	2404.9	10800.6	10733.1	9161.6	5971.6
77.5°	137.4	117.1	123.4	160.3	968.3	2449.5	1736.9	6210.8	6196.8	3897.5	1703.8
80°	77.6	67.4	73.8	134.9	339.7	2299.3	1618.6	2669.6	2515.6	684.6	276.1
82.5°	39.4	33.1	39.4	113.2	211.2	1446.8	1574.0	1047.2	932.7	162.9	179.4
85°	10.2	10.2	19.1	78.9	131.1	474.6	1411.1	755.8	679.5	71.3	127.2
87.5°	2.5	1.3	7.6	29.3	47.1	103.1	782.6	421.2	362.6	36.9	73.8
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°	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2	3611.2
2.5°	3578.1	3542.5	3472.5	3393.6	3337.6	3276.6	3240.9	3197.7	3164.6	3135.3	3156.9
5°	3565.4	3496.7	3341.5	3167.1	3020.8	2880.8	2776.5	2677.2	2602.2	2555.1	2574.2
7.5°	3532.3	3430.5	3178.6	2906.3	2667.1	2441.8	2258.6	2094.5	1967.2	1898.5	1920.1
10°	3476.3	3332.5	2994.1	2616.2	2281.5	1963.4	1691.1	1446.8	1262.3	1175.7	1196.1
12.5°	3435.6	3246.0	2803.2	2336.2	1895.9	1444.2	1082.9	802.9	659.1	572.6	580.2
15°	3417.8	3178.6	2625.1	2041.0	1474.8	927.6	585.3	423.7	374.1	356.3	357.6
17.5°	3420.3	3125.1	2455.8	1734.3	1049.8	533.2	358.8	323.2	315.6	311.8	311.8
20°	3426.7	3071.7	2280.2	1415.0	671.9	343.6	299.0	287.6	283.8	278.7	279.9
22.5°	3445.8	3031.0	2103.4	1094.3	413.5	279.9	264.7	254.5	248.1	240.5	241.8
25°	3475.1	3000.4	1929.0	787.6	291.4	244.3	230.3	216.3	204.9	196.0	197.2
27.5°	3492.9	2957.2	1743.3	537.0	241.8	213.8	194.7	175.6	162.9	155.2	154.0
30°	3480.1	2887.2	1532.0	352.5	213.8	184.5	161.6	140.0	127.2	120.9	120.9
32.5°	3445.8	2796.8	1299.2	257.0	189.6	159.1	131.1	112.0	103.1	99.3	100.5
35°	3406.3	2702.7	1051.0	217.6	170.5	134.9	106.9	91.6	87.8	86.5	86.5
37.5°	3384.7	2621.2	813.1	197.2	152.7	112.0	87.8	78.9	75.1	75.1	75.1
40°	3408.9	2558.9	601.9	182.0	134.9	92.9	73.8	67.4	66.2	66.2	66.2
42.5°	3512.0	2537.3	440.3	169.2	117.1	77.6	63.6	58.5	57.3	58.5	58.5
45°	3713.0	2584.3	333.4	156.5	100.5	63.6	54.7	50.9	50.9	52.2	52.2
47.5°	4054.0	2705.2	273.6	143.8	84.0	53.4	47.1	44.5	44.5	45.8	45.8
50°	4583.4	2929.2	245.6	129.8	70.0	45.8	39.4	38.2	38.2	39.4	40.7
52.5°	5387.6	3355.4	231.6	115.8	57.3	38.2	33.1	31.8	33.1	34.4	34.4
55°	6282.1	3901.3	215.0	101.8	48.4	31.8	26.7	26.7	28.0	30.5	30.5
57.5°	7115.5	4428.1	199.8	84.0	42.0	25.4	21.6	21.6	24.2	26.7	26.7
60°	7996.1	4944.7	179.4	67.4	35.6	20.4	17.8	17.8	21.6	24.2	25.4
62.5°	9084.0	5545.3	152.7	53.4	28.0	15.3	12.7	16.5	20.4	24.2	24.2
65°	10656.8	6292.3	119.6	42.0	21.6	11.5	10.2	15.3	19.1	22.9	24.2
67.5°	11228.1	6196.8	90.3	34.4	16.5	8.9	8.9	14.0	19.1	22.9	22.9
68°	11019.4	5988.1	86.5	33.1	15.3	8.9	8.9	14.0	19.1	22.9	22.9
70°	9601.9	4895.1	71.3	25.4	12.7	7.6	7.6	12.7	19.1	21.6	22.9
72.5°	7189.3	3252.4	61.1	16.5	11.5	7.6	6.4	12.7	17.8	21.6	21.6
75°	4124.0	1350.1	52.2	12.7	10.2	6.4	6.4	11.5	17.8	21.6	21.6
77.5°	1165.6	315.6	42.0	10.2	8.9	6.4	5.1	11.5	16.5	20.4	20.4
80°	213.8	94.2	33.1	8.9	7.6	6.4	5.1	11.5	16.5	20.4	20.4
82.5°	141.2	44.5	24.2	8.9	7.6	6.4	5.1	10.2	15.3	19.1	19.1
85°	105.6	31.8	15.3	8.9	7.6	6.4	5.1	10.2	15.3	19.1	19.1
87.5°	58.5	14.0	11.5	10.2	8.9	6.4	5.1	8.9	14.0	17.8	17.8
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)