

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: P270339

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270339
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-AFL-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9744.1 lumens
Efficiency: N/A
Efficacy: 75.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 129
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

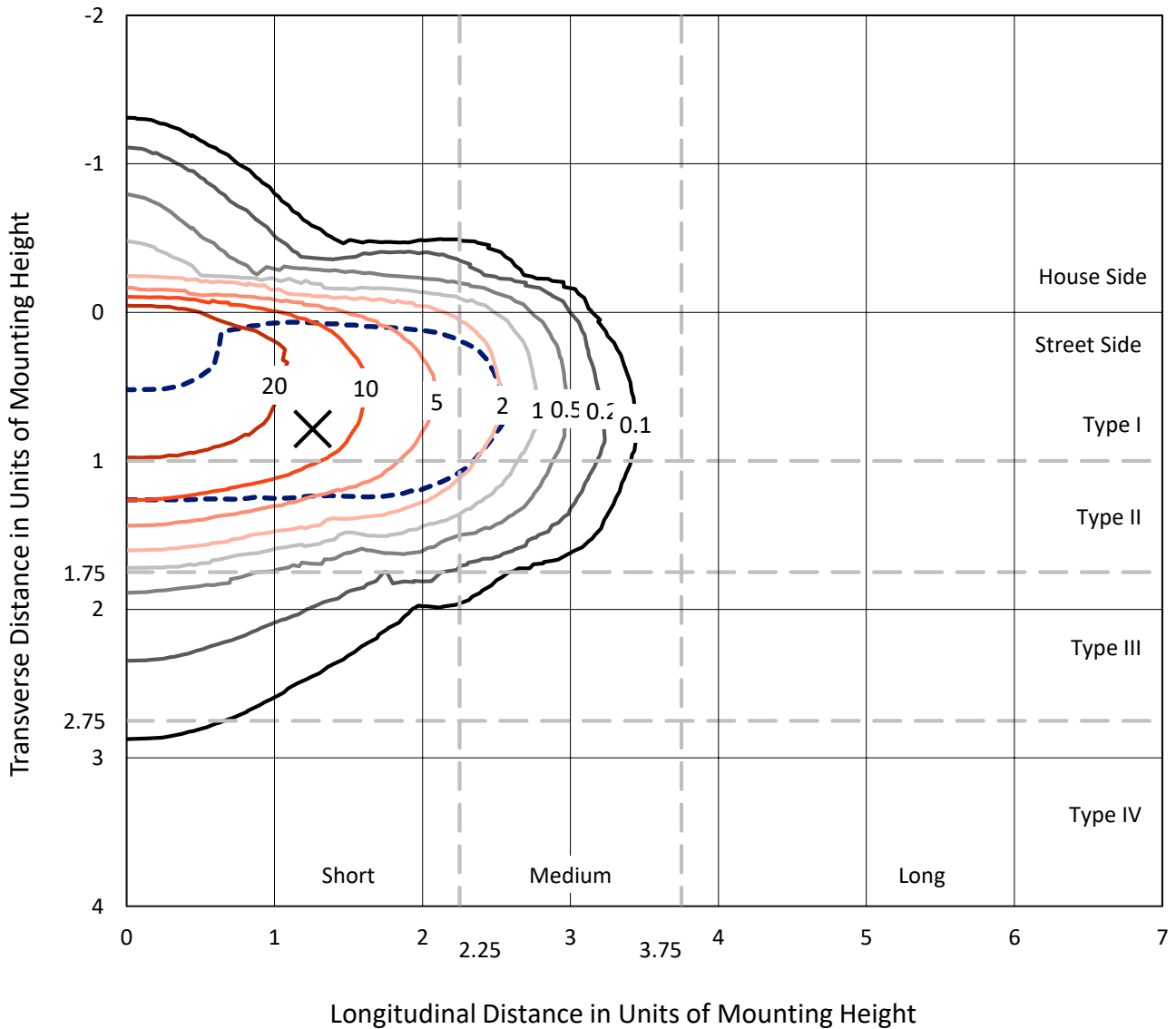


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

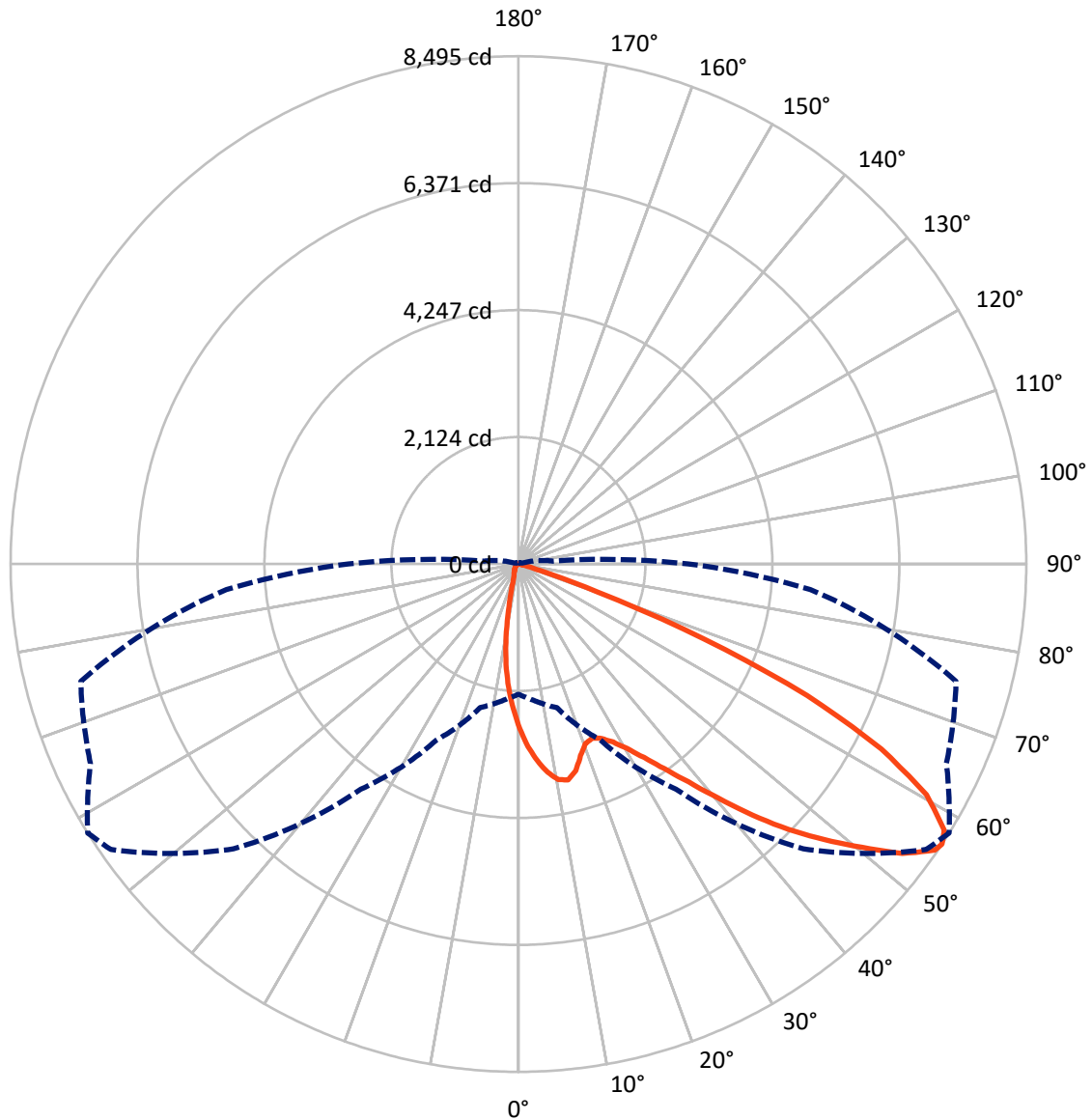


Based on 10 foot mounting height. Maximum calculated value = 34.3 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	608.2	0.0	608.2
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	9135.9	0.0	9135.9
	% Fixture	93.8	0.0	93.8
Total	Lumens	9744.1	0.0	9744.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.3	2.4
10°-20°	547.6	5.6
20°-30°	921.5	9.5
30°-40°	1577.9	16.2
40°-50°	2381.1	24.4
50°-60°	2475.1	25.4
60°-70°	1389.5	14.3
70°-80°	190.4	2.0
80°-90°	25.8	0.3
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°	9744.1	100.0
0°-180°	9744.1	100.0

Coefficient of Utilization



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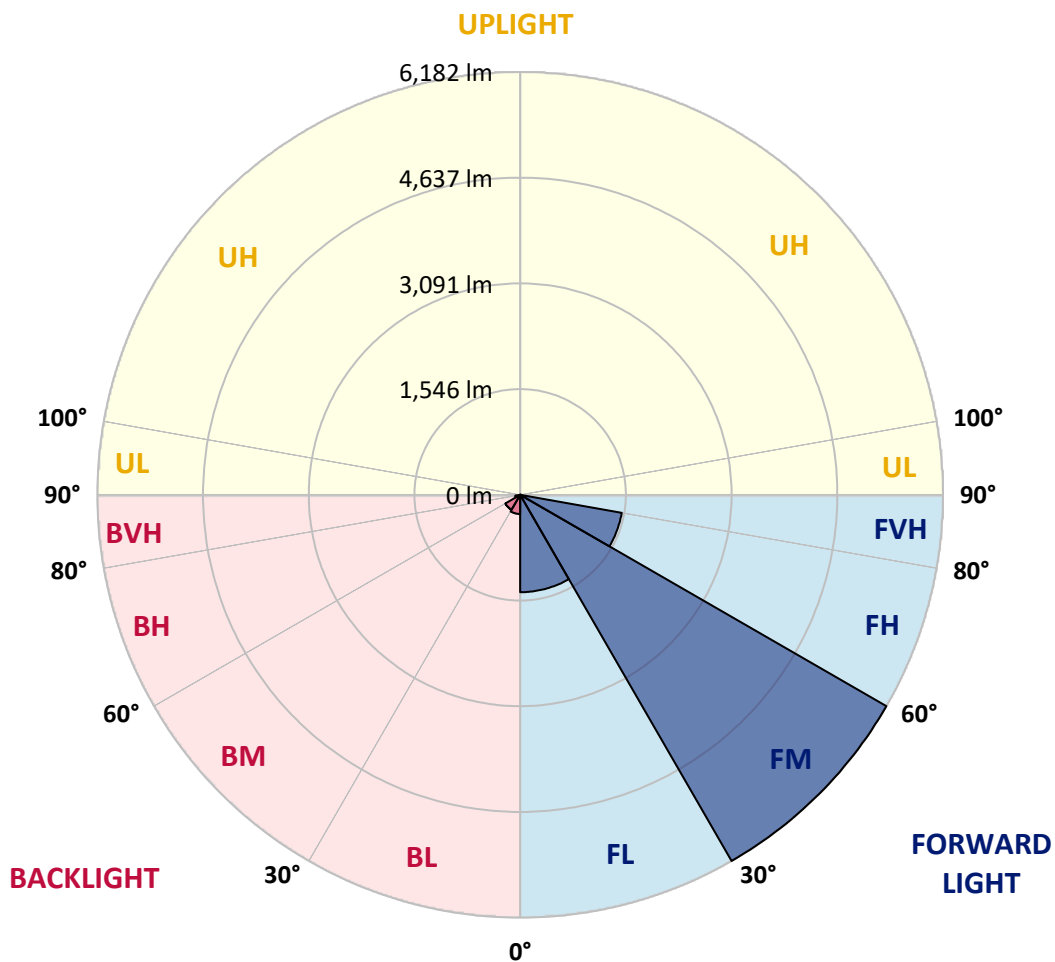
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1423.8	14.6			
FM	(30°-60°)	6182.1	63.4			
FH	(60°-80°)	1507.7	15.5			G1/1800
FVH	(80°-90°)	22.2	0.2			G1/100
BL	(0°-30°)	280.6	2.9	B1/500		
BM	(30°-60°)	251.9	2.6	B1/1000		
BH	(60°-80°)	72.1	0.7	B0/110		G0/110
BVH	(80°-90°)	3.6	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9
2.5°	3319.3	3299.4	3278.5	3239.8	3204.2	3149.2	3073.3	3054.7	2995.3	2897.2	2805.6
5°	3605.6	3601.9	3587.8	3556.6	3517.9	3451.0	3365.5	3308.3	3216.1	3061.5	2885.3
7.5°	3436.1	3467.4	3518.7	3591.6	3640.7	3633.9	3568.4	3518.7	3427.3	3216.1	2963.2
10°	2896.3	2902.3	2973.0	3126.1	3368.5	3594.5	3679.9	3666.6	3582.6	3351.3	3031.7
12.5°	2706.1	2709.7	2726.1	2775.3	2932.8	3248.0	3635.4	3705.2	3698.5	3480.8	3104.5
15°	2721.0	2723.2	2727.7	2743.2	2787.9	2946.3	3409.3	3587.0	3772.9	3603.5	3175.9
17.5°	2838.5	2836.8	2822.8	2807.9	2822.0	2874.0	3178.9	3366.3	3757.3	3706.8	3234.6
20°	3067.4	3074.8	3027.3	2961.1	2926.9	2929.2	3065.1	3205.6	3669.5	3787.1	3278.5
22.5°	3389.2	3394.4	3316.5	3202.0	3101.6	3051.1	3088.9	3163.3	3568.4	3861.4	3314.1
25°	3773.6	3773.6	3664.4	3501.6	3346.1	3235.3	3202.6	3230.9	3529.8	3945.4	3349.9
27.5°	4188.4	4203.3	4060.6	3847.3	3642.1	3479.9	3377.4	3372.1	3559.5	4050.9	3390.1
30°	4639.7	4653.1	4483.6	4222.7	3979.6	3772.2	3614.5	3580.4	3673.3	4192.8	3448.8
32.5°	5088.8	5099.9	4912.7	4646.5	4363.2	4119.4	3911.8	3857.6	3877.8	4400.3	3535.0
35°	5659.7	5661.9	5424.9	5108.1	4805.6	4519.4	4256.9	4203.3	4181.0	4662.1	3659.2
37.5°	6114.0	6096.1	5945.9	5646.3	5299.1	5000.2	4691.8	4621.9	4568.4	5030.0	3851.8
40°	6221.0	6221.0	6198.8	6108.7	5833.0	5545.2	5246.5	5142.3	5024.1	5463.4	4110.5
42.5°	5942.2	5960.1	6107.2	6302.8	6305.1	6120.6	5828.6	5740.8	5532.7	5957.1	4392.9
45°	5318.4	5323.6	5676.7	6204.7	6562.9	6668.6	6453.0	6331.8	6043.3	6470.0	4651.7
47.5°	5094.0	5110.3	5260.6	5905.7	6582.3	7112.4	7052.1	6885.7	6516.1	6938.4	4893.2
50°	4749.0	4769.1	4952.7	5465.6	6408.4	7397.2	7625.4	7446.9	6946.7	7328.7	5012.9
52.5°	3923.7	3955.1	4214.5	4883.5	5973.5	7409.0	8150.2	8043.2	7387.4	7537.6	4998.8
55°	2700.1	2723.2	3025.8	3812.2	5096.3	7045.4	8376.2	8449.7	7780.7	7584.5	4930.3
56°	2178.2	2264.4	2486.0	3248.0	4596.5	6736.2	8324.1	8494.5	7897.4	7577.1	4900.7
57.5°	1440.1	1456.4	1697.9	2353.6	3691.1	6064.8	8089.2	8399.2	8047.6	7539.1	4879.1
60°	677.2	684.7	771.6	1086.1	1997.7	4419.8	7325.8	7840.1	8102.6	7459.5	4878.3
62.5°	441.5	443.0	453.5	518.1	817.0	2407.2	6073.1	6813.6	7646.9	7450.6	4864.2
65°	363.5	367.2	354.7	362.7	427.5	907.7	4283.7	5311.8	6577.1	7241.0	4705.1
67.5°	320.4	321.1	304.0	294.5	313.0	398.5	2158.2	3350.7	4919.3	6152.6	3875.5
70°	292.2	291.4	272.0	249.8	250.5	264.7	703.4	1391.7	2721.7	3653.1	2225.1
72.5°	259.5	261.0	249.8	218.6	208.1	187.3	264.7	375.4	926.3	1173.1	586.6
75°	227.5	224.5	213.3	193.2	173.9	125.7	133.0	159.9	241.6	239.4	126.4
77.5°	172.5	169.5	174.7	165.1	136.1	87.8	72.9	83.3	109.2	101.9	51.4
80°	131.6	130.2	118.9	141.3	124.1	66.1	49.8	51.4	59.5	54.3	25.3
82.5°	95.2	94.4	90.0	87.0	78.8	48.2	37.9	40.2	44.6	37.9	18.5
85°	36.4	36.4	70.6	59.5	54.3	32.7	26.8	28.9	34.1	27.5	12.7
87.5°	6.0	6.0	47.6	39.3	24.6	16.3	17.1	18.5	20.1	16.3	9.6
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°	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9	2758.9
2.5°	2751.4	2701.7	2592.2	2486.8	2394.6	2293.5	2242.2	2182.7	2160.5	2115.8	2120.3
5°	2779.6	2675.6	2456.2	2225.1	2013.2	1797.6	1644.4	1500.2	1420.0	1340.5	1340.5
7.5°	2808.7	2649.6	2310.6	1941.1	1584.3	1214.8	953.1	743.4	626.7	548.7	546.3
10°	2828.8	2616.1	2144.9	1611.7	1085.4	625.9	377.6	297.3	268.4	255.7	254.9
12.5°	2854.8	2582.6	1956.0	1223.8	602.9	297.3	235.6	223.0	217.7	214.9	214.9
15°	2877.1	2535.0	1727.0	822.9	316.7	223.0	202.9	198.4	197.7	197.0	197.7
17.5°	2882.3	2467.5	1452.6	481.8	229.7	194.8	185.9	182.1	182.1	181.4	181.4
20°	2870.4	2378.3	1149.3	297.3	198.4	179.1	169.5	165.1	164.3	164.3	164.3
22.5°	2845.8	2264.4	849.7	225.2	180.6	165.1	152.4	148.0	148.0	148.7	149.4
25°	2815.4	2129.9	583.5	194.0	167.3	150.1	137.5	133.0	134.6	136.1	136.8
27.5°	2776.8	1969.4	382.0	168.1	149.4	135.4	124.1	121.2	124.1	127.1	128.5
30°	2738.0	1793.1	258.7	145.7	129.4	118.9	112.3	111.5	116.1	122.7	123.3
32.5°	2712.8	1612.5	195.6	130.9	113.7	104.8	101.9	103.3	110.0	117.5	118.9
35°	2710.5	1436.3	166.5	118.9	103.3	95.2	93.7	98.2	105.6	111.5	112.9
37.5°	2745.5	1271.2	150.9	110.0	95.2	87.0	84.7	93.0	99.6	105.6	107.1
40°	2816.0	1123.3	140.6	101.9	88.5	78.8	77.3	84.0	90.6	97.3	99.6
42.5°	2904.6	985.0	128.5	93.7	81.0	69.9	68.5	73.7	80.3	90.0	91.4
45°	2981.1	856.4	116.1	84.7	72.9	60.2	59.5	65.4	70.6	79.5	81.0
47.5°	3045.9	749.4	104.1	75.1	62.4	53.4	52.8	55.8	58.7	67.0	68.5
50°	3011.7	658.6	92.2	61.8	50.6	46.2	45.4	45.4	49.0	57.2	58.7
52.5°	2927.7	602.1	81.0	51.4	41.6	39.3	37.2	37.9	41.6	45.4	46.2
55°	2859.9	575.5	71.3	45.4	34.9	32.7	30.5	29.7	30.5	28.9	27.5
56°	2843.7	572.4	69.1	43.8	33.4	30.5	27.5	26.1	25.3	22.3	21.6
57.5°	2836.2	572.4	65.4	41.0	31.3	27.5	23.7	20.8	17.8	15.6	15.6
60°	2830.2	576.2	60.9	35.8	26.8	22.3	17.1	12.7	10.4	10.4	10.4
62.5°	2817.7	574.6	55.8	29.7	23.0	17.1	10.4	8.2	7.5	8.2	9.0
65°	2675.6	533.9	49.0	23.7	17.8	11.9	6.0	6.0	6.6	8.2	9.0
67.5°	2155.9	404.4	40.2	18.5	12.7	9.0	5.2	5.2	6.6	8.2	9.0
70°	1184.2	213.3	34.1	13.4	9.6	7.5	5.2	4.4	6.6	8.2	9.0
72.5°	289.3	89.2	31.3	10.4	9.0	6.6	4.4	4.4	6.6	8.2	9.0
75°	71.3	67.0	25.3	8.2	7.5	6.0	4.4	4.4	6.6	8.2	9.0
77.5°	33.4	88.5	17.1	7.5	6.6	5.2	4.4	4.4	6.6	8.2	8.2
80°	20.1	67.0	10.4	6.6	6.0	5.2	4.4	4.4	6.6	8.2	9.0
82.5°	11.9	19.4	7.5	6.6	6.0	4.4	4.4	4.4	6.6	8.2	9.0
85°	10.4	9.6	7.5	6.6	6.0	5.2	4.4	4.4	7.5	9.0	9.0
87.5°	8.2	7.5	6.6	6.0	6.0	5.2	4.4	4.4	6.6	8.2	9.0
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)