

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: P195996

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195996
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-06-D-UNV-AFL-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 800mA 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: 24988.7 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

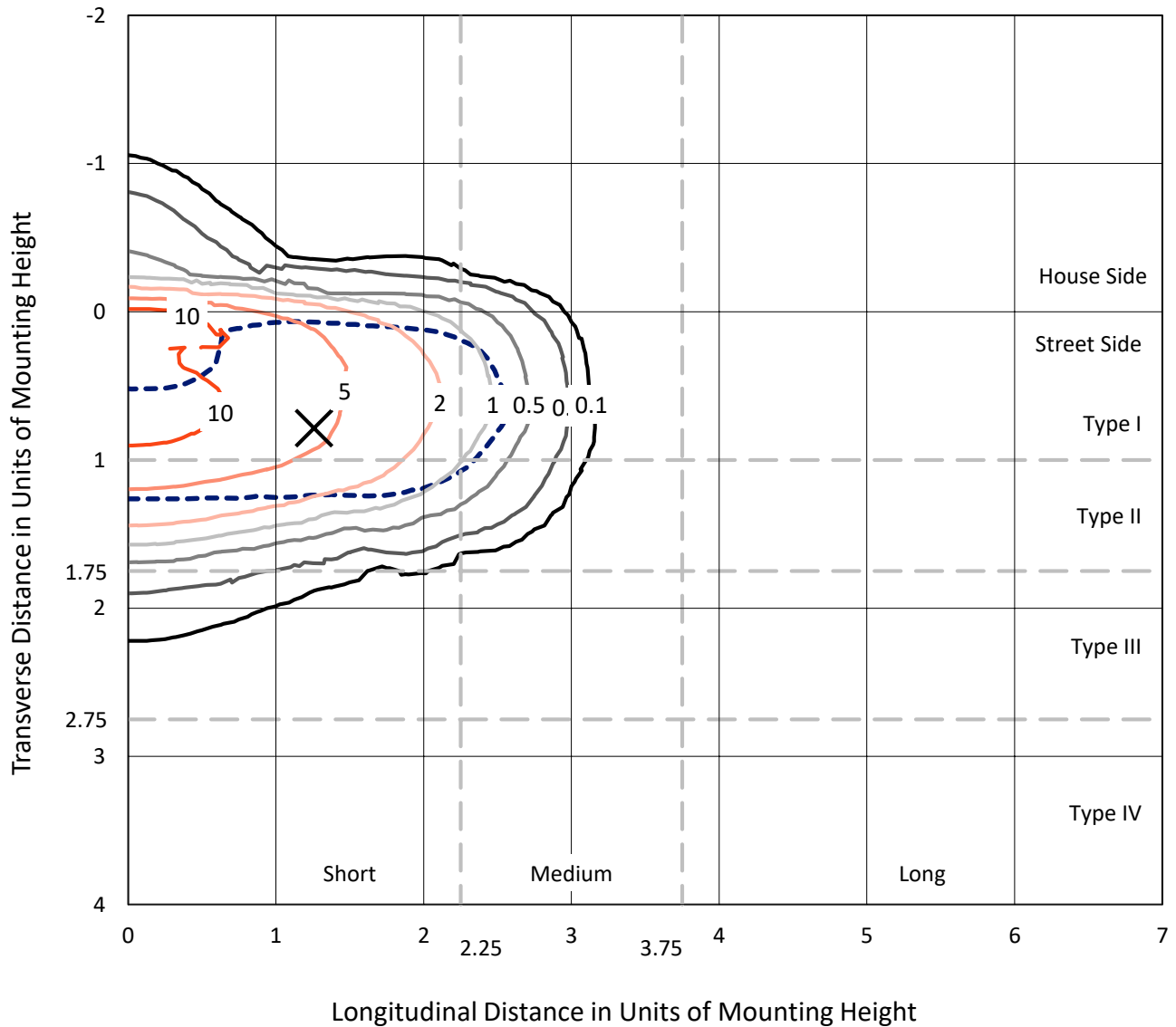
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

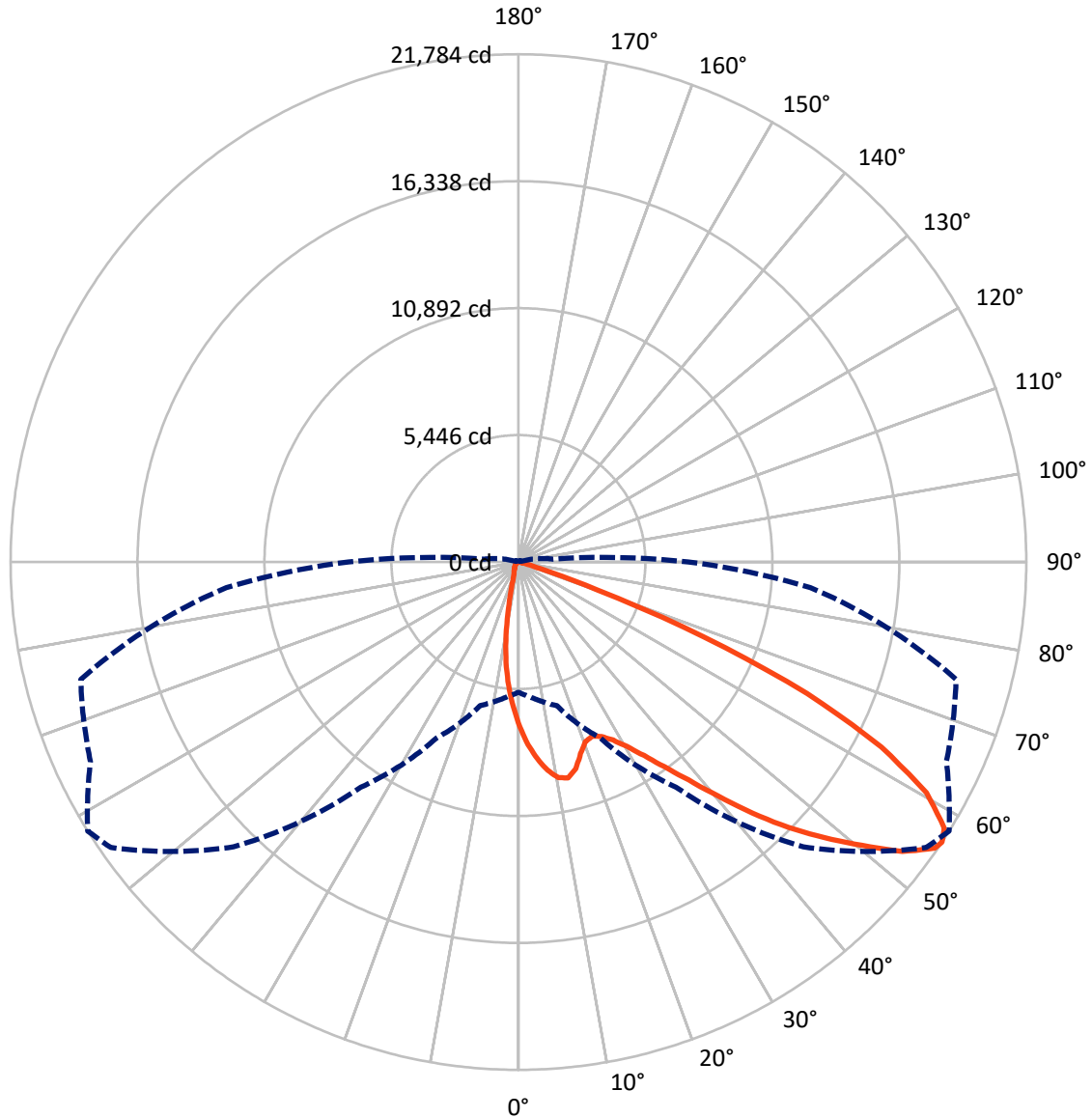
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.1 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	1559.8	0.0	1559.8
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	23428.8	0.0	23428.8
	% Fixture	93.8	0.0	93.8
Total	Lumens	24988.7	0.0	24988.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	603.5	2.4
10°-20°	1404.4	5.6
20°-30°	2363.0	9.5
30°-40°	4046.5	16.2
40°-50°	6106.2	24.4
50°-60°	6347.2	25.4
60°-70°	3563.2	14.3
70°-80°	488.4	2.0
80°-90°	66.2	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°	24988.7	100.0
0°-180°	24988.7	100.0



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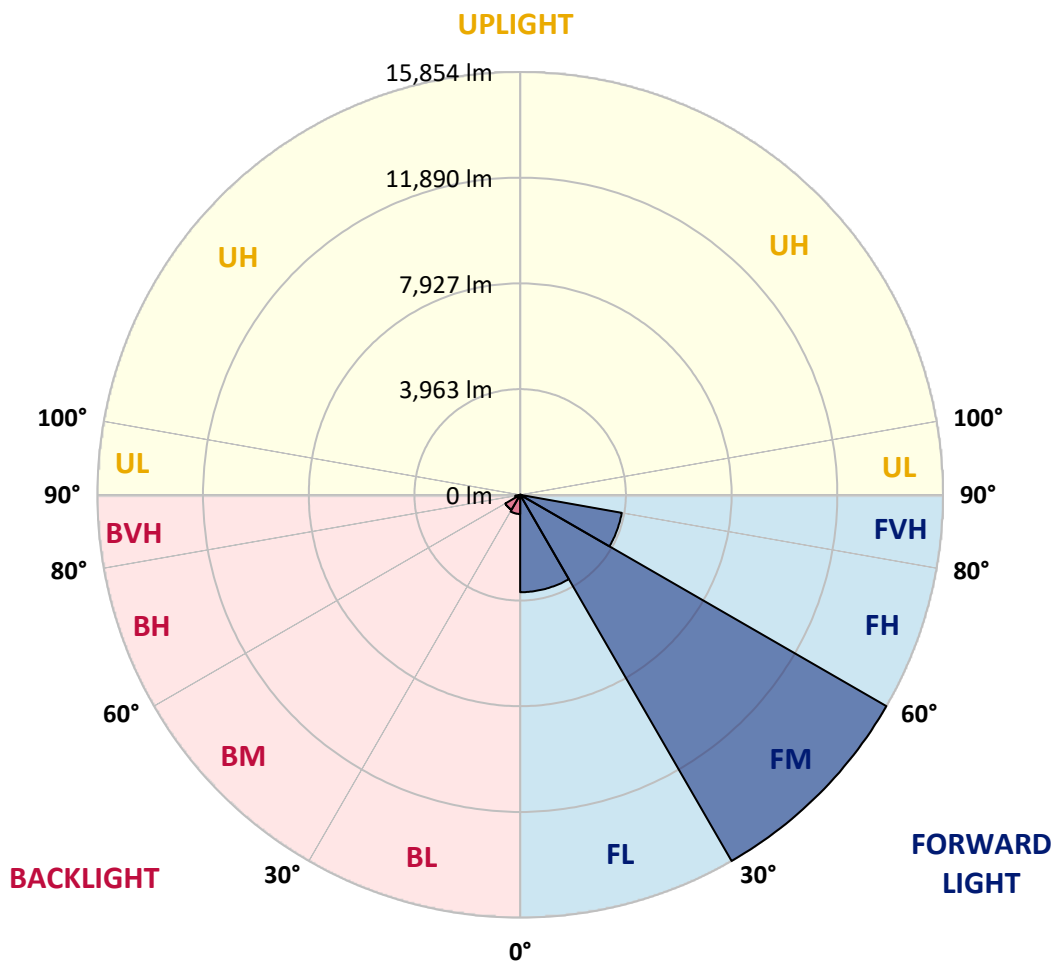
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3651.4	14.6			
FM	(30°-60°)	15853.8	63.4			
FH	(60°-80°)	3866.6	15.5			G2/5000
FVH	(80°-90°)	57.0	0.2			G1/100
BL	(0°-30°)	719.5	2.9	B2/1000		
BM	(30°-60°)	646.1	2.6	B1/1000		
BH	(60°-80°)	185.0	0.7	B1/500		G1/500
BVH	(80°-90°)	9.1	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-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0
2.5°	8512.6	8461.0	8407.7	8308.5	8217.1	8076.0	7881.5	7833.9	7681.3	7429.7	7195.1
5°	9246.6	9237.0	9200.8	9120.7	9021.6	8850.0	8630.7	8483.9	8247.5	7850.9	7399.1
7.5°	8811.9	8891.9	9023.4	9210.3	9336.2	9319.0	9151.2	9023.4	8789.0	8247.5	7599.3
10°	7427.7	7443.0	7624.2	8016.9	8638.4	9217.9	9437.2	9402.9	9187.4	8594.5	7774.7
12.5°	6939.7	6949.2	6991.2	7117.0	7521.1	8329.5	9322.8	9502.0	9484.9	8926.3	7961.5
15°	6977.9	6983.5	6994.9	7035.0	7149.4	7555.5	8743.3	9198.9	9675.5	9240.8	8144.6
17.5°	7279.0	7275.2	7239.0	7200.9	7237.1	7370.6	8152.2	8632.7	9635.5	9505.9	8295.2
20°	7866.3	7885.3	7763.3	7593.6	7505.9	7511.6	7860.6	8220.8	9410.5	9711.7	8407.7
22.5°	8691.7	8705.1	8504.9	8211.3	7954.0	7824.3	7921.5	8112.2	9151.2	9902.4	8499.2
25°	9677.4	9677.4	9397.1	8979.7	8581.2	8297.2	8213.3	8285.7	9052.1	10117.8	8590.7
27.5°	10741.3	10779.3	10413.3	9866.2	9340.0	8924.3	8661.2	8647.9	9128.3	10388.6	8693.6
30°	11898.5	11932.8	11498.2	10829.0	10205.6	9673.6	9269.5	9181.7	9420.0	10752.6	8844.2
32.5°	13050.0	13078.6	12598.2	11915.6	11189.2	10563.9	10032.1	9892.9	9944.3	11284.6	9065.4
35°	14514.2	14520.0	13911.7	13099.6	12323.7	11589.6	10916.6	10779.3	10722.2	11955.7	9383.8
37.5°	15679.1	15633.3	15248.2	14479.9	13589.6	12823.2	12031.9	11852.7	11715.4	12899.4	9877.6
40°	15953.6	15953.6	15896.5	15665.8	14958.4	14220.7	13454.2	13187.3	12884.2	14010.9	10541.1
42.5°	15238.7	15284.4	15662.0	16163.3	16169.1	15696.3	14947.1	14722.0	14188.2	15276.8	11265.6
45°	13639.1	13652.5	14558.0	15911.7	16830.6	17101.4	16548.5	16237.7	15498.0	16592.4	11929.0
47.5°	13063.4	13105.3	13490.5	15145.3	16880.2	18239.5	18085.2	17658.1	16710.5	17793.4	12548.6
50°	12178.7	12230.2	12701.2	14016.7	16434.1	18969.7	19555.0	19097.5	17814.4	18794.4	12855.5
52.5°	10062.6	10142.6	10808.0	12523.8	15318.8	19000.2	20901.0	20626.5	18944.9	19330.1	12819.3
55°	6924.5	6983.5	7759.5	9776.5	13069.1	18068.0	21480.6	21669.4	19953.5	19450.2	12644.0
56°	5586.0	5807.2	6375.3	8329.5	11787.9	17274.9	21347.1	21783.7	20252.8	19431.1	12567.7
57.5°	3692.9	3734.8	4354.5	6036.0	9465.8	15553.3	20744.7	21539.7	20637.9	19333.9	12512.4
60°	1736.9	1755.9	1979.0	2785.4	5122.7	11334.2	18786.7	20106.0	20779.0	19129.9	12510.5
62.5°	1132.5	1136.3	1163.0	1328.8	2095.2	6173.3	15574.2	17473.1	19610.3	19107.0	12474.3
65°	932.3	941.8	909.4	930.4	1096.2	2327.8	10985.3	13622.0	16866.8	18569.3	12066.3
67.5°	821.7	823.6	779.8	754.9	802.6	1021.9	5534.6	8592.6	12615.3	15778.2	9938.6
70°	749.2	747.4	697.8	640.6	642.5	678.7	1803.6	3569.0	6979.7	9368.6	5706.1
72.5°	665.3	669.2	640.6	560.5	533.8	480.5	678.7	962.8	2375.5	3008.5	1504.2
75°	583.4	575.7	547.2	495.7	446.1	322.2	341.3	409.9	619.6	613.9	324.1
77.5°	442.3	434.7	448.1	423.2	348.9	224.9	186.8	213.5	280.3	261.2	131.6
80°	337.5	333.7	305.0	362.2	318.3	169.7	127.8	131.6	152.5	139.2	64.9
82.5°	244.1	242.1	230.7	223.1	202.1	123.9	97.3	102.9	114.4	97.3	47.7
85°	93.4	93.4	181.2	152.5	139.2	83.9	68.6	74.4	87.7	70.6	32.4
87.5°	15.2	15.2	122.0	101.1	62.9	41.9	43.9	47.7	51.5	41.9	24.8
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°	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0
2.5°	7056.0	6928.2	6648.0	6377.3	6140.9	5881.6	5750.0	5597.5	5540.3	5425.9	5437.4
5°	7128.4	6861.5	6299.1	5706.1	5162.8	4609.9	4217.2	3847.3	3641.4	3437.4	3437.4
7.5°	7202.8	6794.7	5925.4	4977.9	4062.8	3115.2	2444.1	1906.5	1607.2	1407.0	1401.2
10°	7254.3	6709.0	5500.3	4133.3	2783.4	1605.3	968.5	762.6	688.2	655.8	654.0
12.5°	7321.0	6623.2	5016.0	3138.1	1546.2	762.6	604.4	571.9	558.6	551.0	551.0
15°	7378.1	6501.2	4428.8	2110.6	812.1	571.9	520.5	509.0	507.2	505.2	507.2
17.5°	7391.5	6327.7	3725.3	1235.4	589.1	499.5	476.6	467.1	467.1	465.2	465.2
20°	7361.1	6098.9	2947.4	762.6	509.0	459.5	434.7	423.2	421.4	421.4	421.4
22.5°	7298.1	5807.2	2179.1	577.7	463.3	423.2	390.9	379.4	379.4	381.3	383.2
25°	7219.9	5462.1	1496.6	497.6	428.9	385.1	352.7	341.3	345.0	348.9	350.8
27.5°	7120.8	5050.3	980.0	430.9	383.2	347.0	318.3	310.8	318.3	326.0	329.8
30°	7021.6	4598.5	663.5	373.7	331.7	305.0	287.9	286.0	297.4	314.6	316.5
32.5°	6956.9	4135.2	501.5	335.5	291.7	268.8	261.2	265.0	282.1	301.3	305.0
35°	6951.2	3683.3	427.1	305.0	265.0	244.1	240.2	251.6	270.7	286.0	289.8
37.5°	7040.8	3260.1	387.0	282.1	244.1	223.1	217.4	238.3	255.4	270.7	274.6
40°	7221.8	2880.7	360.3	261.2	226.9	202.1	198.2	215.4	232.6	249.7	255.4
42.5°	7448.7	2526.1	329.8	240.2	207.8	179.2	175.4	188.7	205.9	230.7	234.5
45°	7645.1	2196.3	297.4	217.4	186.8	154.5	152.5	167.8	181.2	204.0	207.8
47.5°	7810.9	1921.7	266.9	192.5	160.2	137.3	135.3	143.0	150.6	171.5	175.4
50°	7723.3	1689.2	236.4	158.3	129.6	118.3	116.3	116.3	125.8	146.8	150.6
52.5°	7507.8	1544.2	207.8	131.6	106.8	101.1	95.3	97.3	106.8	116.3	118.3
55°	7334.4	1475.6	183.0	116.3	89.6	83.9	78.2	76.2	78.2	74.4	70.6
56°	7292.4	1468.0	177.3	112.5	85.8	78.2	70.6	66.7	64.9	57.2	55.2
57.5°	7273.3	1468.0	167.8	104.9	80.1	70.6	61.0	53.4	45.7	40.0	40.0
60°	7258.0	1477.6	156.3	91.6	68.6	57.2	43.9	32.4	26.7	26.7	26.7
62.5°	7225.6	1473.8	143.0	76.2	59.1	43.9	26.7	21.0	19.0	21.0	22.9
65°	6861.5	1368.9	125.8	61.0	45.7	30.5	15.2	15.2	17.2	21.0	22.9
67.5°	5528.8	1037.2	102.9	47.7	32.4	22.9	13.3	13.3	17.2	21.0	22.9
70°	3037.0	547.2	87.7	34.3	24.8	19.0	13.3	11.5	17.2	21.0	22.9
72.5°	741.6	228.7	80.1	26.7	22.9	17.2	11.5	11.5	17.2	21.0	22.9
75°	183.0	171.5	64.9	21.0	19.0	15.2	11.5	11.5	17.2	21.0	22.9
77.5°	85.8	226.9	43.9	19.0	17.2	13.3	11.5	11.5	17.2	21.0	21.0
80°	51.5	171.5	26.7	17.2	15.2	13.3	11.5	11.5	17.2	21.0	22.9
82.5°	30.5	49.6	19.0	17.2	15.2	11.5	11.5	11.5	17.2	21.0	22.9
85°	26.7	24.8	19.0	17.2	15.2	13.3	11.5	11.5	19.0	22.9	22.9
87.5°	21.0	19.0	17.2	15.2	15.2	13.3	11.5	11.5	17.2	21.0	22.9
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)