

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: P195046

Luminaire Tested: **NAV-AF-04-D-UNV-AFL-7060-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195046
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-04-D-UNV-AFL-7060-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5700K, 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: 22464 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 258
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

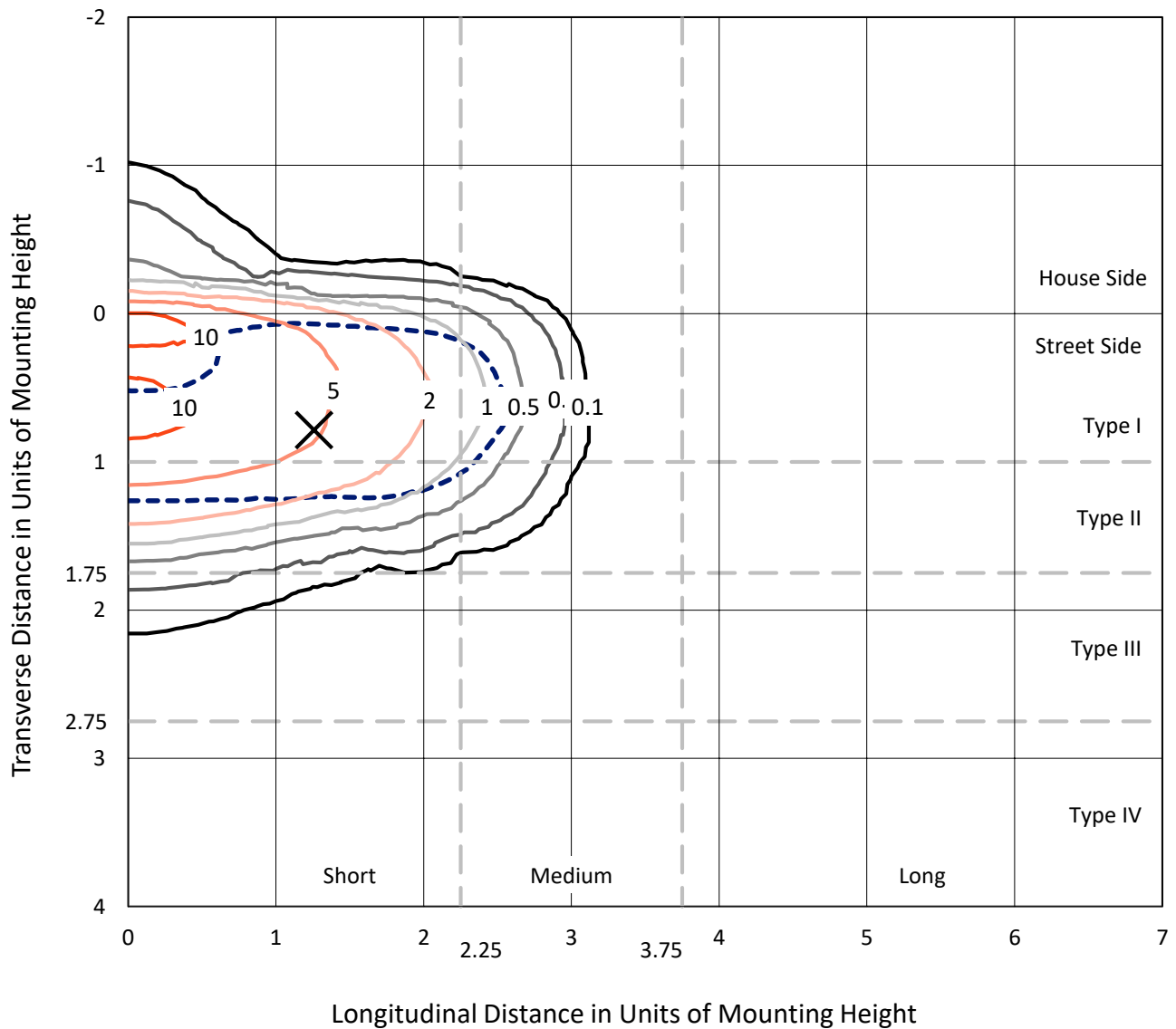


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

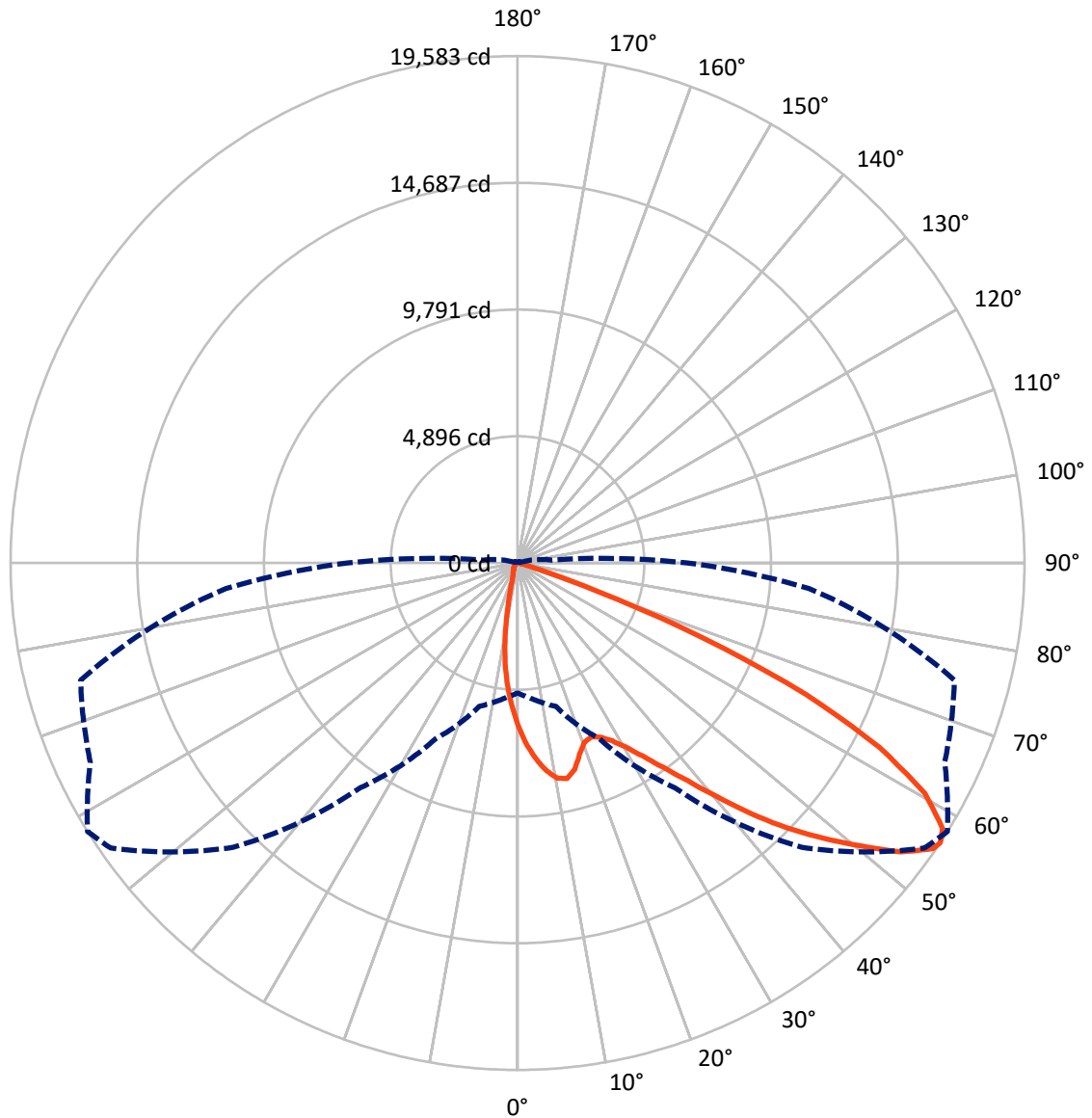


Based on 25 foot mounting height. Maximum calculated value = 12.6 fc
 Type II - Short - Full Cutoff

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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	1402.2	0.0	1402.2
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	21061.8	0.0	21061.8
	% Fixture	93.8	0.0	93.8
Total	Lumens	22464.0	0.0	22464.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	542.6	2.4
10°-20°	1262.5	5.6
20°-30°	2124.3	9.5
30°-40°	3637.7	16.2
40°-50°	5489.3	24.4
50°-60°	5706.0	25.4
60°-70°	3203.2	14.3
70°-80°	439.0	2.0
80°-90°	59.5	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°	22464.0	100.0
0°-180°	22464.0	100.0

Coefficient of Utilization



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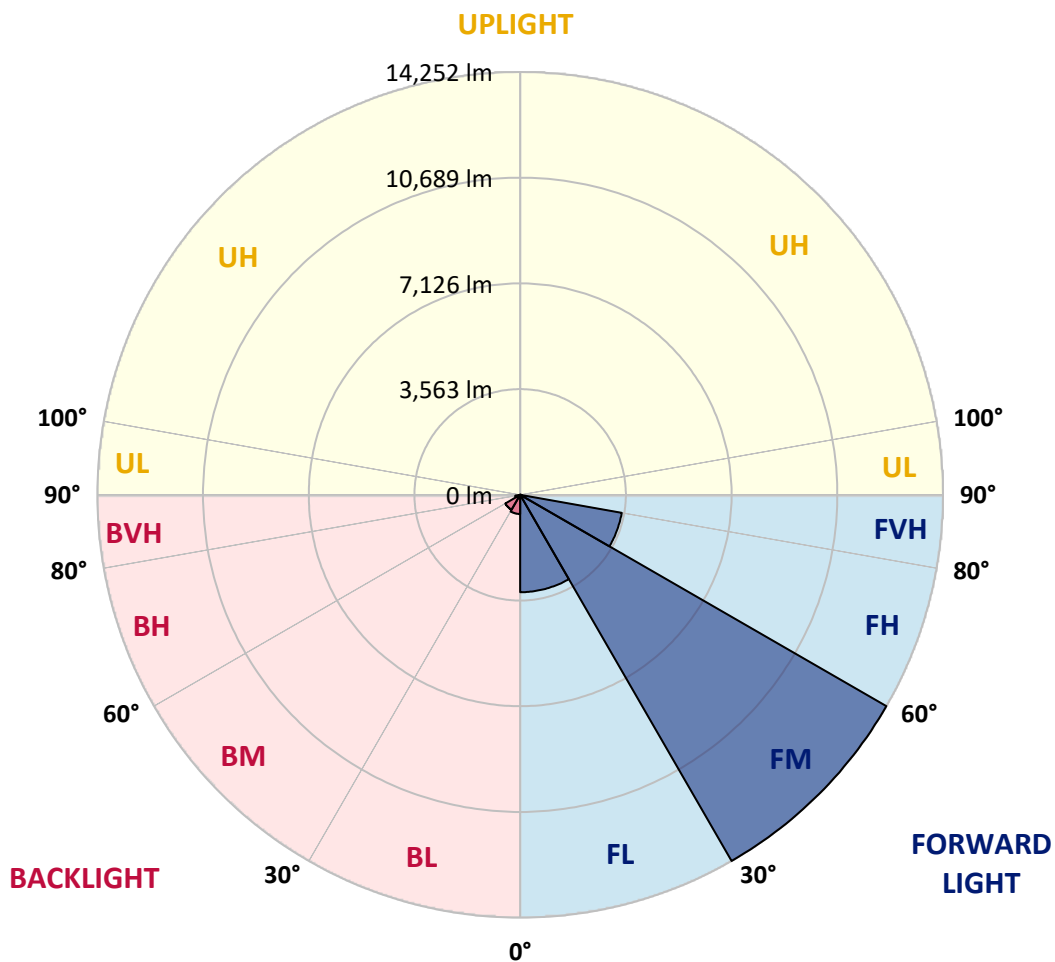
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3282.5	14.6			
FM (30°-60°)	14252.1	63.4			
FH (60°-80°)	3475.9	15.5			G2/5000
FVH (80°-90°)	51.3	0.2			G1/100
BL (0°-30°)	646.8	2.9	B2/1000		
BM (30°-60°)	580.8	2.6	B1/1000		
BH (60°-80°)	166.3	0.7	B1/500		G1/500
BVH (80°-90°)	8.2	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°	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2
2.5°	7652.5	7606.2	7558.2	7469.1	7386.9	7260.0	7085.2	7042.4	6905.3	6679.0	6468.2
5°	8312.4	8303.8	8271.2	8199.2	8110.1	7955.9	7758.8	7626.8	7414.3	7057.8	6651.6
7.5°	7921.6	7993.6	8111.8	8279.8	8392.9	8377.5	8226.7	8111.8	7901.0	7414.3	6831.6
10°	6677.3	6691.0	6853.8	7206.9	7765.6	8286.6	8483.7	8452.9	8259.2	7726.2	6989.2
12.5°	6238.6	6247.1	6284.8	6397.9	6761.3	7488.0	8380.9	8542.0	8526.6	8024.4	7157.2
15°	6272.8	6278.0	6288.3	6324.2	6427.1	6792.1	7859.9	8269.5	8698.0	8307.2	7321.7
17.5°	6543.6	6540.2	6507.6	6473.4	6505.9	6625.9	7328.6	7760.5	8662.0	8545.4	7457.1
20°	7071.5	7088.6	6979.0	6826.4	6747.6	6752.7	7066.4	7390.3	8459.8	8730.5	7558.2
22.5°	7813.6	7825.6	7645.7	7381.7	7150.3	7033.8	7121.2	7292.6	8226.7	8901.9	7640.5
25°	8699.7	8699.7	8447.8	8072.4	7714.2	7458.8	7383.4	7448.6	8137.5	9095.6	7722.8
27.5°	9656.0	9690.3	9361.3	8869.4	8396.3	8022.7	7786.2	7774.2	8206.1	9339.0	7815.3
30°	10696.4	10727.2	10336.5	9734.9	9174.4	8696.3	8332.9	8254.1	8468.3	9666.3	7950.7
32.5°	11731.6	11757.3	11325.4	10711.8	10058.8	9496.7	9018.5	8893.4	8939.6	10144.5	8149.5
35°	13047.8	13053.0	12506.2	11776.1	11078.6	10418.7	9813.7	9690.3	9638.9	10747.8	8435.8
37.5°	14095.0	14053.9	13707.7	13017.0	12216.6	11527.6	10816.3	10655.2	10531.8	11596.2	8879.7
40°	14341.8	14341.8	14290.4	14083.0	13447.2	12783.9	12094.9	11855.0	11582.5	12595.4	9476.1
42.5°	13699.1	13740.2	14079.6	14530.3	14535.5	14110.4	13436.9	13234.6	12754.8	13733.4	10127.4
45°	12261.2	12273.2	13087.2	14304.1	15130.2	15373.6	14876.5	14597.2	13932.2	14916.0	10723.8
47.5°	11743.6	11781.3	12127.5	13615.1	15174.8	16396.8	16257.9	15874.0	15022.2	15995.7	11280.8
50°	10948.3	10994.6	11417.9	12600.5	14773.7	17053.2	17579.3	17168.0	16014.6	16895.5	11556.7
52.5°	9045.9	9117.9	9716.0	11258.5	13771.1	17080.6	18789.4	18542.6	17030.9	17377.1	11524.2
55°	6224.8	6278.0	6975.5	8788.8	11748.7	16242.5	19310.4	19480.0	17937.6	17485.1	11366.5
56°	5021.7	5220.5	5731.2	7488.0	10597.0	15529.5	19190.4	19582.9	18206.6	17467.9	11297.9
57.5°	3319.8	3357.5	3914.5	5426.2	8509.5	13981.9	18648.8	19363.5	18552.8	17380.5	11248.2
60°	1561.4	1578.5	1779.0	2504.0	4605.2	10189.1	16888.7	18074.7	18679.7	17197.2	11246.5
62.5°	1018.0	1021.5	1045.5	1194.6	1883.6	5549.6	14000.7	15707.8	17629.1	17176.6	11214.0
65°	838.1	846.7	817.5	836.4	985.5	2092.7	9875.4	12245.7	15162.8	16693.3	10847.2
67.5°	738.7	740.4	701.0	678.7	721.5	918.6	4975.4	7724.5	11340.8	14184.1	8934.5
70°	673.6	671.8	627.3	575.9	577.6	610.1	1621.3	3208.4	6274.5	8422.0	5129.7
72.5°	598.1	601.6	575.9	503.9	479.9	431.9	610.1	865.5	2135.5	2704.5	1352.3
75°	524.4	517.6	491.9	445.6	401.0	289.6	306.8	368.5	557.0	551.9	291.4
77.5°	397.6	390.8	402.8	380.5	313.6	202.2	168.0	192.0	251.9	234.8	118.3
80°	303.4	299.9	274.2	325.6	286.2	152.5	114.8	118.3	137.1	125.1	58.3
82.5°	219.4	217.7	207.4	200.5	181.7	111.4	87.4	92.5	102.8	87.4	42.8
85°	84.0	84.0	162.8	137.1	125.1	75.4	61.7	66.8	78.8	63.4	29.1
87.5°	13.7	13.7	109.7	90.8	56.6	37.7	39.4	42.8	46.3	37.7	22.3
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°	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2	6360.2
2.5°	6343.1	6228.3	5976.3	5733.0	5520.4	5287.3	5169.1	5032.0	4980.6	4877.7	4888.0
5°	6408.2	6168.3	5662.7	5129.7	4641.2	4144.2	3791.1	3458.6	3273.5	3090.1	3090.1
7.5°	6475.1	6108.3	5326.8	4475.0	3652.3	2800.5	2197.2	1713.9	1444.8	1264.8	1259.7
10°	6521.3	6031.2	4944.6	3715.7	2502.3	1443.1	870.7	685.6	618.7	589.6	587.9
12.5°	6581.3	5954.0	4509.2	2821.1	1390.0	685.6	543.3	514.2	502.2	495.3	495.3
15°	6632.7	5844.4	3981.4	1897.3	730.1	514.2	467.9	457.6	455.9	454.2	455.9
17.5°	6644.7	5688.4	3348.9	1110.6	529.6	449.0	428.5	419.9	419.9	418.2	418.2
20°	6617.3	5482.7	2649.7	685.6	457.6	413.0	390.8	380.5	378.8	378.8	378.8
22.5°	6560.8	5220.5	1959.0	519.3	416.5	380.5	351.3	341.1	341.1	342.8	344.5
25°	6490.5	4910.3	1345.4	447.3	385.6	346.2	317.1	306.8	310.2	313.6	315.4
27.5°	6401.4	4540.1	880.9	387.3	344.5	311.9	286.2	279.4	286.2	293.1	296.5
30°	6312.2	4133.9	596.4	335.9	298.2	274.2	258.8	257.1	267.4	282.8	284.5
32.5°	6254.0	3717.4	450.8	301.6	262.2	241.7	234.8	238.2	253.7	270.8	274.2
35°	6248.8	3311.2	383.9	274.2	238.2	219.4	215.9	226.2	243.4	257.1	260.5
37.5°	6329.4	2930.7	347.9	253.7	219.4	200.5	195.4	214.2	229.7	243.4	246.8
40°	6492.2	2589.7	323.9	234.8	204.0	181.7	178.2	193.7	209.1	224.5	229.7
42.5°	6696.2	2270.9	296.5	215.9	186.8	161.1	157.7	169.7	185.1	207.4	210.8
45°	6872.7	1974.4	267.4	195.4	168.0	138.8	137.1	150.8	162.8	183.4	186.8
47.5°	7021.8	1727.6	239.9	173.1	144.0	123.4	121.7	128.5	135.4	154.2	157.7
50°	6943.0	1518.5	212.5	142.3	116.5	106.3	104.5	104.5	113.1	132.0	135.4
52.5°	6749.3	1388.2	186.8	118.3	96.0	90.8	85.7	87.4	96.0	104.5	106.3
55°	6593.3	1326.5	164.5	104.5	80.6	75.4	70.3	68.6	70.3	66.8	63.4
56°	6555.6	1319.7	159.4	101.1	77.1	70.3	63.4	60.0	58.3	51.4	49.7
57.5°	6538.5	1319.7	150.8	94.3	72.0	63.4	54.8	48.0	41.1	36.0	36.0
60°	6524.8	1328.3	140.5	82.3	61.7	51.4	39.4	29.1	24.0	24.0	24.0
62.5°	6495.6	1324.8	128.5	68.6	53.1	39.4	24.0	18.9	17.1	18.9	20.6
65°	6168.3	1230.6	113.1	54.8	41.1	27.4	13.7	13.7	15.4	18.9	20.6
67.5°	4970.3	932.4	92.5	42.8	29.1	20.6	12.0	12.0	15.4	18.9	20.6
70°	2730.2	491.9	78.8	30.8	22.3	17.1	12.0	10.3	15.4	18.9	20.6
72.5°	666.7	205.7	72.0	24.0	20.6	15.4	10.3	10.3	15.4	18.9	20.6
75°	164.5	154.2	58.3	18.9	17.1	13.7	10.3	10.3	15.4	18.9	20.6
77.5°	77.1	204.0	39.4	17.1	15.4	12.0	10.3	10.3	15.4	18.9	18.9
80°	46.3	154.2	24.0	15.4	13.7	12.0	10.3	10.3	15.4	18.9	20.6
82.5°	27.4	44.6	17.1	15.4	13.7	10.3	10.3	10.3	15.4	18.9	20.6
85°	24.0	22.3	17.1	15.4	13.7	12.0	10.3	10.3	17.1	20.6	20.6
87.5°	18.9	17.1	15.4	13.7	13.7	12.0	10.3	10.3	15.4	18.9	20.6
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)