

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: P196950

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-8030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196950
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-8030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 615mA 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: 16256 lumens
Efficiency: N/A
Efficacy: 84.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 193
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

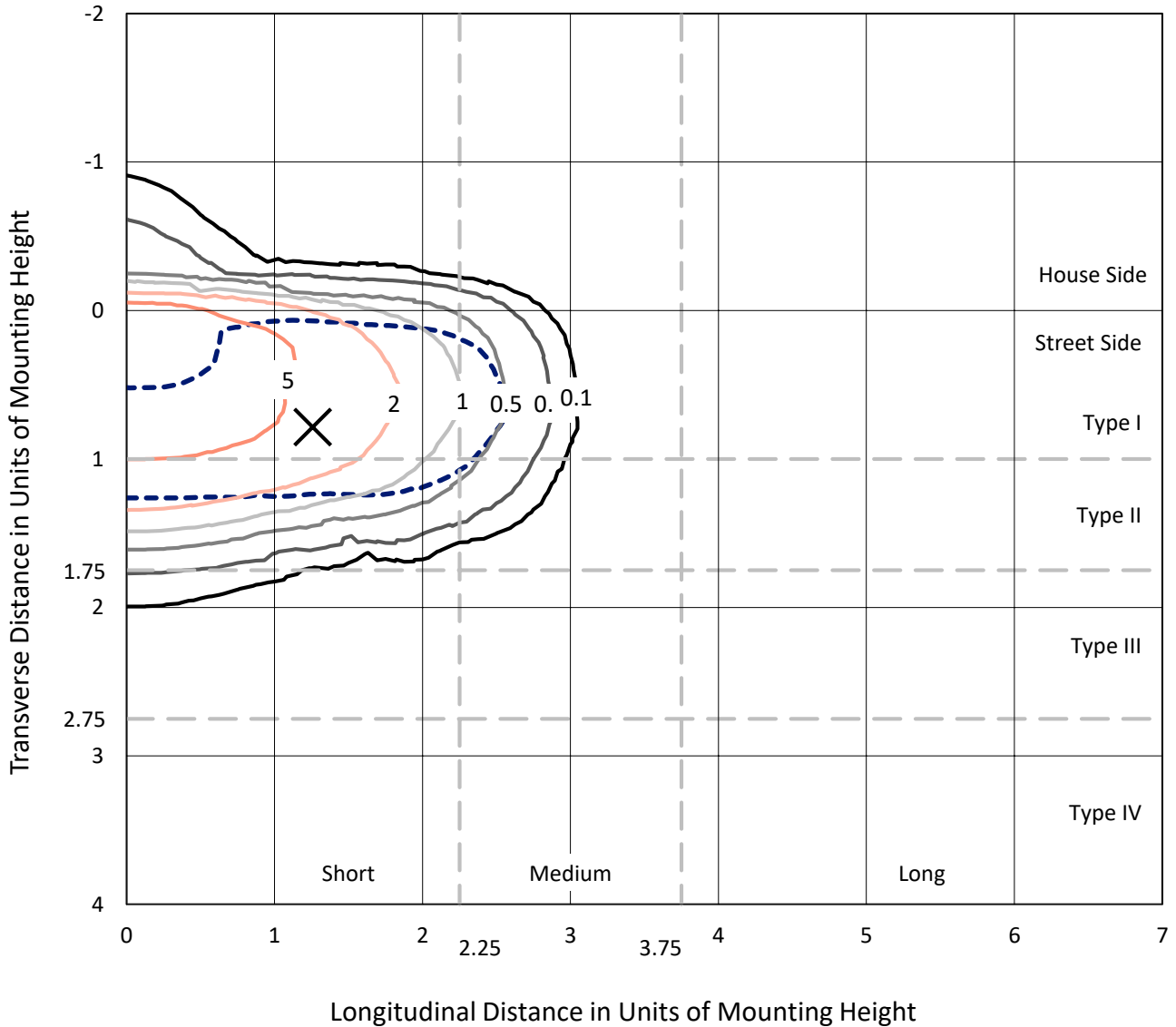


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

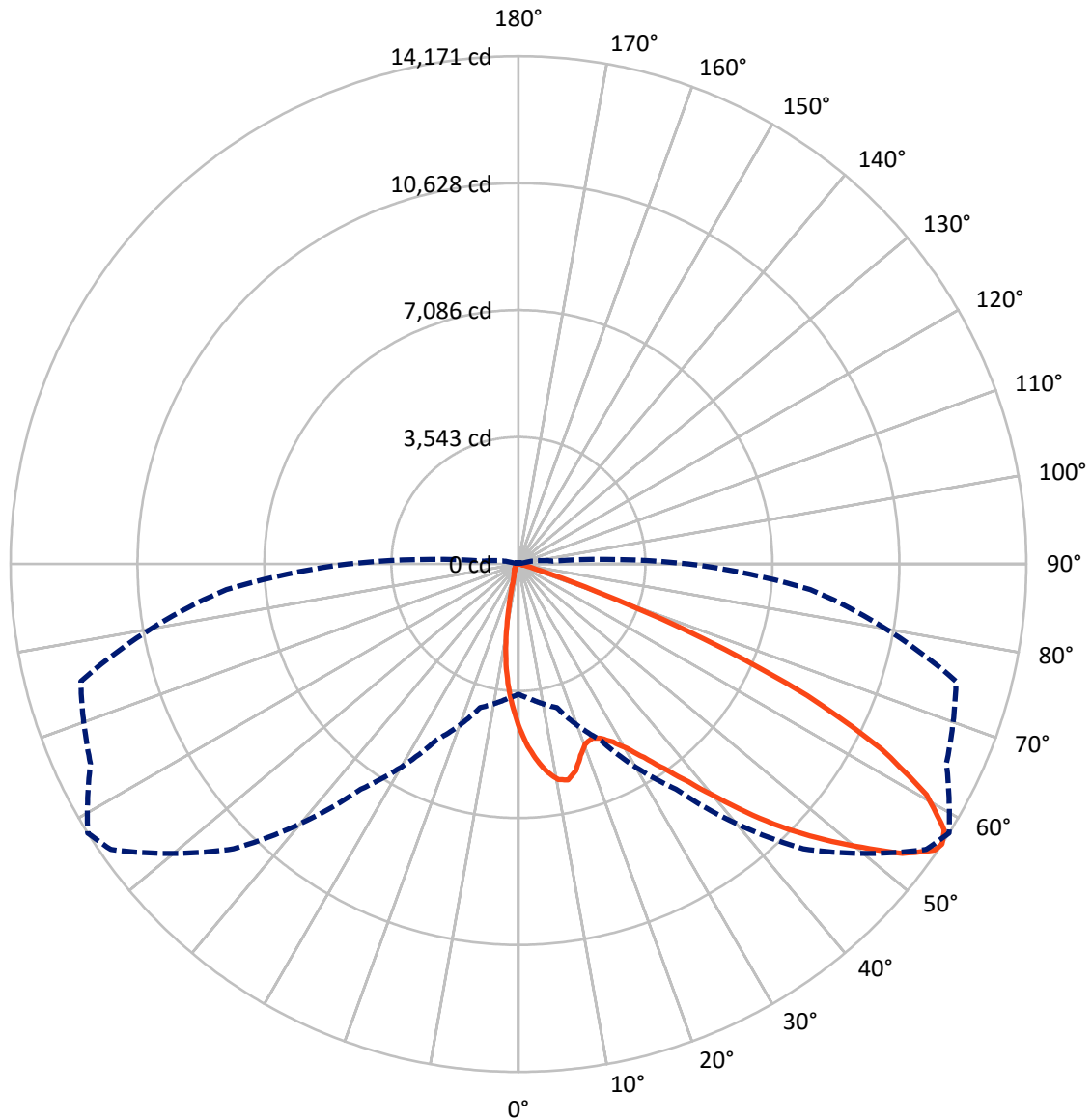


Based on 25 foot mounting height. Maximum calculated value = 9.2 fc
 Type II - Short - Full Cutoff

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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	1014.7	0.0	1014.7
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	15241.3	0.0	15241.3
	% Fixture	93.8	0.0	93.8
Total	Lumens	16256.0	0.0	16256.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	392.6	2.4
10°-20°	913.6	5.6
20°-30°	1537.2	9.5
30°-40°	2632.4	16.2
40°-50°	3972.3	24.4
50°-60°	4129.1	25.4
60°-70°	2318.0	14.3
70°-80°	317.7	2.0
80°-90°	43.0	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°	16256.0	100.0
0°-180°	16256.0	100.0



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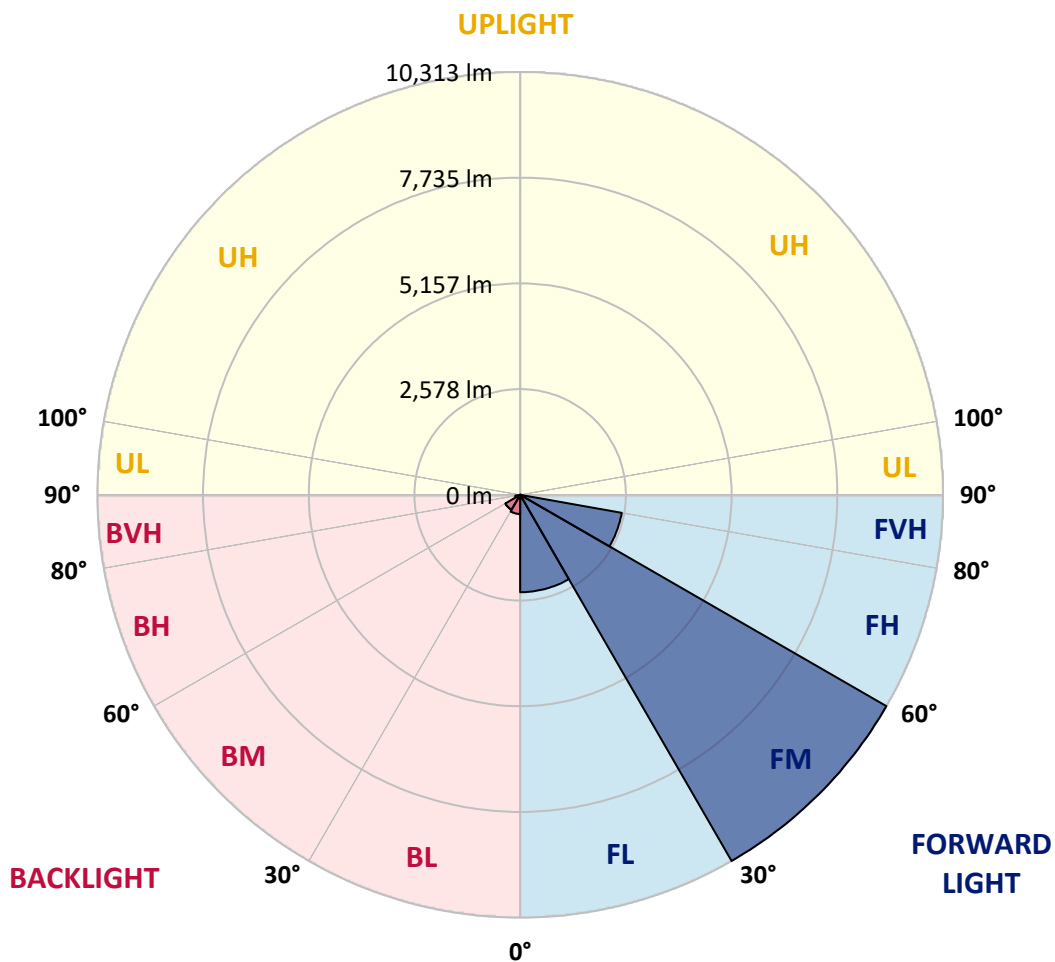
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2375.4	14.6			
FM	(30°-60°)	10313.5	63.4			
FH	(60°-80°)	2515.3	15.5			G2/5000
FVH	(80°-90°)	37.1	0.2			G1/100
BL	(0°-30°)	468.1	2.9	B1/500		
BM	(30°-60°)	420.3	2.6	B1/1000		
BH	(60°-80°)	120.4	0.7	B1/500		G1/500
BVH	(80°-90°)	5.9	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-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6
2.5°	5537.7	5504.2	5469.5	5405.0	5345.5	5253.7	5127.2	5096.2	4997.0	4833.3	4680.7
5°	6015.2	6009.0	5985.4	5933.4	5868.9	5757.2	5614.6	5519.1	5365.3	5107.3	4813.4
7.5°	5732.4	5784.5	5870.1	5991.6	6073.5	6062.3	5953.2	5870.1	5717.5	5365.3	4943.6
10°	4832.0	4841.9	4959.8	5215.2	5619.6	5996.6	6139.2	6116.9	5976.8	5591.0	5057.7
12.5°	4514.5	4520.7	4548.0	4629.9	4892.8	5418.6	6064.8	6181.4	6170.2	5806.8	5179.3
15°	4539.3	4543.0	4550.5	4576.5	4650.9	4915.1	5687.8	5984.2	6294.3	6011.5	5298.3
17.5°	4735.3	4732.8	4709.2	4684.4	4708.0	4794.8	5303.3	5615.8	6268.2	6183.9	5396.3
20°	5117.3	5129.7	5050.3	4939.9	4882.9	4886.6	5113.5	5348.0	6121.9	6317.8	5469.5
22.5°	5654.3	5663.0	5532.8	5341.8	5174.3	5090.0	5153.2	5277.3	5953.2	6441.9	5529.0
25°	6295.5	6295.5	6113.2	5841.6	5582.4	5397.6	5343.0	5390.1	5888.7	6582.0	5588.6
27.5°	6987.6	7012.4	6774.2	6418.3	6076.0	5805.6	5634.5	5625.8	5938.3	6758.1	5655.5
30°	7740.4	7762.7	7479.9	7044.6	6639.1	6293.0	6030.1	5973.0	6128.1	6995.0	5753.5
32.5°	8489.5	8508.1	8195.6	7751.6	7279.0	6872.2	6526.2	6435.7	6469.1	7341.0	5897.4
35°	9442.0	9445.7	9050.1	8521.8	8017.0	7539.5	7101.7	7012.4	6975.2	7777.6	6104.5
37.5°	10199.8	10170.0	9919.5	9419.7	8840.5	8341.9	7827.2	7710.6	7621.3	8391.5	6425.7
40°	10378.4	10378.4	10341.2	10191.1	9731.0	9251.0	8752.4	8578.8	8381.6	9114.6	6857.3
42.5°	9913.3	9943.1	10188.6	10514.8	10518.6	10211.0	9723.6	9577.2	9229.9	9938.1	7328.6
45°	8872.7	8881.4	9470.5	10351.1	10948.9	11125.0	10765.4	10563.2	10082.0	10793.9	7760.2
47.5°	8498.2	8525.5	8776.0	9852.5	10981.2	11865.5	11765.0	11487.2	10870.8	11575.2	8163.3
50°	7922.7	7956.2	8262.5	9118.3	10690.9	12340.5	12721.2	12423.6	11588.9	12226.4	8363.0
52.5°	6546.0	6598.1	7031.0	8147.2	9965.4	12360.3	13596.9	13418.3	12324.4	12574.9	8339.4
55°	4504.6	4543.0	5047.8	6360.0	8501.9	11753.8	13973.9	14096.7	12980.4	12653.0	8225.3
56°	3633.9	3777.8	4147.4	5418.6	7668.5	11237.9	13887.1	14171.1	13175.2	12640.6	8175.7
57.5°	2402.4	2429.6	2832.7	3926.6	6157.8	10118.0	13495.2	14012.3	13425.7	12577.4	8139.8
60°	1129.9	1142.3	1287.4	1812.0	3332.5	7373.3	12221.4	13079.7	13517.5	12444.7	8138.5
62.5°	736.7	739.2	756.6	864.5	1363.0	4015.9	10131.6	11366.9	12757.2	12429.8	8115.0
65°	606.5	612.7	591.6	605.2	713.1	1514.3	7146.3	8861.6	10972.5	12080.0	7849.5
67.5°	534.5	535.8	507.3	491.1	522.1	664.8	3600.4	5589.8	8206.7	10264.3	6465.4
70°	487.4	486.2	453.9	416.7	418.0	441.5	1173.3	2321.7	4540.6	6094.6	3712.1
72.5°	432.8	435.3	416.7	364.6	347.3	312.5	441.5	626.3	1545.4	1957.1	978.6
75°	379.5	374.6	356.0	322.5	290.2	209.6	222.0	266.7	403.1	399.4	210.8
77.5°	287.7	282.8	291.5	275.3	227.0	146.3	121.5	138.9	182.3	169.9	85.6
80°	219.5	217.0	198.4	235.6	207.1	110.4	83.1	85.6	99.2	90.5	42.2
82.5°	158.8	157.5	150.1	145.1	131.5	80.6	63.3	67.0	74.4	63.3	31.0
85°	60.8	60.8	117.8	99.2	90.5	54.6	44.6	48.4	57.1	45.9	21.1
87.5°	9.9	9.9	79.4	65.7	40.9	27.3	28.5	31.0	33.5	27.3	16.1
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°	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6	4602.6
2.5°	4590.2	4507.1	4324.7	4148.6	3994.8	3826.2	3740.6	3641.4	3604.2	3529.7	3537.2
5°	4637.3	4463.7	4097.8	3712.1	3358.6	2998.9	2743.4	2502.8	2368.9	2236.2	2236.2
7.5°	4685.7	4420.2	3854.7	3238.3	2643.0	2026.6	1590.0	1240.2	1045.5	915.3	911.6
10°	4719.1	4364.4	3578.1	2688.9	1810.8	1044.3	630.0	496.1	447.7	426.6	425.4
12.5°	4762.6	4308.6	3263.1	2041.5	1005.8	496.1	393.2	372.1	363.4	358.4	358.4
15°	4799.8	4229.3	2881.1	1373.0	528.3	372.1	338.6	331.1	329.9	328.7	329.9
17.5°	4808.4	4116.4	2423.4	803.7	383.2	324.9	310.1	303.9	303.9	302.6	302.6
20°	4788.6	3967.6	1917.4	496.1	331.1	298.9	282.8	275.3	274.1	274.1	274.1
22.5°	4747.7	3777.8	1417.6	375.8	301.4	275.3	254.3	246.8	246.8	248.0	249.3
25°	4696.8	3553.3	973.6	323.7	279.1	250.5	229.4	222.0	224.5	227.0	228.2
27.5°	4632.3	3285.4	637.5	280.3	249.3	225.7	207.1	202.2	207.1	212.1	214.6
30°	4567.8	2991.5	431.6	243.1	215.8	198.4	187.3	186.0	193.5	204.6	205.9
32.5°	4525.7	2690.1	326.2	218.3	189.8	174.9	169.9	172.4	183.6	196.0	198.4
35°	4521.9	2396.2	277.8	198.4	172.4	158.8	156.3	163.7	176.1	186.0	188.5
37.5°	4580.2	2120.8	251.8	183.6	158.8	145.1	141.4	155.0	166.2	176.1	178.6
40°	4698.1	1874.0	234.4	169.9	147.6	131.5	129.0	140.1	151.3	162.5	166.2
42.5°	4845.7	1643.3	214.6	156.3	135.2	116.6	114.1	122.8	133.9	150.1	152.6
45°	4973.4	1428.8	193.5	141.4	121.5	100.5	99.2	109.1	117.8	132.7	135.2
47.5°	5081.3	1250.2	173.6	125.3	104.2	89.3	88.1	93.0	98.0	111.6	114.1
50°	5024.3	1098.9	153.8	102.9	84.3	76.9	75.7	75.7	81.9	95.5	98.0
52.5°	4884.1	1004.6	135.2	85.6	69.5	65.7	62.0	63.3	69.5	75.7	76.9
55°	4771.2	960.0	119.1	75.7	58.3	54.6	50.9	49.6	50.9	48.4	45.9
56°	4744.0	955.0	115.3	73.2	55.8	50.9	45.9	43.4	42.2	37.2	36.0
57.5°	4731.6	955.0	109.1	68.2	52.1	45.9	39.7	34.7	29.8	26.0	26.0
60°	4721.6	961.2	101.7	59.5	44.6	37.2	28.5	21.1	17.4	17.4	17.4
62.5°	4700.5	958.7	93.0	49.6	38.4	28.5	17.4	13.6	12.4	13.6	14.9
65°	4463.7	890.5	81.9	39.7	29.8	19.8	9.9	9.9	11.2	13.6	14.9
67.5°	3596.7	674.7	67.0	31.0	21.1	14.9	8.7	8.7	11.2	13.6	14.9
70°	1975.7	356.0	57.1	22.3	16.1	12.4	8.7	7.4	11.2	13.6	14.9
72.5°	482.5	148.8	52.1	17.4	14.9	11.2	7.4	7.4	11.2	13.6	14.9
75°	119.1	111.6	42.2	13.6	12.4	9.9	7.4	7.4	11.2	13.6	14.9
77.5°	55.8	147.6	28.5	12.4	11.2	8.7	7.4	7.4	11.2	13.6	13.6
80°	33.5	111.6	17.4	11.2	9.9	8.7	7.4	7.4	11.2	13.6	14.9
82.5°	19.8	32.2	12.4	11.2	9.9	7.4	7.4	7.4	11.2	13.6	14.9
85°	17.4	16.1	12.4	11.2	9.9	8.7	7.4	7.4	12.4	14.9	14.9
87.5°	13.6	12.4	11.2	9.9	9.9	8.7	7.4	7.4	11.2	13.6	14.9
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)