

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: P197058

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197058
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28817 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G4

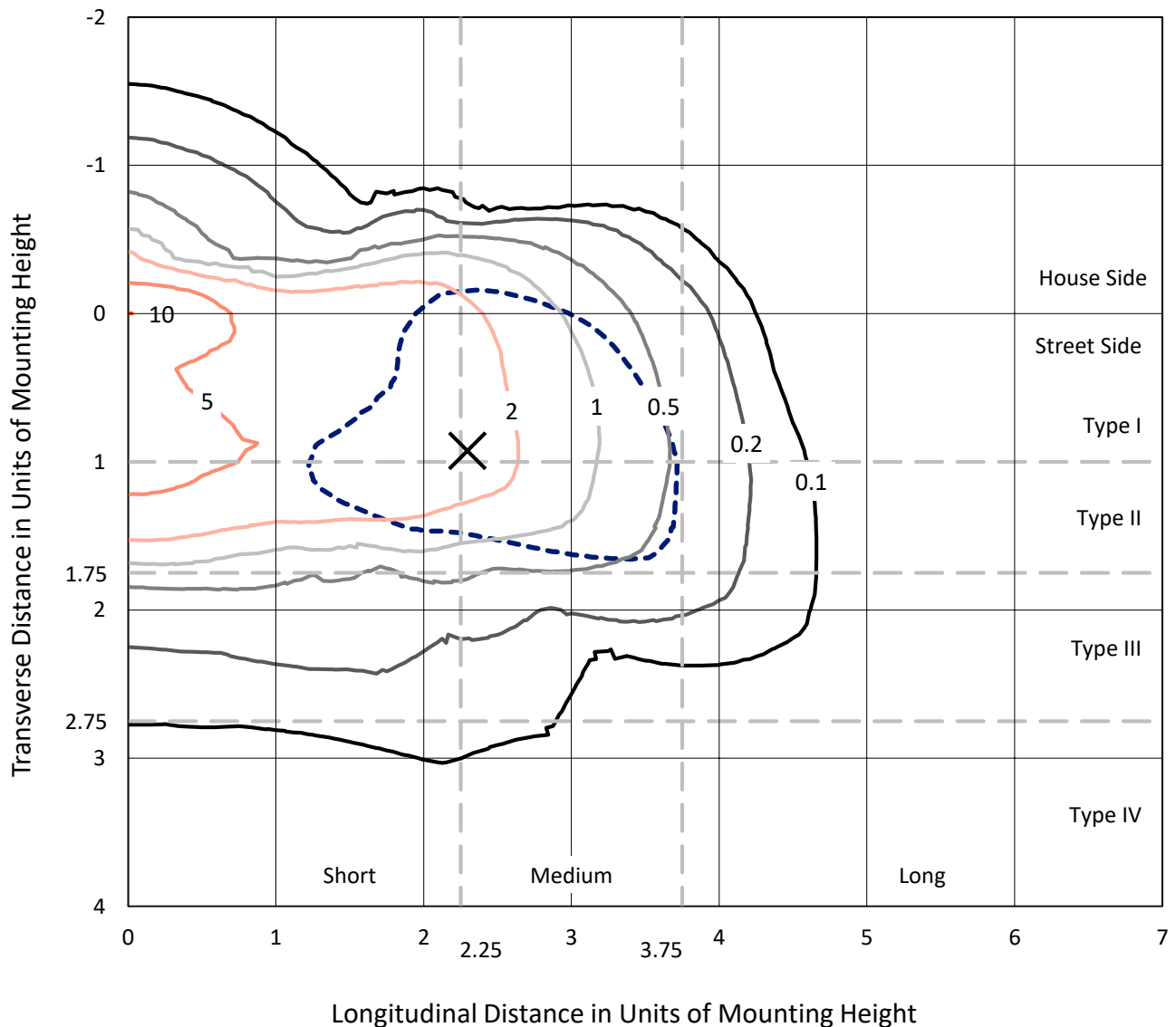
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

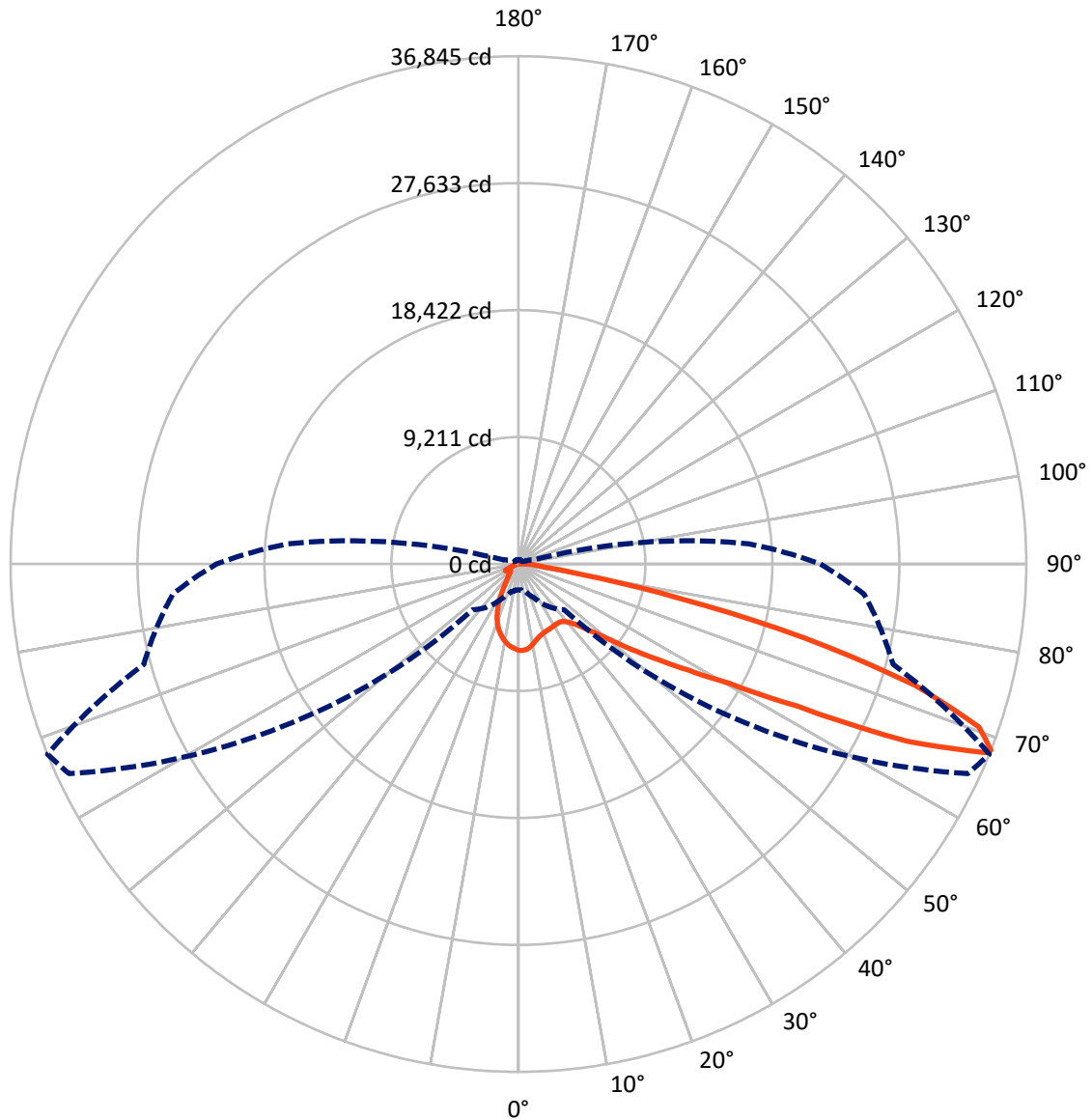
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4714.5	0.0	4714.5
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	24102.5	0.0	24102.5
	% Fixture	83.6	0.0	83.6
Total	Lumens	28817.0	0.0	28817.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	537.2	1.9
10°-20°	1246.1	4.3
20°-30°	1685.3	5.8
30°-40°	2376.2	8.2
40°-50°	3907.4	13.6
50°-60°	6056.8	21.0
60°-70°	7853.1	27.3
70°-80°	4506.5	15.6
80°-90°	648.4	2.3
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°	28817.0	100.0
0°-180°	28817.0	100.0



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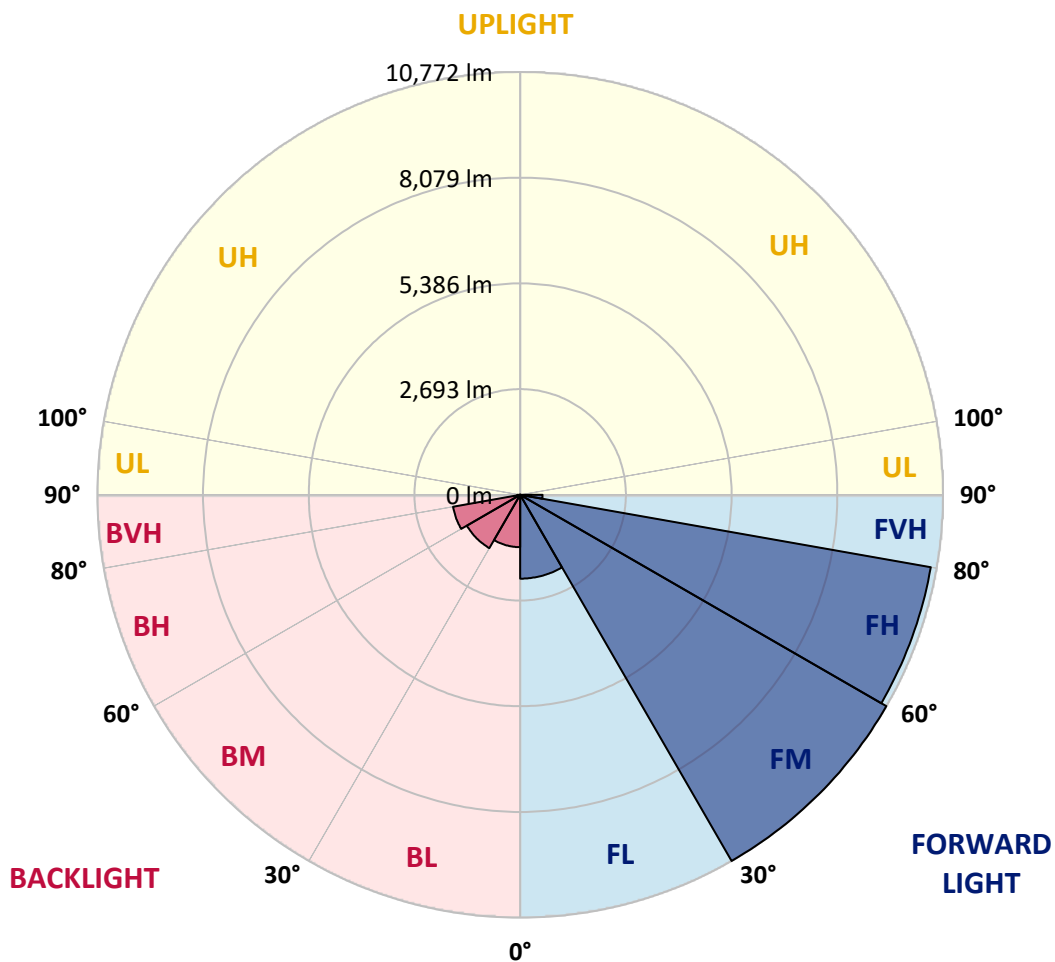
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2135.8	7.4			
FM (30°-60°)	10772.3	37.4			
FH (60°-80°)	10623.3	36.9			G4/12000
FVH (80°-90°)	571.1	2.0			G4/750
BL (0°-30°)	1332.8	4.6	B3/2500		
BM (30°-60°)	1568.1	5.4	B2/2500		
BH (60°-80°)	1736.3	6.0	B3/2500		G3/2500
BVH (80°-90°)	77.3	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3
2.5°	6102.8	6151.7	6151.7	6187.5	6219.5	6245.9	6268.4	6268.4	6268.4	6253.4	6240.2
5°	5460.9	5526.8	5536.2	5626.5	5745.1	5890.1	6052.0	6195.0	6223.3	6276.0	6296.7
7.5°	5014.8	5035.5	5071.2	5133.3	5253.8	5432.6	5686.8	6006.8	6084.0	6249.6	6336.2
10°	4698.5	4715.4	4745.6	4807.7	4916.9	5078.8	5329.1	5745.1	5873.1	6166.8	6338.1
12.5°	4467.0	4480.1	4508.4	4564.9	4675.9	4820.9	5076.9	5509.8	5667.9	6084.0	6364.4
15°	4286.3	4308.8	4331.4	4386.0	4499.0	4638.3	4898.0	5338.5	5509.8	6018.1	6413.4
17.5°	4214.7	4226.0	4229.8	4258.0	4359.7	4500.9	4760.6	5218.1	5395.0	5965.4	6451.0
20°	4259.9	4261.8	4224.1	4205.3	4263.7	4393.6	4645.8	5127.7	5308.4	5918.3	6466.1
22.5°	4457.6	4457.6	4359.7	4276.8	4237.3	4318.3	4568.6	5065.6	5261.3	5882.5	6466.1
25°	4834.0	4817.1	4664.6	4500.9	4325.8	4291.9	4519.7	5026.0	5225.6	5863.7	6441.6
27.5°	5329.1	5314.1	5120.2	4877.3	4561.1	4348.4	4502.7	4994.0	5189.8	5835.5	6388.9
30°	5931.5	5918.3	5698.1	5379.9	4913.1	4527.2	4542.3	4971.5	5161.6	5788.4	6300.4
32.5°	6532.0	6524.4	6349.4	6023.7	5398.8	4830.3	4645.8	4967.7	5146.5	5732.0	6193.1
35°	7136.2	7136.2	7028.9	6754.1	6052.0	5285.8	4862.3	5037.3	5174.8	5701.8	6100.9
37.5°	8028.5	7992.7	7793.2	7509.0	6874.6	5876.9	5212.4	5184.2	5283.9	5752.7	6070.8
40°	9410.2	9306.7	8807.8	8329.7	7772.5	6633.6	5724.4	5468.4	5528.7	5925.8	6142.3
42.5°	10855.9	10692.1	10031.4	9267.1	8700.5	7567.3	6396.4	5929.6	5927.7	6260.9	6370.1
45°	12096.4	12011.7	11296.4	10326.9	9760.3	8617.7	7245.4	6614.8	6547.0	6780.5	6808.7
47.5°	12817.4	12760.9	12329.8	11448.8	11017.8	9858.2	8322.2	7565.4	7437.4	7576.7	7533.4
50°	12617.8	12672.4	12548.2	12098.3	12369.3	11601.3	9694.4	8868.1	8625.2	8764.5	8659.1
52.5°	11567.4	11714.3	11825.3	11911.9	13146.8	13933.6	11418.7	10494.5	10293.0	10268.6	10166.9
55°	9675.6	9909.0	10259.2	10895.4	12937.8	15806.6	14430.6	12461.6	12167.9	12013.6	12053.1
57.5°	6584.7	6938.6	7693.4	8903.8	11851.7	16604.8	18884.4	15002.8	14505.9	13956.2	14084.2
60°	3627.4	3923.0	4820.9	6040.7	9372.5	16486.2	22831.8	19132.9	17568.6	16111.6	16375.1
62.5°	2347.4	2411.4	3079.6	4126.3	5752.7	14554.8	25024.8	26035.7	22720.7	18954.0	19324.9
65°	1886.2	1931.4	2258.9	3328.1	4007.7	9363.1	25122.7	33196.4	31010.9	22816.7	22828.0
67.5°	1842.9	1863.6	2053.7	2799.2	3759.2	5097.6	21715.5	36020.0	36526.4	27376.0	25171.6
68°	1869.2	1893.7	2085.7	2712.6	3757.3	4698.5	20070.3	35976.7	36844.5	28138.3	25171.6
70°	1649.0	1679.1	2127.1	2806.7	3597.3	4039.7	13743.5	34066.1	35462.8	29890.9	23884.1
72.5°	862.1	837.7	1052.3	2215.6	4049.1	4209.1	7260.5	28460.2	30090.4	27682.8	20635.0
75°	672.0	611.8	589.2	875.3	3561.5	4365.3	4216.6	20228.4	21459.5	19955.5	13792.4
77.5°	632.5	559.1	515.8	517.7	1568.1	4542.3	3410.9	11904.4	11904.4	9519.4	4401.1
80°	508.3	440.5	412.2	470.6	756.7	4186.5	3559.6	5425.1	4627.0	2460.3	1212.3
82.5°	335.1	299.3	301.2	382.1	574.1	2795.4	4122.5	2678.7	2012.3	1089.9	713.4
85°	212.7	182.6	203.3	267.3	429.2	1246.2	4081.1	1861.7	1332.7	611.8	355.8
87.5°	107.3	82.8	101.7	139.3	261.7	357.7	3360.1	1662.2	988.3	254.1	193.9
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°	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3	6270.3
2.5°	6240.2	6198.8	6178.1	6144.2	6102.8	6061.4	6033.1	6020.0	6012.4	6016.2	6014.3
5°	6285.4	6230.8	6142.3	6016.2	5886.3	5748.9	5643.5	5562.5	5511.7	5496.6	5492.9
7.5°	6319.3	6240.2	6074.6	5844.9	5622.8	5381.8	5176.6	5012.9	4901.8	4851.0	4849.1
10°	6313.6	6212.0	5950.3	5611.5	5285.8	4931.9	4610.0	4335.2	4135.7	4039.7	4035.9
12.5°	6319.3	6180.0	5797.8	5338.5	4871.7	4365.3	3887.2	3459.9	3162.5	3021.3	3015.6
15°	6341.9	6146.1	5641.6	5033.6	4387.9	3672.6	2989.3	2452.8	2181.7	2089.5	2089.5
17.5°	6340.0	6089.6	5460.9	4679.7	3813.8	2855.6	2040.5	1709.2	1682.9	1767.6	1780.8
20°	6302.3	5999.3	5227.5	4259.9	3139.9	1976.5	1383.6	1336.5	1547.3	1780.8	1807.1
22.5°	6244.0	5882.5	4958.3	3772.4	2354.9	1287.6	1067.3	1138.9	1425.0	1714.9	1756.3
25°	6163.0	5741.4	4649.6	3205.8	1566.2	926.1	890.4	978.9	1180.3	1374.2	1404.3
27.5°	6044.4	5562.5	4312.6	2592.1	999.6	762.4	775.6	837.7	924.3	1007.1	1024.0
30°	5895.7	5353.6	3945.5	1912.5	758.6	681.4	704.0	741.7	779.3	832.0	843.3
32.5°	5745.1	5140.9	3563.4	1313.9	662.6	638.1	660.7	681.4	713.4	749.2	756.7
35°	5609.6	4943.2	3170.0	916.7	621.2	609.9	621.2	634.4	666.4	702.1	705.9
37.5°	5511.7	4781.3	2759.6	724.7	596.7	585.4	591.1	596.7	634.4	687.1	692.7
40°	5498.5	4674.0	2343.6	651.3	577.9	562.8	559.1	562.8	611.8	672.0	677.7
42.5°	5626.5	4679.7	1937.0	621.2	562.8	545.9	530.8	538.4	581.7	628.7	632.5
45°	5929.6	4811.5	1585.0	608.0	549.7	536.5	513.9	517.7	538.4	562.8	566.6
47.5°	6464.2	5099.5	1315.8	600.5	538.4	527.1	498.8	487.5	489.4	502.6	502.6
50°	7318.8	5581.4	1152.0	593.0	529.0	508.3	476.3	453.7	448.0	455.5	457.4
52.5°	8593.2	6407.7	1073.0	577.9	512.0	483.8	448.0	425.4	416.0	423.5	423.5
55°	10315.6	7727.3	1035.3	557.2	491.3	453.7	421.7	402.8	395.3	401.0	401.0
57.5°	12279.0	9442.2	1099.3	529.0	465.0	421.7	399.1	385.9	380.2	385.9	387.8
60°	14611.3	11686.0	1539.8	493.2	436.7	393.4	380.2	372.7	369.0	374.6	374.6
62.5°	17711.6	14671.5	2383.1	465.0	406.6	367.1	363.3	359.5	355.8	361.4	361.4
65°	21058.6	17387.9	2452.8	448.0	380.2	344.5	346.4	346.4	342.6	348.2	348.2
67.5°	22124.0	17152.6	1370.4	427.3	348.2	321.9	329.4	329.4	327.5	333.2	331.3
68°	21898.1	16779.8	1193.5	421.7	342.6	316.2	323.8	325.7	323.8	329.4	327.5
70°	20215.2	14731.8	785.0	389.7	318.1	297.4	308.7	310.6	308.7	316.2	314.4
72.5°	16687.6	11049.8	579.8	340.7	288.0	273.0	284.2	286.1	288.0	295.5	293.7
75°	10598.0	6102.8	457.4	289.9	257.9	244.7	256.0	261.7	265.4	276.7	271.1
77.5°	2902.7	1852.3	370.8	246.6	222.1	216.5	224.0	231.5	235.3	248.5	239.1
80°	1016.5	818.9	308.7	208.9	184.5	182.6	190.1	197.7	201.4	212.7	201.4
82.5°	617.4	534.6	246.6	163.8	144.9	143.1	152.5	160.0	163.8	163.8	156.2
85°	321.9	282.4	180.7	114.8	99.8	94.1	111.1	120.5	122.4	120.5	114.8
87.5°	180.7	160.0	96.0	54.6	45.2	47.1	58.4	71.5	77.2	75.3	71.5
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)