

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: P197105

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197105
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-05-D-UNV-SL3-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24504 lumens
Efficiency: N/A
Efficacy: 87.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

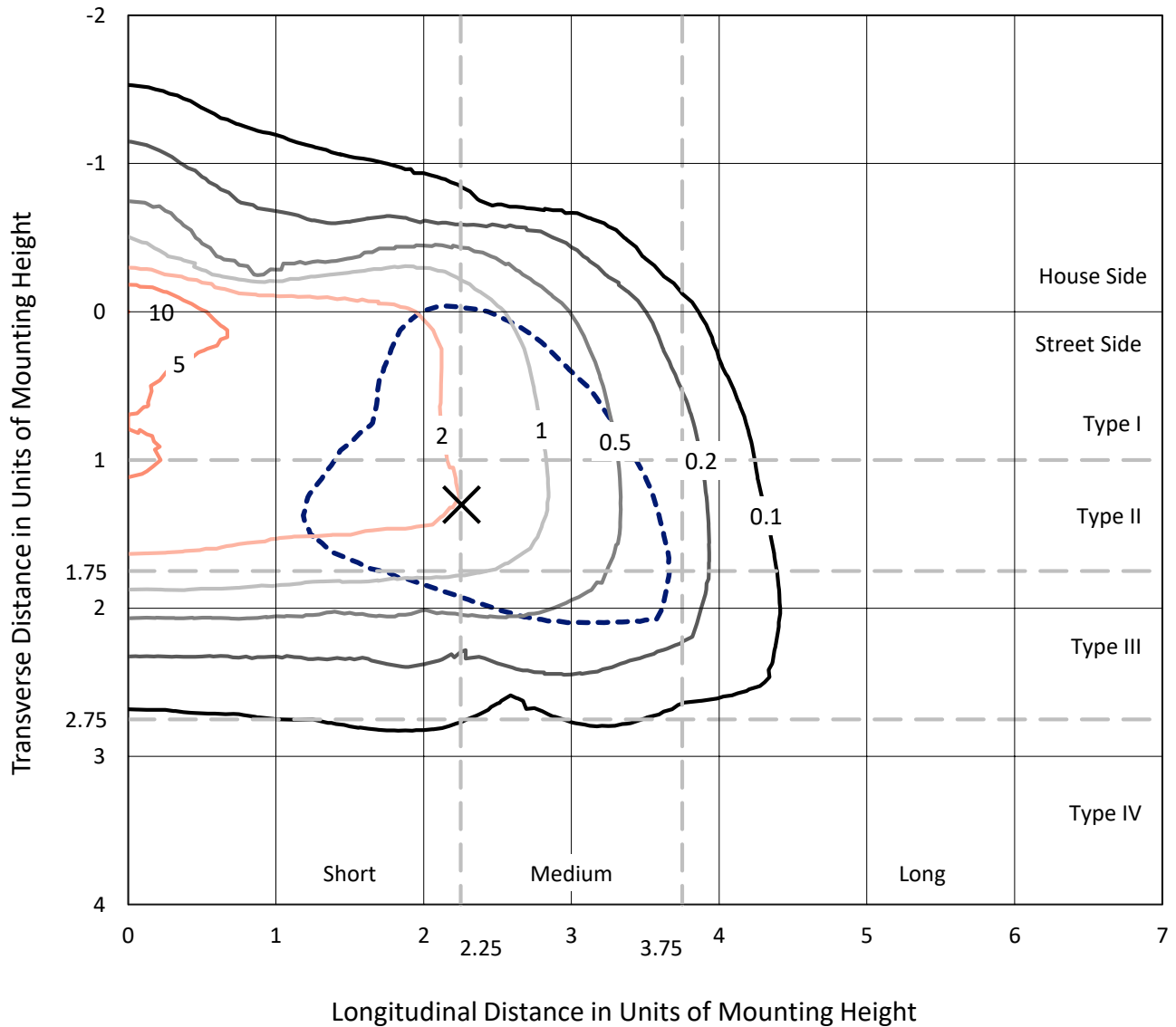
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197105
 CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030

Iso-Footcandle Lines of Horizontal Illumination

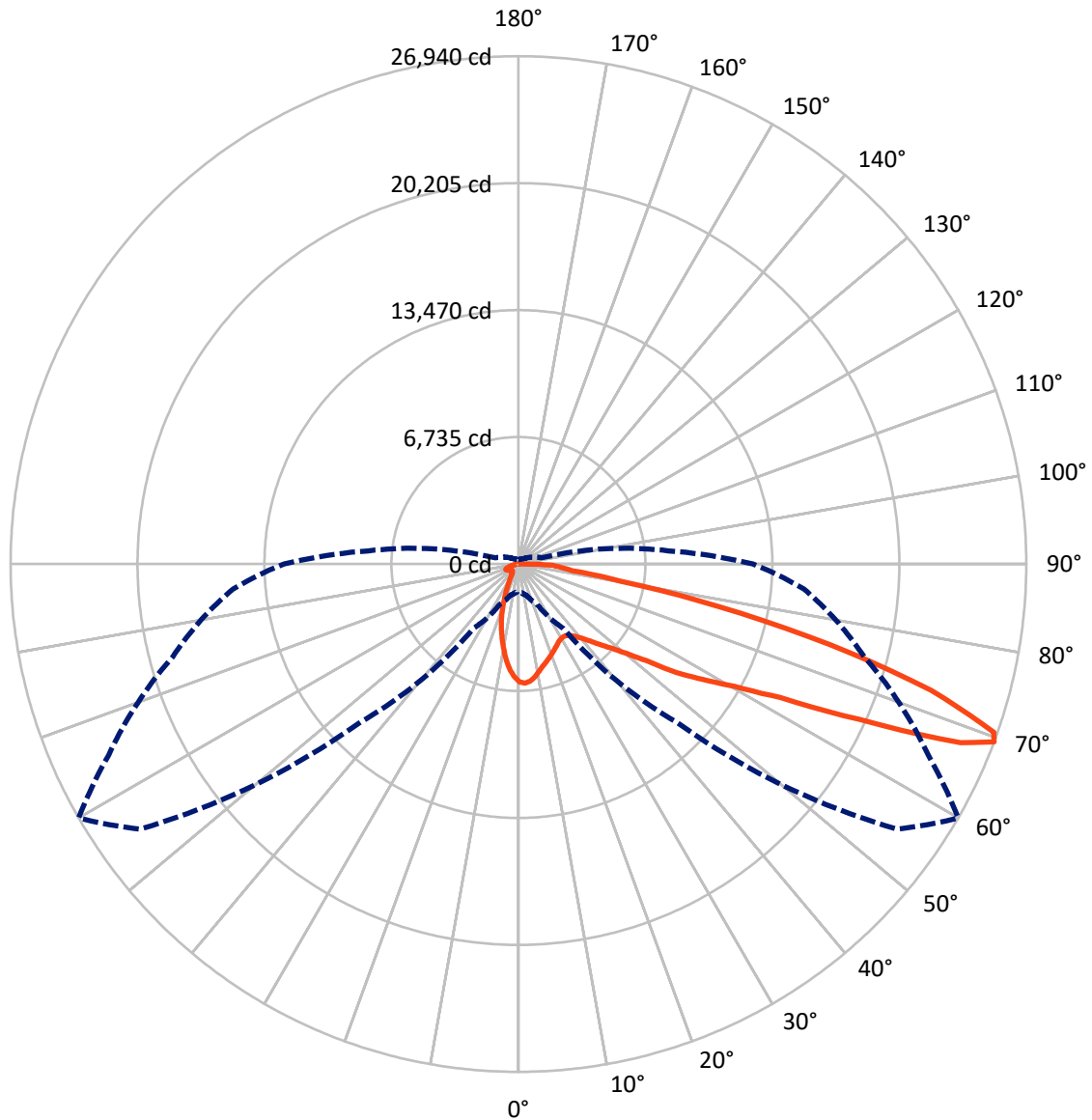
✕ Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P197105
CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030

Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P197105

CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3495.1	0.0	3495.1
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	21008.9	0.0	21008.9
	% Fixture	85.7	0.0	85.7
Total	Lumens	24504.0	0.0	24504.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	530.4	2.2
10°-20°	1135.7	4.6
20°-30°	1448.8	5.9
30°-40°	1993.6	8.1
40°-50°	3229.3	13.2
50°-60°	5068.2	20.7
60°-70°	6756.8	27.6
70°-80°	3758.4	15.3
80°-90°	582.9	2.4
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°	24504.0	100.0
0°-180°	24504.0	100.0



REPORT NUMBER: P197105

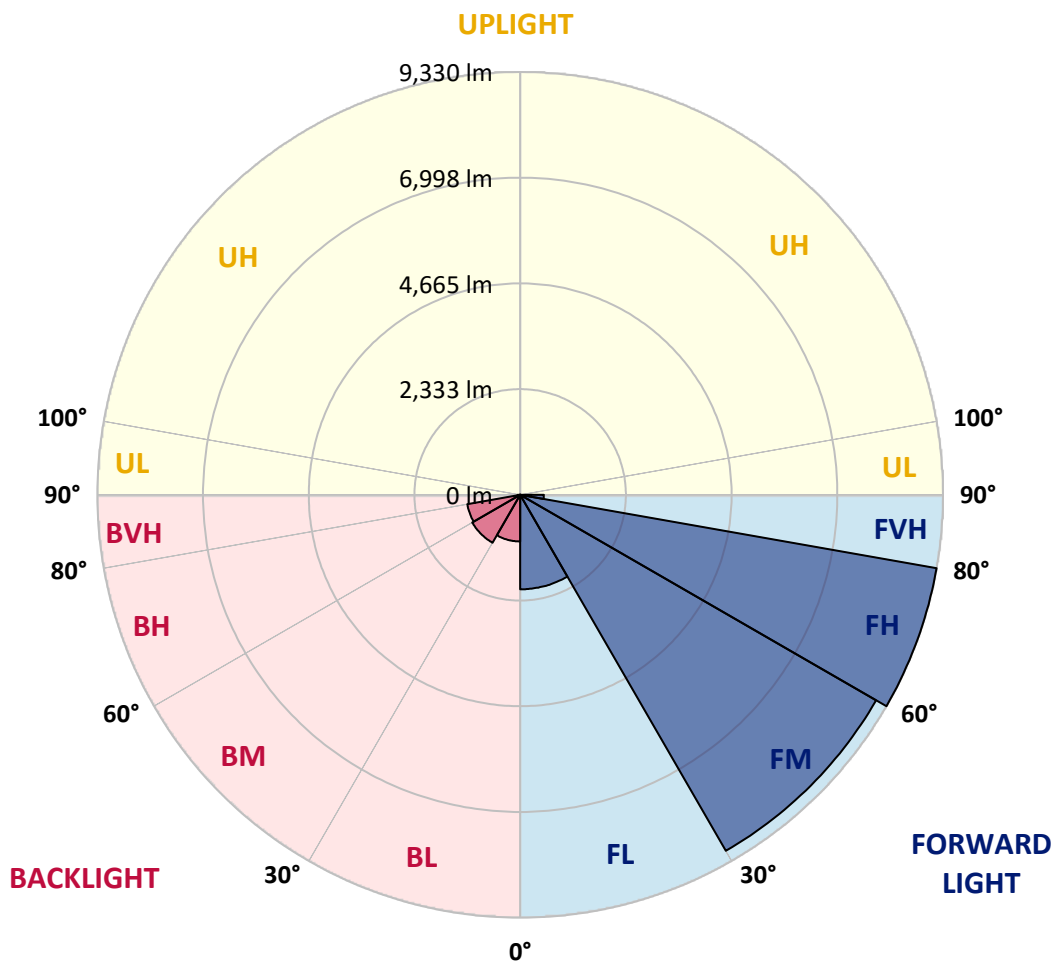
CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2084.8	8.5			
FM	(30°-60°)	9070.1	37.0			
FH	(60°-80°)	9330.2	38.1			G4/12000
FVH	(80°-90°)	523.8	2.1			G4/750
BL	(0°-30°)	1030.0	4.2	B3/2500		
BM	(30°-60°)	1221.0	5.0	B2/2500		
BH	(60°-80°)	1185.0	4.8	B3/2500		G3/2500
BVH	(80°-90°)	59.1	0.2			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 III Medium





REPORT NUMBER: P197105
 CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3
2.5°	6418.8	6436.1	6436.1	6422.0	6414.1	6368.6	6341.8	6323.0	6290.0	6228.7	6173.7
5°	6189.4	6222.4	6236.6	6242.8	6283.7	6269.6	6271.1	6258.6	6230.3	6164.3	6074.7
7.5°	5768.3	5774.6	5799.7	5842.2	5941.2	6010.3	6066.9	6077.9	6071.6	6022.9	5897.2
10°	5353.5	5364.5	5394.3	5466.6	5560.9	5659.9	5782.4	5832.7	5870.4	5854.7	5696.0
12.5°	5009.4	5010.9	5043.9	5127.2	5232.5	5356.6	5523.2	5601.7	5691.3	5727.5	5549.9
15°	4677.8	4699.8	4731.2	4831.8	4962.2	5119.4	5311.1	5419.5	5537.3	5641.0	5436.8
17.5°	4426.4	4443.7	4462.5	4545.8	4696.7	4893.1	5130.4	5246.6	5402.2	5560.9	5320.5
20°	4288.1	4294.4	4280.3	4321.1	4448.4	4660.5	4935.5	5075.4	5260.8	5483.9	5201.1
22.5°	4259.8	4259.8	4208.0	4200.1	4256.7	4435.8	4734.4	4905.7	5131.9	5430.5	5094.2
25°	4391.8	4382.4	4285.0	4195.4	4175.0	4266.1	4542.7	4753.2	5021.9	5428.9	5014.1
27.5°	4641.7	4629.1	4508.1	4357.3	4226.8	4187.6	4395.0	4610.2	4935.5	5482.3	4973.2
30°	4952.8	4948.1	4825.5	4637.0	4421.7	4219.0	4336.8	4536.4	4877.4	5581.3	4971.6
32.5°	5293.8	5271.8	5196.3	5007.8	4728.1	4393.4	4371.4	4539.5	4861.7	5725.9	5007.8
35°	5656.7	5641.0	5622.2	5432.0	5117.8	4701.4	4523.8	4648.0	4938.7	5927.0	5109.9
37.5°	6118.7	6101.4	6132.9	5925.4	5581.3	5105.2	4781.5	4864.8	5095.8	6219.3	5300.1
40°	6940.5	6890.2	6802.2	6483.3	6121.9	5600.2	5153.9	5166.5	5364.5	6610.5	5604.9
42.5°	8290.3	8128.4	7693.2	7107.1	6692.2	6175.3	5639.5	5579.7	5735.3	7127.5	6048.0
45°	9643.2	9460.9	8725.5	7787.5	7283.1	6792.8	6239.7	6096.7	6197.3	7729.3	6618.4
47.5°	10516.8	10427.3	9597.6	8467.8	7902.2	7465.3	6926.4	6690.7	6763.0	8411.3	7322.3
50°	10773.0	10696.0	10043.9	9000.5	8486.7	8277.7	7776.5	7463.8	7476.3	9207.9	8166.1
52.5°	10581.3	10549.8	10117.7	9330.5	9024.1	9134.1	8953.4	8518.1	8414.4	10081.6	9080.6
55°	10325.1	10336.1	10169.6	9662.0	9570.9	9932.3	10493.3	10142.9	9702.9	10991.4	10032.9
57.5°	9519.0	9526.9	9963.7	10293.7	10614.3	11051.1	11692.2	11544.5	11032.2	11973.4	11099.8
60°	7664.9	7726.2	8698.8	10163.3	11806.9	13255.6	13412.8	13158.2	12446.4	13104.8	12487.3
62.5°	5476.0	5531.0	6657.7	8822.9	11667.0	15750.9	16590.0	15578.0	14365.0	14797.1	14438.8
65°	2877.1	2867.7	3739.7	6096.7	9827.0	16329.1	21596.2	19874.0	17597.2	17124.2	16324.4
67.5°	1607.5	1659.3	1997.1	3075.1	6404.7	14371.3	24793.8	25301.4	22091.2	18970.5	16242.7
69°	1486.5	1503.8	1730.0	2377.4	4175.0	11857.2	24518.8	26940.2	23986.2	18978.4	15196.2
70°	1444.0	1462.9	1668.7	2190.4	3507.2	9715.5	23517.9	26748.5	24446.6	18557.3	14244.0
72.5°	1294.8	1319.9	1519.5	1968.9	2955.6	5007.8	18943.8	22894.1	22144.6	16219.1	11044.8
75°	1104.6	1147.1	1448.8	1954.7	2800.1	3183.5	12633.4	17056.7	16481.6	11599.5	6266.4
77.5°	457.3	462.0	633.2	1431.5	2938.4	3046.8	6789.7	10804.4	9564.6	5086.4	1887.2
80°	319.0	312.7	315.8	418.0	2371.1	3067.2	3483.6	5494.9	4270.8	1341.9	883.1
82.5°	268.7	265.6	278.1	262.4	802.9	3480.5	2913.2	2864.5	2011.3	722.8	421.1
85°	177.6	172.8	227.8	238.8	381.8	2763.9	3133.2	2251.7	1499.0	386.5	179.1
87.5°	86.4	88.0	130.4	161.8	202.7	875.2	3001.2	1780.3	1158.1	168.1	72.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P197105
 CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3	6252.3
2.5°	6151.7	6104.6	6062.1	6008.7	5967.9	5933.3	5886.2	5884.6	5876.7	5887.7	5890.9
5°	6015.0	5936.4	5817.0	5683.5	5589.2	5465.0	5344.1	5303.2	5257.6	5252.9	5267.1
7.5°	5809.2	5686.6	5482.3	5278.1	5073.8	4864.8	4666.8	4566.2	4468.8	4439.0	4453.1
10°	5579.7	5424.2	5111.5	4778.4	4490.8	4179.7	3878.0	3683.2	3505.6	3430.2	3449.0
12.5°	5400.6	5202.6	4762.7	4330.6	3900.0	3453.8	3056.2	2671.2	2380.5	2250.1	2258.0
15°	5246.6	4993.6	4435.8	3860.7	3321.8	2710.5	2159.0	1712.7	1458.2	1363.9	1360.8
17.5°	5080.1	4773.7	4094.9	3423.9	2724.7	1968.9	1445.6	1181.6	1081.1	1049.6	1049.6
20°	4902.5	4547.4	3738.2	2947.8	2096.1	1374.9	1087.4	985.2	947.5	938.1	936.5
22.5°	4737.5	4325.8	3379.9	2440.3	1516.3	1043.4	925.5	886.2	879.9	887.8	887.8
25°	4607.1	4131.0	3016.9	1906.0	1103.1	873.7	823.4	818.7	842.2	870.5	875.2
27.5°	4509.7	3956.6	2658.7	1392.2	867.4	760.5	743.2	763.7	818.7	875.2	886.2
30°	4442.1	3807.3	2229.7	1000.9	722.8	666.2	674.1	710.2	793.5	879.9	903.5
32.5°	4412.3	3686.3	1797.6	768.4	617.5	586.1	606.5	653.7	740.1	826.5	854.8
35°	4440.5	3598.3	1398.5	638.0	540.5	517.0	540.5	589.2	645.8	688.2	705.5
37.5°	4542.7	3566.9	1052.8	565.7	490.3	466.7	485.5	518.5	543.7	559.4	567.2
40°	4758.0	3599.9	824.9	528.0	462.0	435.3	440.0	455.7	473.0	485.5	487.1
42.5°	5100.5	3708.3	733.8	513.8	444.7	410.1	402.3	413.3	432.1	449.4	452.5
45°	5556.2	3889.0	724.4	518.5	436.8	389.7	374.0	385.0	410.1	438.4	443.1
47.5°	6145.4	4175.0	768.4	543.7	441.5	378.7	355.1	366.1	399.1	436.8	443.1
50°	6843.1	4571.0	850.1	581.4	463.5	378.7	347.3	356.7	391.3	433.7	440.0
52.5°	7664.9	5122.5	934.9	619.1	495.0	392.8	350.4	348.8	380.3	419.5	427.4
55°	8571.5	5807.6	1016.6	652.1	512.2	411.7	358.3	339.4	364.5	396.0	402.3
57.5°	9638.5	6745.7	1159.6	683.5	521.7	425.8	367.7	330.0	344.1	366.1	370.8
60°	11085.6	8123.7	1437.8	736.9	539.0	432.1	369.3	320.5	319.0	334.7	336.3
62.5°	12972.8	9737.5	1703.3	799.8	573.5	433.7	363.0	314.3	298.6	303.3	303.3
65°	14314.7	10331.4	1626.3	853.2	605.0	432.1	356.7	309.5	282.8	275.0	275.0
67.5°	13551.0	9126.2	1381.2	867.4	608.1	414.8	342.5	298.6	268.7	249.8	249.8
69°	12429.1	7999.6	1268.1	842.2	583.0	394.4	326.8	287.6	259.3	237.3	237.3
70°	11514.6	7146.4	1198.9	812.4	553.1	377.1	312.7	276.6	249.8	231.0	229.4
72.5°	8596.7	4768.9	1024.5	700.8	454.1	319.0	273.4	246.7	224.7	212.1	212.1
75°	4536.4	2390.0	839.1	572.0	350.4	254.6	224.7	207.4	194.8	193.3	191.7
77.5°	1486.5	1081.1	603.4	430.5	257.7	198.0	179.1	168.1	166.6	172.8	172.8
80°	802.9	645.8	388.1	290.7	179.1	147.7	138.3	136.7	141.4	150.8	150.8
82.5°	389.7	319.0	231.0	179.1	122.6	108.4	108.4	110.0	116.3	127.3	127.3
85°	168.1	150.8	133.6	100.6	75.4	67.6	77.0	84.9	89.6	97.4	100.6
87.5°	80.1	70.7	61.3	39.3	33.0	34.6	40.9	50.3	59.7	66.0	67.6
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)