

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: P196679

Luminaire Tested: **NAV-AF-05-D-UNV-SL4-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196679
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
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-SL4-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30434.1 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G5

Input Watts (W): 320
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

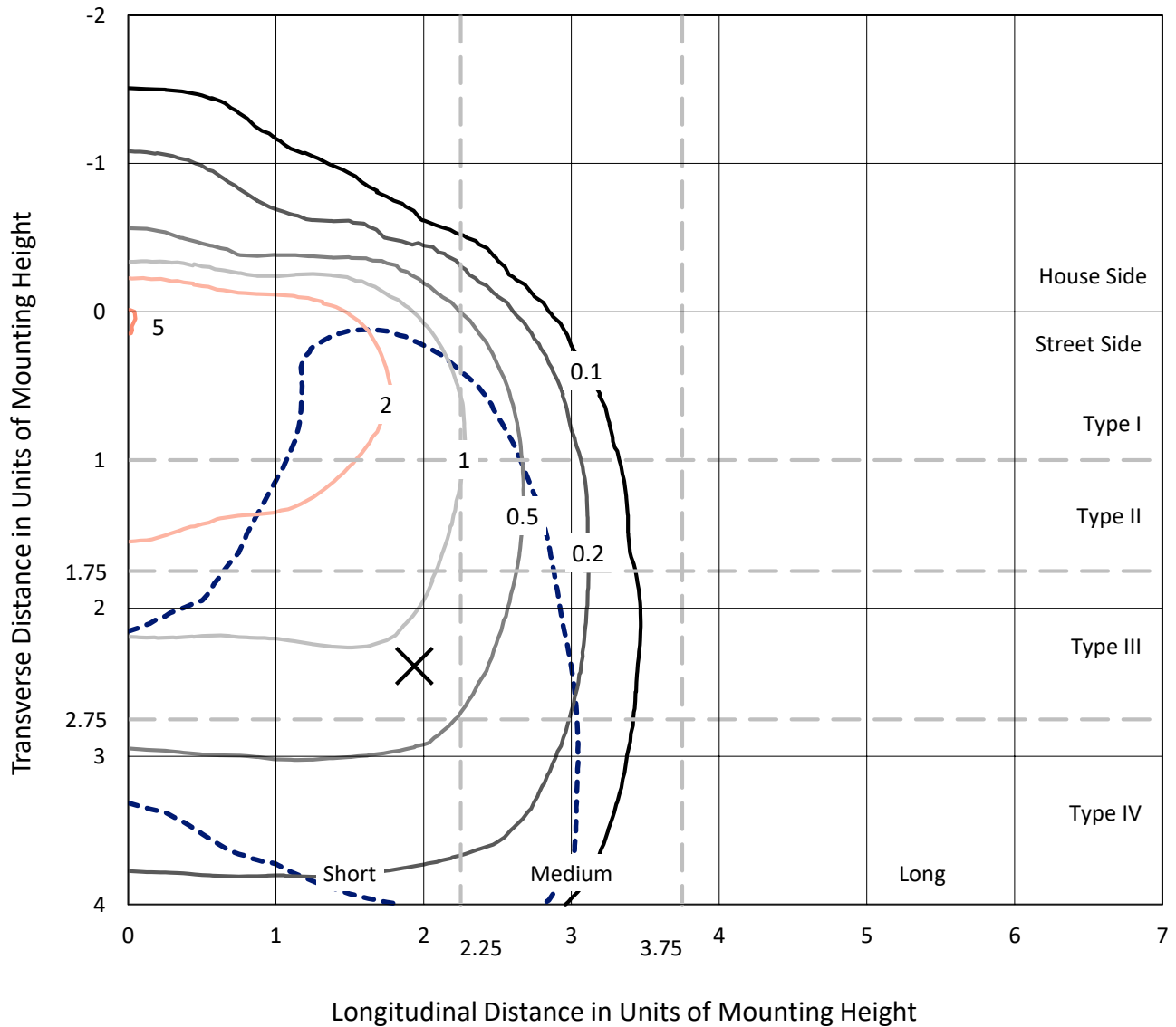


REPORT NUMBER: P196679

CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7030-1200

Iso-Footcandle Lines of Horizontal Illumination

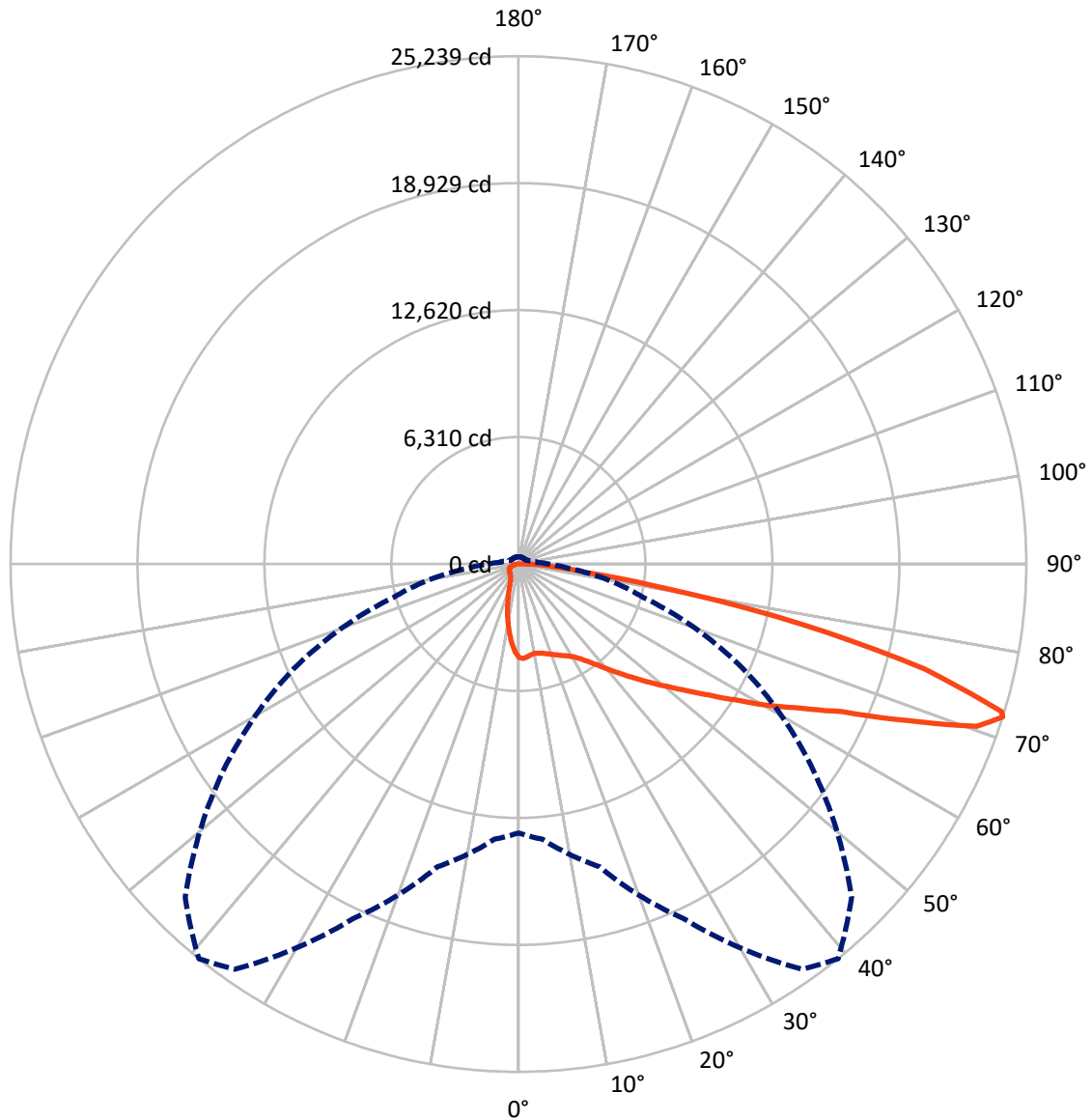
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196679
CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7030-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P196679

CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7030-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3489.7	0.0	3489.7
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	26944.5	0.0	26944.5
	% Fixture	88.5	0.0	88.5
Total	Lumens	30434.1	0.0	30434.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	399.4	1.3
10°-20°	1003.6	3.3
20°-30°	1564.1	5.1
30°-40°	2408.2	7.9
40°-50°	3925.9	12.9
50°-60°	6100.4	20.0
60°-70°	8165.2	26.8
70°-80°	5871.9	19.3
80°-90°	995.4	3.3
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°	30434.1	100.0
0°-180°	30434.1	100.0



REPORT NUMBER: P196679

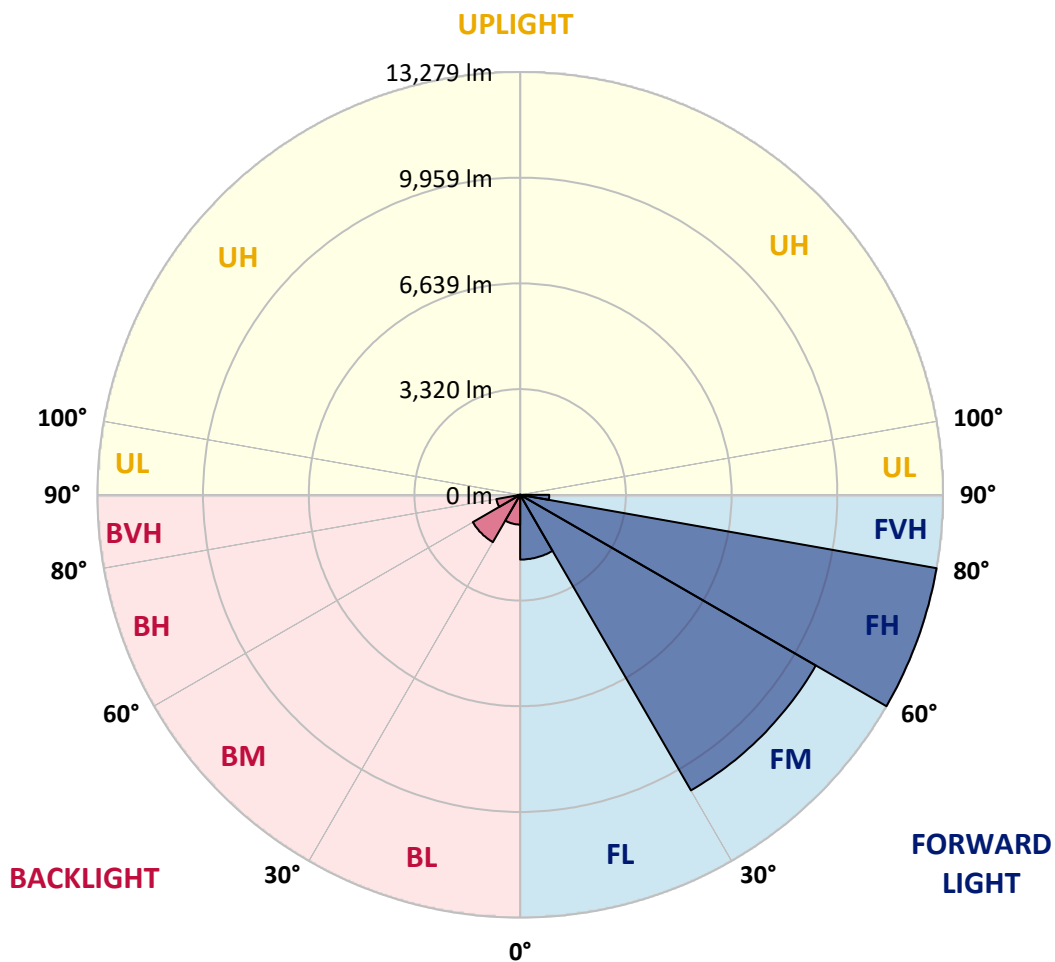
CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2032.9	6.7			
FM	(30°-60°)	10719.5	35.2			
FH	(60°-80°)	13278.9	43.6			G5
FVH	(80°-90°)	913.1	3.0			G5
BL	(0°-30°)	934.2	3.1	B2/1000		
BM	(30°-60°)	1715.0	5.6	B2/2500		
BH	(60°-80°)	758.2	2.5	B2/1000		G2/1000
BVH	(80°-90°)	82.3	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G5

Type IV Short





REPORT NUMBER: P196679

CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7030-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9
2.5°	4748.0	4750.0	4743.8	4725.5	4709.2	4701.0	4686.6	4662.1	4629.5	4607.0	4588.6
5°	4702.9	4709.2	4705.0	4674.4	4645.8	4629.5	4607.0	4572.3	4529.4	4511.0	4468.0
7.5°	4668.3	4672.4	4660.1	4625.4	4570.2	4549.8	4508.9	4464.0	4425.1	4398.6	4347.5
10°	4643.7	4647.9	4637.6	4602.9	4541.6	4517.1	4468.0	4419.0	4367.9	4335.3	4278.0
12.5°	4609.0	4617.2	4617.2	4600.9	4560.1	4543.6	4494.6	4441.5	4394.5	4359.8	4288.3
15°	4602.9	4613.2	4631.5	4629.5	4617.2	4604.9	4566.2	4513.0	4472.1	4431.3	4343.4
17.5°	4654.0	4676.4	4713.2	4725.5	4717.3	4690.7	4645.8	4596.7	4551.8	4513.0	4404.7
20°	4782.8	4795.0	4850.1	4874.6	4833.7	4795.0	4735.8	4672.4	4631.5	4600.9	4461.9
22.5°	4976.8	4993.1	5038.1	5040.1	4954.3	4907.3	4831.7	4754.1	4715.3	4702.9	4539.6
25°	5287.3	5283.2	5295.5	5244.5	5089.2	5034.0	4942.1	4852.1	4825.6	4850.1	4654.0
27.5°	5659.1	5648.9	5610.1	5477.2	5242.4	5170.8	5060.6	4980.8	4980.8	5038.1	4809.3
30°	6088.2	6078.0	5951.3	5728.6	5424.1	5342.4	5226.0	5142.3	5185.1	5295.5	5019.7
32.5°	6541.7	6505.0	6327.2	6028.9	5683.6	5593.7	5481.4	5395.6	5477.2	5665.3	5322.0
35°	6968.7	6948.3	6729.8	6376.3	6018.6	5943.1	5865.5	5759.3	5889.9	6182.1	5749.0
37.5°	7410.0	7393.7	7126.0	6750.1	6427.2	6376.3	6310.9	6237.3	6447.7	6831.9	6327.2
40°	7902.4	7869.6	7532.6	7156.7	6903.3	6878.9	6844.1	6823.7	7162.8	7734.8	7058.5
42.5°	8460.1	8396.8	7961.6	7604.1	7422.2	7442.6	7424.2	7506.0	8025.0	8776.8	7929.0
45°	9097.5	8970.8	8388.6	8080.0	7996.3	8078.1	8116.9	8325.2	9044.4	9980.1	8901.4
47.5°	9694.0	9530.6	8856.4	8596.9	8643.9	8784.9	8895.3	9263.0	10161.8	11169.1	9894.3
50°	10243.6	10059.7	9357.0	9132.2	9361.2	9561.3	9790.0	10309.0	11351.0	12392.8	10805.5
52.5°	10650.1	10517.4	9857.5	9716.5	10184.4	10450.0	10815.7	11471.4	12552.2	13559.4	11618.6
55°	10964.8	10893.3	10345.8	10386.6	11116.0	11496.0	11939.3	12693.2	13823.1	14605.4	12272.3
57.5°	11328.4	11275.3	10903.5	11195.7	12272.3	12750.4	13273.5	14111.1	15032.4	15526.9	12785.2
60°	11712.6	11712.6	11524.5	12170.2	13718.8	14266.3	14787.2	15439.0	16237.8	16356.3	12993.5
62.5°	12002.6	12078.3	12145.7	13208.1	15091.7	15772.0	16344.1	16969.3	17486.1	16765.0	12503.2
65°	12423.6	12584.9	12964.9	14407.3	16791.5	17682.2	18454.6	18979.5	18497.4	16440.1	10903.5
67.5°	13146.7	13385.8	14194.9	16192.9	19394.3	20728.3	21478.1	20571.0	18299.2	14395.0	8351.8
70°	13798.5	14135.5	15518.6	18458.6	22777.5	24162.6	23817.4	20201.3	15937.5	10552.1	5138.1
72°	13365.3	13733.2	15580.0	19445.3	24585.5	25239.3	23418.9	17902.9	12315.2	6439.5	2533.2
72.5°	13081.4	13463.5	15381.8	19420.9	24634.5	25102.5	22865.3	16989.7	11179.3	5634.6	2049.1
75°	10928.0	11254.9	13226.5	17212.3	21709.0	20850.9	17843.6	10995.6	5138.1	1820.4	1054.3
77.5°	7136.3	7385.5	9120.0	11925.0	15206.1	14380.7	10860.6	5148.4	1926.6	1105.2	792.6
80°	3585.5	3763.2	4880.7	6270.0	8206.8	7550.9	5013.6	2490.4	1289.1	798.8	623.1
82.5°	2494.5	2658.0	3360.7	3201.4	3430.2	3319.9	2357.6	2077.8	964.3	504.7	326.9
85°	2092.0	2261.5	2780.5	2282.0	1867.4	1701.8	1689.5	1963.3	637.4	249.2	275.8
87.5°	1824.4	2081.8	2294.3	1667.1	1280.9	1129.7	1244.3	1799.9	202.2	136.9	83.8
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: P196679

CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7030-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9	4647.9
2.5°	4558.0	4551.8	4521.1	4474.1	4439.4	4417.1	4374.0	4372.0	4376.2	4339.3	4353.7
5°	4429.3	4404.7	4325.0	4216.8	4128.9	4045.1	3953.2	3922.6	3895.9	3840.9	3847.0
7.5°	4294.4	4251.5	4112.6	3934.9	3765.3	3610.0	3456.8	3381.1	3324.0	3252.4	3252.4
10°	4214.6	4147.3	3934.9	3675.4	3405.7	3178.9	2950.1	2813.2	2713.1	2621.1	2615.0
12.5°	4210.7	4108.4	3812.3	3454.8	3084.9	2766.2	2453.6	2243.2	2094.1	1985.8	1975.6
15°	4243.3	4100.3	3710.1	3248.4	2782.7	2367.8	1981.8	1714.1	1524.0	1403.6	1391.3
17.5°	4271.9	4090.1	3599.8	3031.8	2488.4	1983.7	1554.8	1276.9	1097.1	999.0	988.8
20°	4298.5	4067.6	3458.8	2803.0	2163.6	1624.1	1215.6	990.9	872.3	817.1	811.0
22.5°	4337.3	4047.2	3311.7	2545.6	1844.9	1321.8	1003.1	841.8	778.4	751.8	747.8
25°	4400.6	4049.2	3168.7	2282.0	1552.7	1101.3	868.3	768.2	733.4	715.1	715.1
27.5°	4492.5	4073.7	3027.8	2014.4	1305.4	950.0	788.7	729.3	706.9	692.6	688.5
30°	4627.4	4118.7	2878.6	1761.0	1109.3	845.7	741.7	704.8	686.4	674.2	672.2
32.5°	4823.6	4198.4	2721.3	1530.1	960.2	772.3	706.9	684.4	670.1	659.9	657.8
35°	5115.7	4339.3	2568.0	1334.0	854.0	719.2	678.3	659.9	651.7	647.6	645.6
37.5°	5544.7	4566.2	2423.1	1180.9	784.5	684.4	649.6	639.5	635.4	635.4	635.4
40°	6084.1	4864.4	2292.3	1072.6	745.7	657.8	629.3	621.0	621.0	623.1	623.1
42.5°	6739.8	5238.3	2179.9	999.0	723.2	639.5	614.9	610.9	608.8	608.8	610.9
45°	7502.0	5679.6	2110.5	941.9	706.9	629.3	604.8	602.7	594.5	590.4	590.4
47.5°	8268.0	6151.6	2106.3	909.1	686.4	617.0	594.5	594.5	578.2	570.0	572.1
50°	8983.1	6574.3	2151.4	901.0	674.2	598.6	584.3	586.4	563.9	553.6	551.6
52.5°	9559.2	6897.2	2206.5	911.2	674.2	582.3	566.0	576.2	551.6	539.3	537.3
55°	10004.7	7121.9	2226.9	933.6	682.4	567.9	549.6	566.0	547.5	531.2	531.2
57.5°	10323.4	7193.4	2139.1	943.9	694.7	566.0	533.1	563.9	553.6	533.1	533.1
60°	10206.9	6778.7	1812.2	905.1	692.6	561.8	520.9	567.9	574.0	551.6	551.6
62.5°	9297.8	5671.4	1454.6	817.1	657.8	547.5	506.6	563.9	588.4	580.1	576.2
65°	7569.4	4159.6	1127.8	713.0	598.6	516.9	476.1	527.0	555.7	563.9	566.0
67.5°	5334.2	2633.4	876.5	606.8	525.1	471.9	441.3	465.8	476.1	480.0	488.3
70°	2917.4	1426.1	696.6	510.8	449.5	426.9	404.5	406.6	402.5	398.4	402.5
72°	1464.8	931.7	588.4	443.4	398.4	384.0	373.8	367.7	367.7	361.6	363.7
72.5°	1260.6	866.2	567.9	426.9	386.1	373.8	365.7	359.6	357.5	353.5	355.5
75°	839.6	686.4	473.9	357.5	328.9	320.7	324.8	318.7	320.7	316.7	318.7
77.5°	678.3	590.4	402.5	302.3	281.9	269.7	277.8	279.9	284.0	279.9	277.8
80°	567.9	502.6	337.1	249.2	234.9	224.7	228.8	243.1	245.2	232.9	230.9
82.5°	367.7	404.5	265.6	194.1	179.7	175.7	186.0	200.2	204.4	187.9	183.9
85°	308.5	324.8	192.1	132.8	118.5	114.4	134.8	149.1	159.4	143.0	139.0
87.5°	85.8	159.4	94.0	63.4	53.1	53.1	65.3	77.7	91.9	94.0	94.0
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)