

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: P197112

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197112
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-06-D-UNV-SL3-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1200mA 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: 32203 lumens
Efficiency: N/A
Efficacy: 84.3 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 - G5

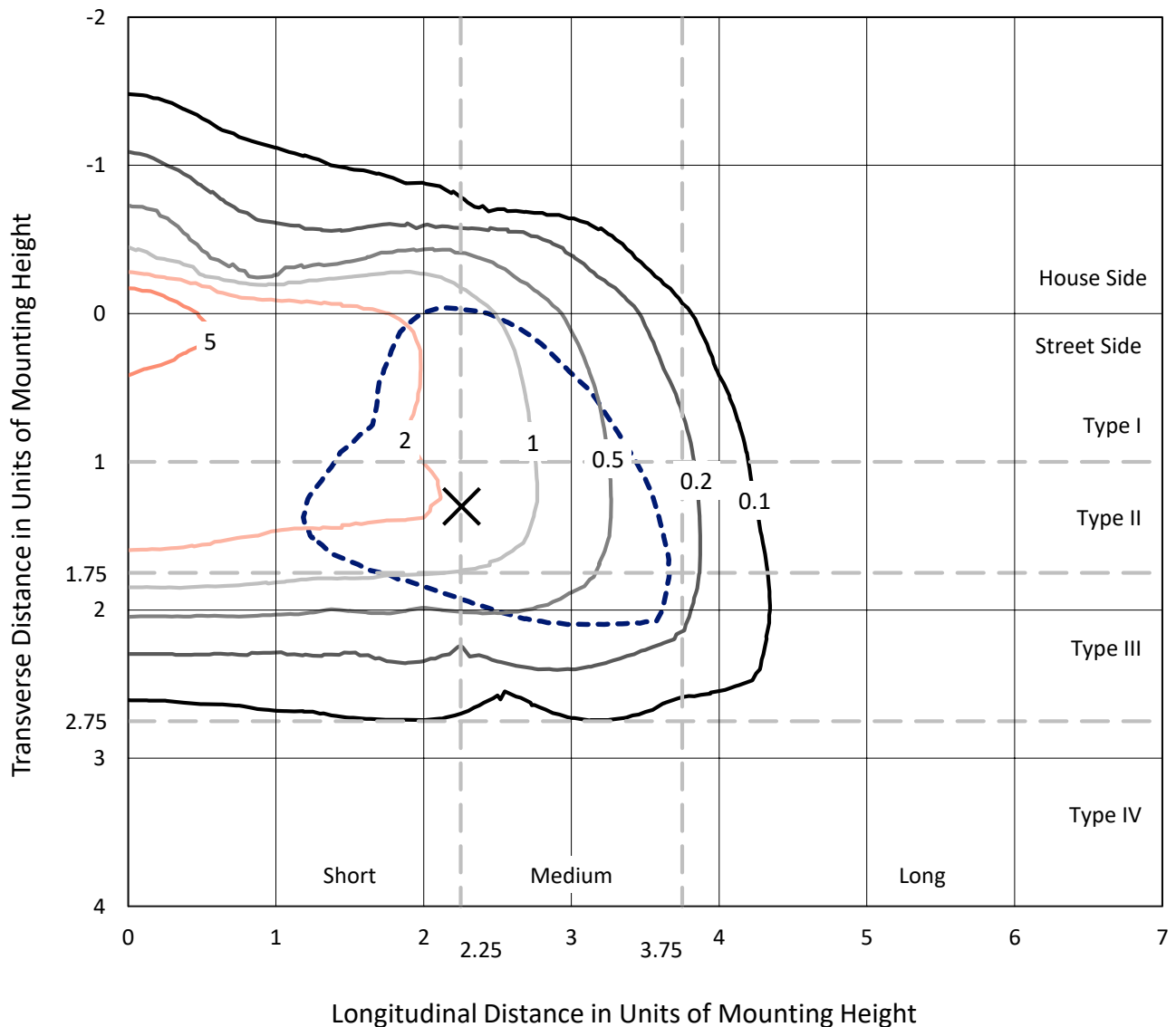
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197112
 CATALOG NUMBER: NAV-AF-06-D-UNV-SL3-8030-1200

Iso-Footcandle Lines of Horizontal Illumination

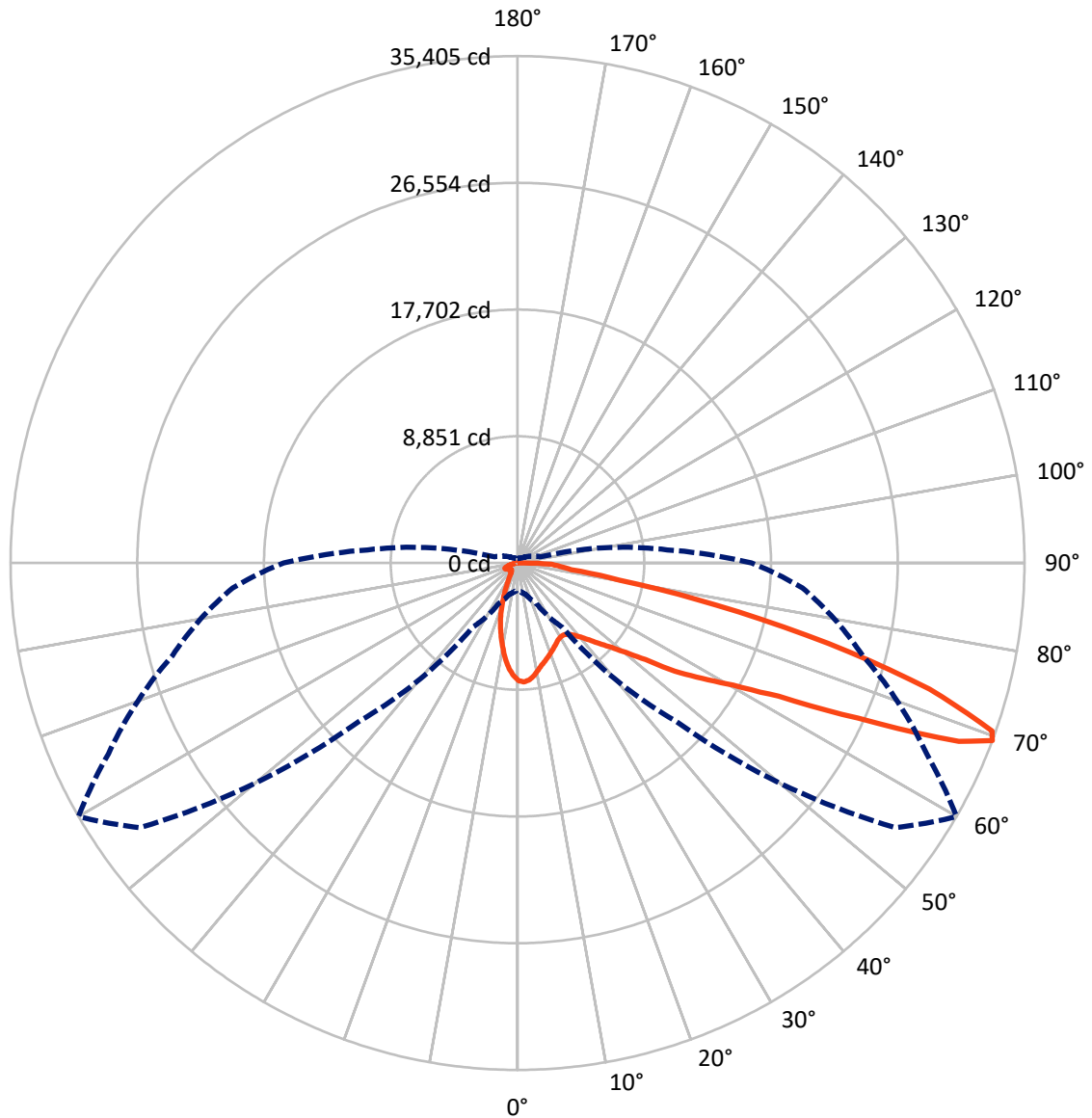
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.1 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P197112
CATALOG NUMBER: NAV-AF-06-D-UNV-SL3-8030-1200

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197112

CATALOG NUMBER: NAV-AF-06-D-UNV-SL3-8030-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4593.2	0.0	4593.2
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	27609.8	0.0	27609.8
	% Fixture	85.7	0.0	85.7
Total	Lumens	32203.0	0.0	32203.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	697.1	2.2
10°-20°	1492.5	4.6
20°-30°	1903.9	5.9
30°-40°	2620.0	8.1
40°-50°	4243.9	13.2
50°-60°	6660.6	20.7
60°-70°	8879.8	27.6
70°-80°	4939.2	15.3
80°-90°	766.1	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°	32203.0	100.0
0°-180°	32203.0	100.0

Coefficient of Utilization



REPORT NUMBER: P197112

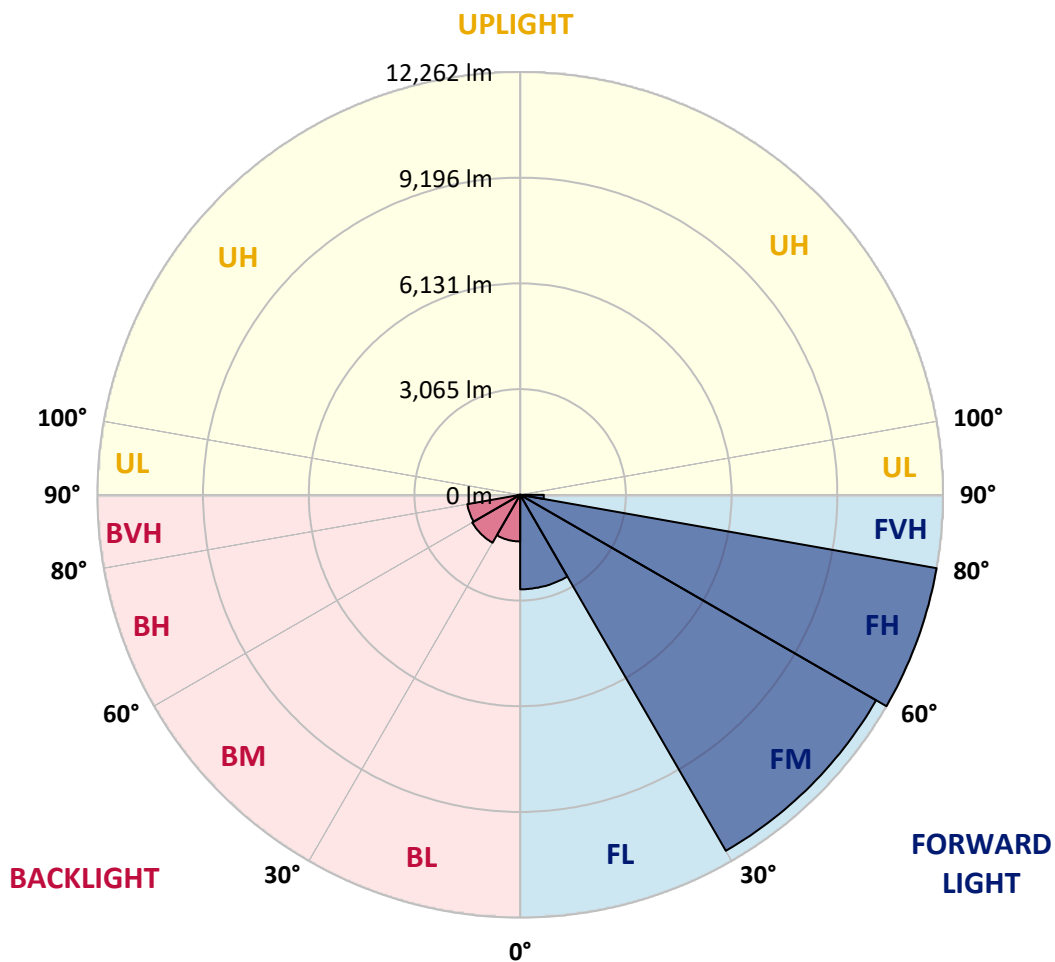
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2739.8	8.5			
FM (30°-60°)	11919.9	37.0			
FH (60°-80°)	12261.7	38.1			G5
FVH (80°-90°)	688.4	2.1			G4/750
BL (0°-30°)	1353.6	4.2	B3/2500		
BM (30°-60°)	1604.6	5.0	B2/2500		
BH (60°-80°)	1557.3	4.8	B3/2500		G3/2500
BVH (80°-90°)	77.6	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-G5

Type III Medium





REPORT NUMBER: P197112
 CATALOG NUMBER: NAV-AF-06-D-UNV-SL3-8030-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7
2.5°	8435.6	8458.3	8458.3	8439.7	8429.4	8369.5	8334.4	8309.6	8266.3	8185.7	8113.4
5°	8134.1	8177.5	8196.0	8204.3	8258.0	8239.4	8241.5	8225.0	8187.8	8101.1	7983.4
7.5°	7580.7	7588.9	7622.0	7677.7	7807.8	7898.7	7973.0	7987.5	7979.2	7915.2	7750.0
10°	7035.5	7050.0	7089.2	7184.2	7308.1	7438.2	7599.3	7665.3	7714.9	7694.2	7485.7
12.5°	6583.3	6585.3	6628.7	6738.1	6876.5	7039.6	7258.5	7361.8	7479.5	7527.0	7293.6
15°	6147.6	6176.5	6217.8	6349.9	6521.3	6727.8	6979.8	7122.2	7277.1	7413.4	7145.0
17.5°	5817.1	5839.9	5864.6	5974.1	6172.3	6430.5	6742.3	6895.1	7099.5	7308.1	6992.1
20°	5635.4	5643.7	5625.1	5678.8	5846.1	6124.8	6486.2	6670.0	6913.7	7206.9	6835.2
22.5°	5598.3	5598.3	5530.1	5519.8	5594.1	5829.5	6221.9	6447.0	6744.3	7136.7	6694.8
25°	5771.7	5759.3	5631.3	5513.6	5486.7	5606.5	5970.0	6246.7	6599.8	7134.6	6589.5
27.5°	6100.1	6083.5	5924.5	5726.3	5554.9	5503.3	5775.8	6058.8	6486.2	7204.8	6535.8
30°	6508.9	6502.7	6341.7	6093.9	5811.0	5544.6	5699.4	5961.7	6409.8	7334.9	6533.7
32.5°	6957.0	6928.1	6829.0	6581.2	6213.6	5773.8	5744.9	5965.8	6389.2	7524.9	6581.2
35°	7434.1	7413.4	7388.6	7138.8	6725.8	6178.5	5945.2	6108.3	6490.3	7789.2	6715.4
37.5°	8041.2	8018.5	8059.8	7787.2	7334.9	6709.2	6283.8	6393.3	6696.8	8173.3	6965.3
40°	9121.2	9055.1	8939.5	8520.3	8045.3	7359.7	6773.3	6789.8	7050.0	8687.5	7365.9
42.5°	10895.0	10682.3	10110.3	9340.1	8794.9	8115.5	7411.3	7332.9	7537.3	9366.9	7948.2
45°	12673.0	12433.5	11467.0	10234.2	9571.3	8927.1	8200.2	8012.3	8144.4	10157.8	8697.8
47.5°	13821.2	13703.4	12613.1	11128.4	10385.0	9810.9	9102.6	8792.8	8887.8	11054.0	9623.0
50°	14157.7	14056.6	13199.6	11828.4	11153.1	10878.5	10219.8	9808.8	9825.3	12101.0	10731.9
52.5°	13905.8	13864.5	13296.6	12262.1	11859.4	12003.9	11766.5	11194.5	11058.2	13249.1	11933.7
55°	13569.2	13583.7	13364.8	12697.8	12578.0	13053.0	13790.2	13329.7	12751.5	14444.8	13185.1
57.5°	12509.9	12520.2	13094.3	13527.9	13949.2	14523.3	15365.8	15171.7	14498.5	15735.4	14587.3
60°	10073.1	10153.7	11431.9	13356.5	15516.5	17420.5	17627.0	17292.4	16357.0	17222.2	16410.7
62.5°	7196.6	7268.9	8749.5	11595.1	15332.7	20699.7	21802.4	20472.6	18878.4	19446.3	18975.4
65°	3781.0	3768.7	4914.7	8012.3	12914.6	21459.6	28381.6	26118.3	23126.1	22504.5	21453.4
67.5°	2112.5	2180.7	2624.6	4041.2	8417.0	18886.6	32583.9	33250.9	29032.1	24930.9	21346.1
69°	1953.5	1976.2	2273.6	3124.4	5486.7	15582.6	32222.5	35404.7	31522.5	24941.3	19970.8
70°	1897.7	1922.5	2193.0	2878.6	4609.1	12768.0	30907.1	35152.8	32127.5	24387.8	18719.4
72.5°	1701.6	1734.6	1996.9	2587.5	3884.3	6581.2	24895.8	30087.3	29102.3	21315.1	14515.0
75°	1451.7	1507.5	1903.9	2568.9	3679.9	4183.7	16602.7	22415.7	21659.9	15243.9	8235.3
77.5°	600.9	607.1	832.2	1881.2	3861.6	4004.1	8922.9	14199.0	12569.8	6684.5	2480.1
80°	419.2	410.9	415.1	549.3	3116.1	4030.9	4578.1	7221.4	5612.7	1763.5	1160.5
82.5°	353.1	349.0	365.5	344.9	1055.2	4574.0	3828.5	3764.5	2643.2	949.9	553.4
85°	233.3	227.2	299.4	313.9	501.8	3632.4	4117.6	2959.2	1970.0	508.0	235.4
87.5°	113.6	115.6	171.4	212.7	266.4	1150.2	3944.2	2339.7	1521.9	221.0	95.0
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: P197112

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7	8216.7
2.5°	8084.5	8022.6	7966.8	7896.6	7842.9	7797.5	7735.5	7733.5	7723.2	7737.6	7741.7
5°	7904.9	7801.6	7644.7	7469.2	7345.3	7182.1	7023.1	6969.4	6909.5	6903.3	6921.9
7.5°	7634.4	7473.3	7204.8	6936.4	6667.9	6393.3	6133.1	6000.9	5872.9	5833.7	5852.3
10°	7332.9	7128.4	6717.5	6279.7	5901.8	5492.9	5096.5	4840.4	4607.1	4507.9	4532.7
12.5°	7097.5	6837.3	6259.1	5691.2	5125.4	4538.9	4016.5	3510.5	3128.5	2957.1	2967.4
15°	6895.1	6562.6	5829.5	5073.7	4365.4	3562.2	2837.3	2250.9	1916.3	1792.4	1788.3
17.5°	6676.2	6273.5	5381.4	4499.7	3580.7	2587.5	1899.8	1552.9	1420.7	1379.4	1379.4
20°	6442.8	5976.2	4912.7	3874.0	2754.7	1806.9	1429.0	1294.8	1245.2	1232.8	1230.7
22.5°	6226.0	5685.0	4441.8	3207.0	1992.7	1371.2	1216.3	1164.7	1156.4	1166.7	1166.7
25°	6054.6	5428.9	3964.8	2504.9	1449.6	1148.1	1082.1	1075.9	1106.8	1144.0	1150.2
27.5°	5926.6	5199.7	3494.0	1829.6	1139.9	999.5	976.8	1003.6	1075.9	1150.2	1164.7
30°	5837.8	5003.5	2930.3	1315.4	949.9	875.6	885.9	933.4	1042.8	1156.4	1187.4
32.5°	5798.6	4844.5	2362.4	1009.8	811.6	770.3	797.1	859.0	972.6	1086.2	1123.4
35°	5835.7	4728.9	1837.9	838.4	710.4	679.4	710.4	774.4	848.7	904.5	927.2
37.5°	5970.0	4687.6	1383.6	743.4	644.3	613.3	638.1	681.5	714.5	735.1	745.5
40°	6252.9	4731.0	1084.1	693.8	607.1	572.0	578.2	598.9	621.6	638.1	640.2
42.5°	6703.0	4873.4	964.4	675.3	584.4	539.0	528.6	543.1	567.9	590.6	594.7
45°	7301.9	5110.9	952.0	681.5	574.1	512.1	491.5	505.9	539.0	576.1	582.3
47.5°	8076.3	5486.7	1009.8	714.5	580.3	497.7	466.7	481.1	524.5	574.1	582.3
50°	8993.1	6007.1	1117.2	764.1	609.2	497.7	456.4	468.8	514.2	569.9	578.2
52.5°	10073.1	6732.0	1228.7	813.6	650.5	516.3	460.5	458.4	499.7	551.4	561.7
55°	11264.7	7632.3	1336.1	857.0	673.2	541.0	470.8	446.0	479.1	520.4	528.6
57.5°	12666.8	8865.1	1524.0	898.3	685.6	559.6	483.2	433.7	452.2	481.1	487.3
60°	14568.7	10676.1	1889.5	968.5	708.3	567.9	485.3	421.3	419.2	439.8	441.9
62.5°	17048.8	12796.9	2238.5	1051.1	753.7	569.9	477.0	413.0	392.4	398.5	398.5
65°	18812.3	13577.5	2137.3	1121.3	795.0	567.9	468.8	406.8	371.7	361.4	361.4
67.5°	17808.7	11993.6	1815.1	1139.9	799.2	545.2	450.2	392.4	353.1	328.3	328.3
69°	16334.3	10513.0	1666.5	1106.8	766.1	518.3	429.5	377.9	340.7	311.8	311.8
70°	15132.4	9391.7	1575.6	1067.6	726.9	495.6	410.9	363.4	328.3	303.6	301.5
72.5°	11297.7	6267.3	1346.4	921.0	596.8	419.2	359.3	324.2	295.3	278.8	278.8
75°	5961.7	3140.9	1102.7	751.7	460.5	334.5	295.3	272.6	256.1	254.0	251.9
77.5°	1953.5	1420.7	793.0	565.8	338.7	260.2	235.4	221.0	218.9	227.2	227.2
80°	1055.2	848.7	510.1	382.0	235.4	194.1	181.7	179.7	185.9	198.2	198.2
82.5°	512.1	419.2	303.6	235.4	161.1	142.5	142.5	144.6	152.8	167.3	167.3
85°	221.0	198.2	175.5	132.2	99.1	88.8	101.2	111.5	117.7	128.0	132.2
87.5°	105.3	92.9	80.5	51.6	43.4	45.4	53.7	66.1	78.5	86.7	88.8
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)