

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: P195521

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195521
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-05-D-UNV-AFL-7050-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 1050mA 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: 25239 lumens
Efficiency: N/A
Efficacy: 90.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

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

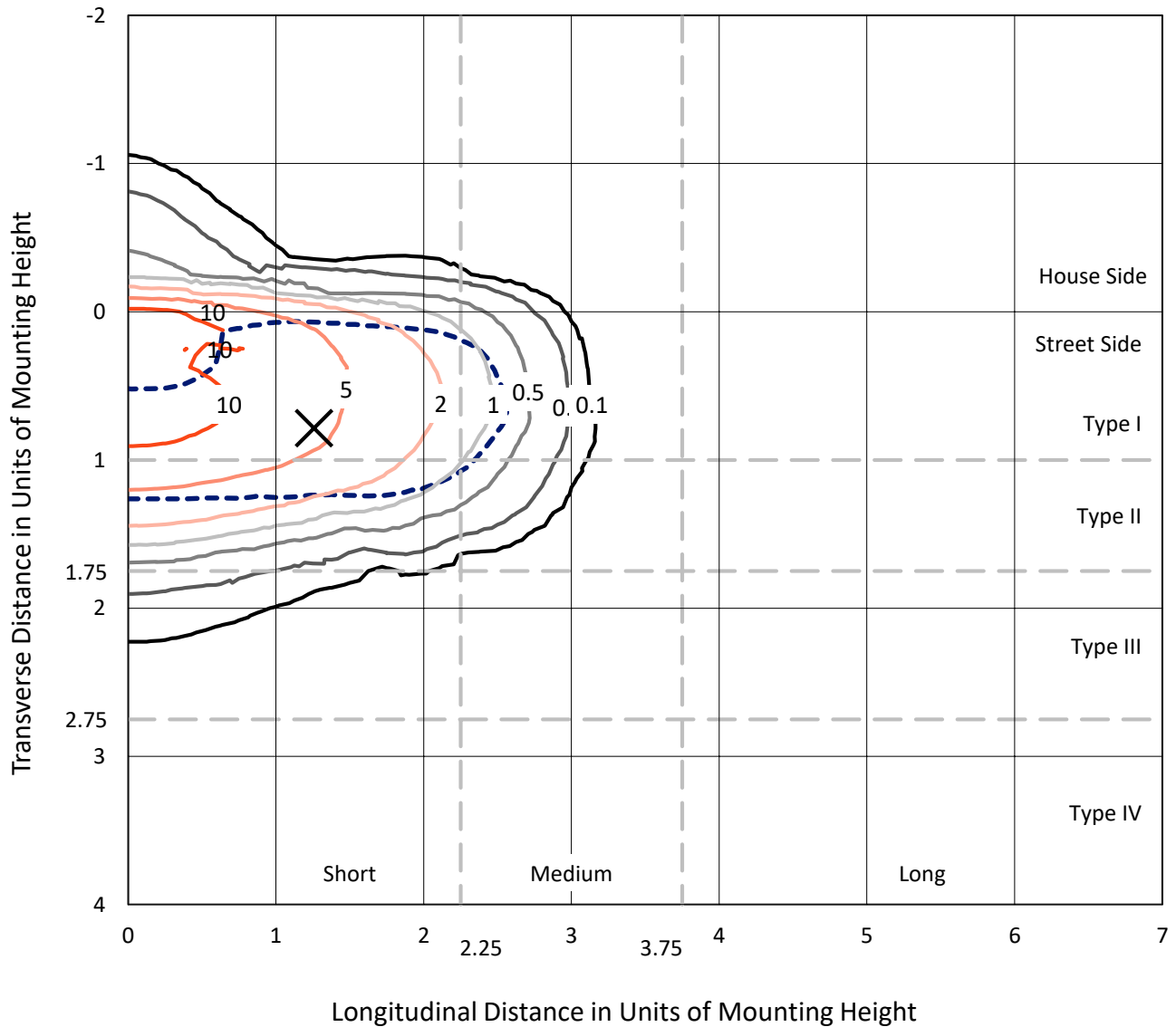


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Iso-Footcandle Lines of Horizontal Illumination

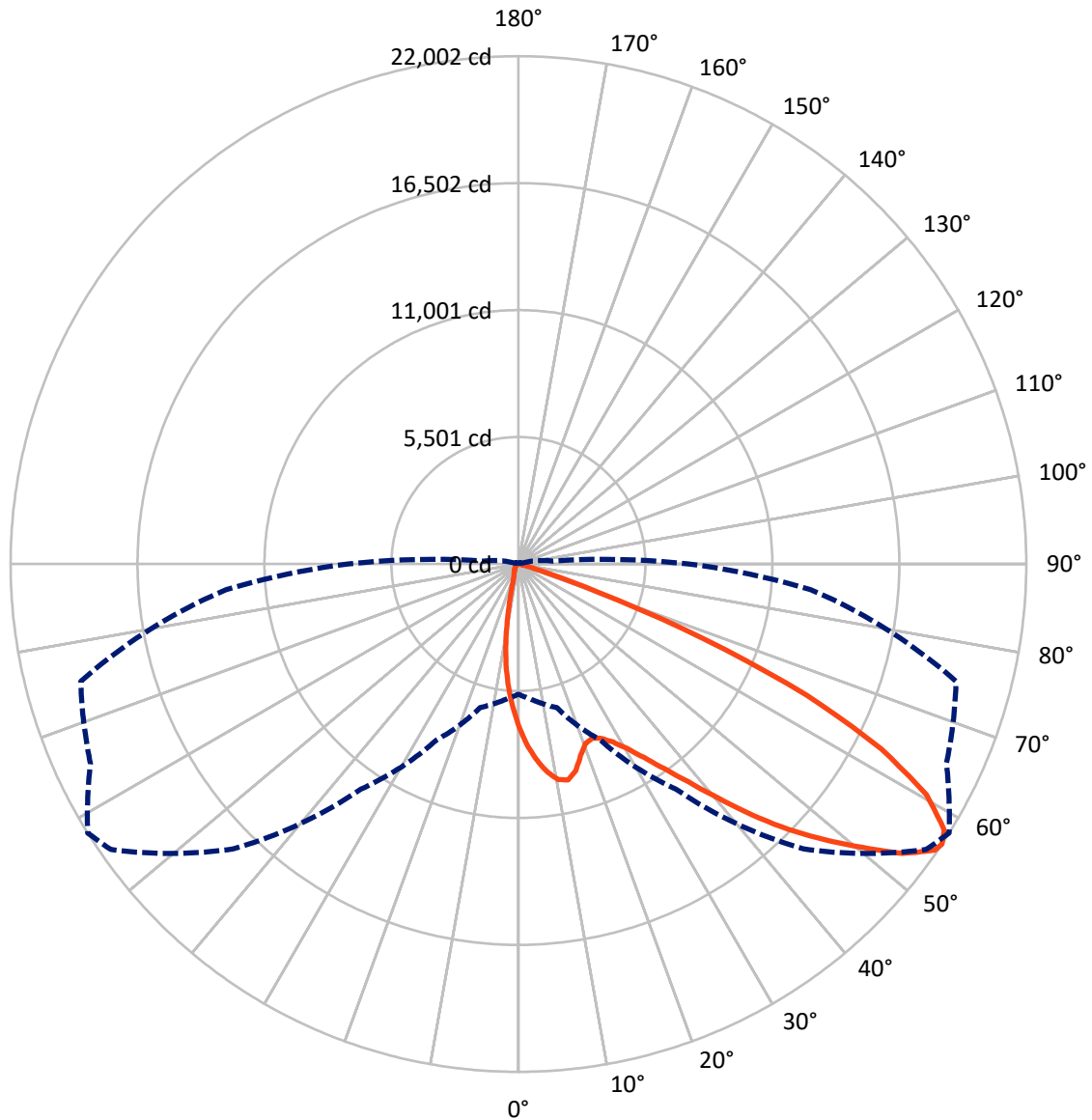
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.2 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	1575.4	0.0	1575.4
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	23663.6	0.0	23663.6
	% Fixture	93.8	0.0	93.8
Total	Lumens	25239.0	0.0	25239.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	609.6	2.4
10°-20°	1418.4	5.6
20°-30°	2386.7	9.5
30°-40°	4087.0	16.2
40°-50°	6167.4	24.4
50°-60°	6410.8	25.4
60°-70°	3598.9	14.3
70°-80°	493.3	2.0
80°-90°	66.8	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°	25239.0	100.0
0°-180°	25239.0	100.0



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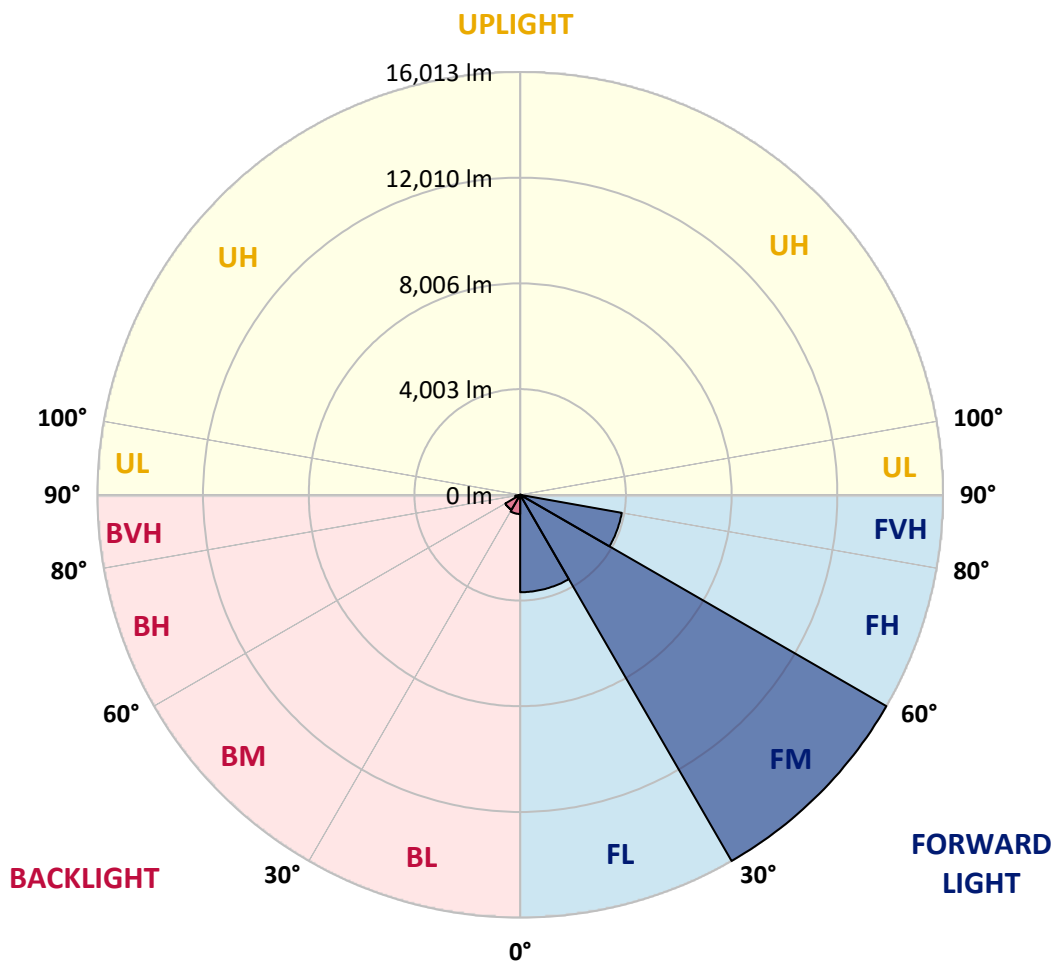
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3688.0	14.6			
FM	(30°-60°)	16012.7	63.4			
FH	(60°-80°)	3905.3	15.5			G2/5000
FVH	(80°-90°)	57.6	0.2			G1/100
BL	(0°-30°)	726.7	2.9	B2/1000		
BM	(30°-60°)	652.6	2.6	B1/1000		
BH	(60°-80°)	186.9	0.7	B1/500		G1/500
BVH	(80°-90°)	9.2	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9
2.5°	8597.8	8545.8	8491.9	8391.8	8299.4	8156.9	7960.5	7912.3	7758.3	7504.1	7267.2
5°	9339.2	9329.6	9293.0	9212.1	9112.0	8938.7	8717.2	8568.9	8330.2	7929.6	7473.3
7.5°	8900.2	8981.0	9113.9	9302.6	9429.7	9412.4	9242.9	9113.9	8877.0	8330.2	7675.5
10°	7502.2	7517.6	7700.5	8097.2	8724.9	9310.3	9531.8	9497.1	9279.5	8680.6	7852.6
12.5°	7009.2	7018.8	7061.2	7188.3	7596.5	8413.0	9416.2	9597.2	9579.9	9015.7	8041.3
15°	7047.7	7053.5	7065.0	7105.5	7221.0	7631.2	8830.8	9291.0	9772.5	9333.4	8226.2
17.5°	7352.0	7348.1	7311.5	7273.0	7309.6	7444.4	8233.9	8719.1	9732.0	9601.1	8378.3
20°	7945.1	7964.3	7841.1	7669.7	7581.1	7586.9	7939.3	8303.2	9504.8	9809.0	8491.9
22.5°	8778.8	8792.3	8590.1	8293.6	8033.6	7902.7	8000.9	8193.5	9242.9	10001.6	8584.4
25°	9774.4	9774.4	9491.3	9069.6	8667.2	8380.2	8295.5	8368.7	9142.8	10219.2	8676.8
27.5°	10848.9	10887.4	10517.7	9965.0	9433.5	9013.8	8748.0	8734.5	9219.8	10492.6	8780.8
30°	12017.7	12052.4	11613.3	10937.4	10307.8	9770.5	9362.3	9273.7	9514.4	10860.4	8932.9
32.5°	13180.8	13209.7	12724.4	12035.0	11301.4	10669.8	10132.5	9992.0	10044.0	11397.7	9156.3
35°	14659.6	14665.4	14051.1	13230.8	12447.1	11705.8	11026.0	10887.4	10829.6	12075.5	9477.8
37.5°	15836.2	15790.0	15401.0	14625.0	13725.7	12951.6	12152.5	11971.5	11832.8	13028.7	9976.6
40°	16113.5	16113.5	16055.7	15822.7	15108.3	14363.1	13589.0	13319.4	13013.2	14151.3	10646.7
42.5°	15391.4	15437.6	15818.9	16325.3	16331.1	15853.5	15096.8	14869.5	14330.4	15429.9	11378.4
45°	13775.8	13789.3	14703.9	16071.1	16999.3	17272.7	16714.3	16400.4	15653.3	16758.6	12048.5
47.5°	13194.3	13236.6	13625.6	15297.0	17049.3	18422.3	18266.3	17835.0	16877.9	17971.7	12674.3
50°	12300.8	12352.8	12828.4	14157.1	16598.7	19159.8	19750.9	19288.8	17992.9	18982.6	12984.4
52.5°	10163.3	10244.2	10916.3	12649.3	15472.2	19190.6	21110.4	20833.1	19134.7	19523.7	12947.8
55°	6993.8	7053.5	7837.2	9874.5	13200.0	18249.0	21695.8	21886.4	20153.4	19645.0	12770.6
56°	5642.0	5865.4	6439.2	8413.0	11906.0	17447.9	21561.0	22002.0	20455.7	19625.8	12693.6
57.5°	3729.9	3772.3	4398.1	6096.5	9560.6	15709.1	20952.5	21755.5	20844.7	19527.6	12637.8
60°	1754.2	1773.5	1998.8	2813.3	5174.1	11447.7	18974.9	20307.4	20987.2	19321.5	12635.8
62.5°	1143.8	1147.7	1174.6	1342.1	2116.2	6235.1	15730.3	17648.2	19806.8	19298.4	12599.2
65°	941.6	951.2	918.5	939.7	1107.2	2351.2	11095.3	13758.5	17035.8	18755.4	12187.2
67.5°	829.9	831.9	787.6	762.5	810.7	1032.1	5590.0	8678.7	12741.7	15936.3	10038.2
70°	756.8	754.8	704.8	647.0	648.9	685.5	1821.6	3604.7	7049.6	9462.4	5763.3
72.5°	672.0	675.9	647.0	566.1	539.2	485.3	685.5	972.4	2399.3	3038.6	1519.3
75°	589.2	581.5	552.6	500.7	450.6	325.4	344.7	414.0	625.8	620.0	327.4
77.5°	446.7	439.0	452.5	427.5	352.4	227.2	188.7	215.7	283.1	263.8	132.9
80°	340.8	337.0	308.1	365.9	321.6	171.4	129.0	132.9	154.0	140.6	65.5
82.5°	246.5	244.6	233.0	225.3	204.1	125.2	98.2	104.0	115.5	98.2	48.1
85°	94.4	94.4	182.9	154.0	140.6	84.7	69.3	75.1	88.6	71.2	32.7
87.5°	15.4	15.4	123.2	102.1	63.5	42.4	44.3	48.1	52.0	42.4	25.0
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°	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9	7145.9
2.5°	7126.7	6997.7	6714.6	6441.2	6202.4	5940.5	5807.6	5653.6	5595.8	5480.3	5491.8
5°	7199.8	6930.3	6362.2	5763.3	5214.5	4656.1	4259.4	3885.9	3677.9	3471.9	3471.9
7.5°	7274.9	6862.9	5984.8	5027.8	4103.5	3146.4	2468.6	1925.6	1623.3	1421.1	1415.3
10°	7326.9	6776.2	5555.4	4174.7	2811.4	1621.4	978.2	770.2	695.1	662.4	660.5
12.5°	7394.3	6689.6	5066.3	3169.5	1561.7	770.2	610.4	577.7	564.2	556.5	556.5
15°	7452.1	6566.3	4473.2	2131.6	820.3	577.7	525.7	514.1	512.2	510.3	512.2
17.5°	7465.6	6391.1	3762.6	1247.8	595.0	504.5	481.4	471.8	471.8	469.8	469.8
20°	7434.8	6160.0	2977.0	770.2	514.1	464.1	439.0	427.5	425.6	425.6	425.6
22.5°	7371.2	5865.4	2201.0	583.5	467.9	427.5	394.7	383.2	383.2	385.1	387.0
25°	7292.3	5516.9	1511.6	502.6	433.3	389.0	356.2	344.7	348.5	352.4	354.3
27.5°	7192.1	5100.9	989.8	435.2	387.0	350.5	321.6	313.9	321.6	329.3	333.1
30°	7092.0	4644.6	670.1	377.4	335.1	308.1	290.8	288.8	300.4	317.7	319.7
32.5°	7026.5	4176.6	506.4	338.9	294.6	271.5	263.8	267.7	285.0	304.2	308.1
35°	7020.8	3720.3	431.3	308.1	267.7	246.5	242.6	254.2	273.4	288.8	292.7
37.5°	7111.3	3292.8	390.9	285.0	246.5	225.3	219.5	240.7	258.0	273.4	277.3
40°	7294.2	2909.6	363.9	263.8	229.1	204.1	200.3	217.6	234.9	252.3	258.0
42.5°	7523.3	2551.4	333.1	242.6	209.9	181.0	177.2	190.6	208.0	233.0	236.8
45°	7721.7	2218.3	300.4	219.5	188.7	156.0	154.0	169.5	182.9	206.0	209.9
47.5°	7889.2	1941.0	269.6	194.5	161.8	138.6	136.7	144.4	152.1	173.3	177.2
50°	7800.6	1706.1	238.8	159.8	130.9	119.4	117.5	117.5	127.1	148.3	152.1
52.5°	7583.0	1559.7	209.9	132.9	107.8	102.1	96.3	98.2	107.8	117.5	119.4
55°	7407.8	1490.4	184.9	117.5	90.5	84.7	78.9	77.0	78.9	75.1	71.2
56°	7365.4	1482.7	179.1	113.6	86.7	78.9	71.2	67.4	65.5	57.8	55.8
57.5°	7346.2	1482.7	169.5	105.9	80.9	71.2	61.6	53.9	46.2	40.4	40.4
60°	7330.8	1492.3	157.9	92.4	69.3	57.8	44.3	32.7	27.0	27.0	27.0
62.5°	7298.0	1488.5	144.4	77.0	59.7	44.3	27.0	21.2	19.3	21.2	23.1
65°	6930.3	1382.6	127.1	61.6	46.2	30.8	15.4	15.4	17.3	21.2	23.1
67.5°	5584.3	1047.5	104.0	48.1	32.7	23.1	13.5	13.5	17.3	21.2	23.1
70°	3067.5	552.6	88.6	34.7	25.0	19.3	13.5	11.6	17.3	21.2	23.1
72.5°	749.1	231.1	80.9	27.0	23.1	17.3	11.6	11.6	17.3	21.2	23.1
75°	184.9	173.3	65.5	21.2	19.3	15.4	11.6	11.6	17.3	21.2	23.1
77.5°	86.7	229.1	44.3	19.3	17.3	13.5	11.6	11.6	17.3	21.2	21.2
80°	52.0	173.3	27.0	17.3	15.4	13.5	11.6	11.6	17.3	21.2	23.1
82.5°	30.8	50.1	19.3	17.3	15.4	11.6	11.6	11.6	17.3	21.2	23.1
85°	27.0	25.0	19.3	17.3	15.4	13.5	11.6	11.6	19.3	23.1	23.1
87.5°	21.2	19.3	17.3	15.4	15.4	13.5	11.6	11.6	17.3	21.2	23.1
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)