

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: P270634

Luminaire Tested: **NAV-AF-05-D-UNV-T4FT-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270634
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17348.7 lumens
Efficiency: N/A
Efficacy: 107.1 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 - G3

Input Watts (W): 162
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

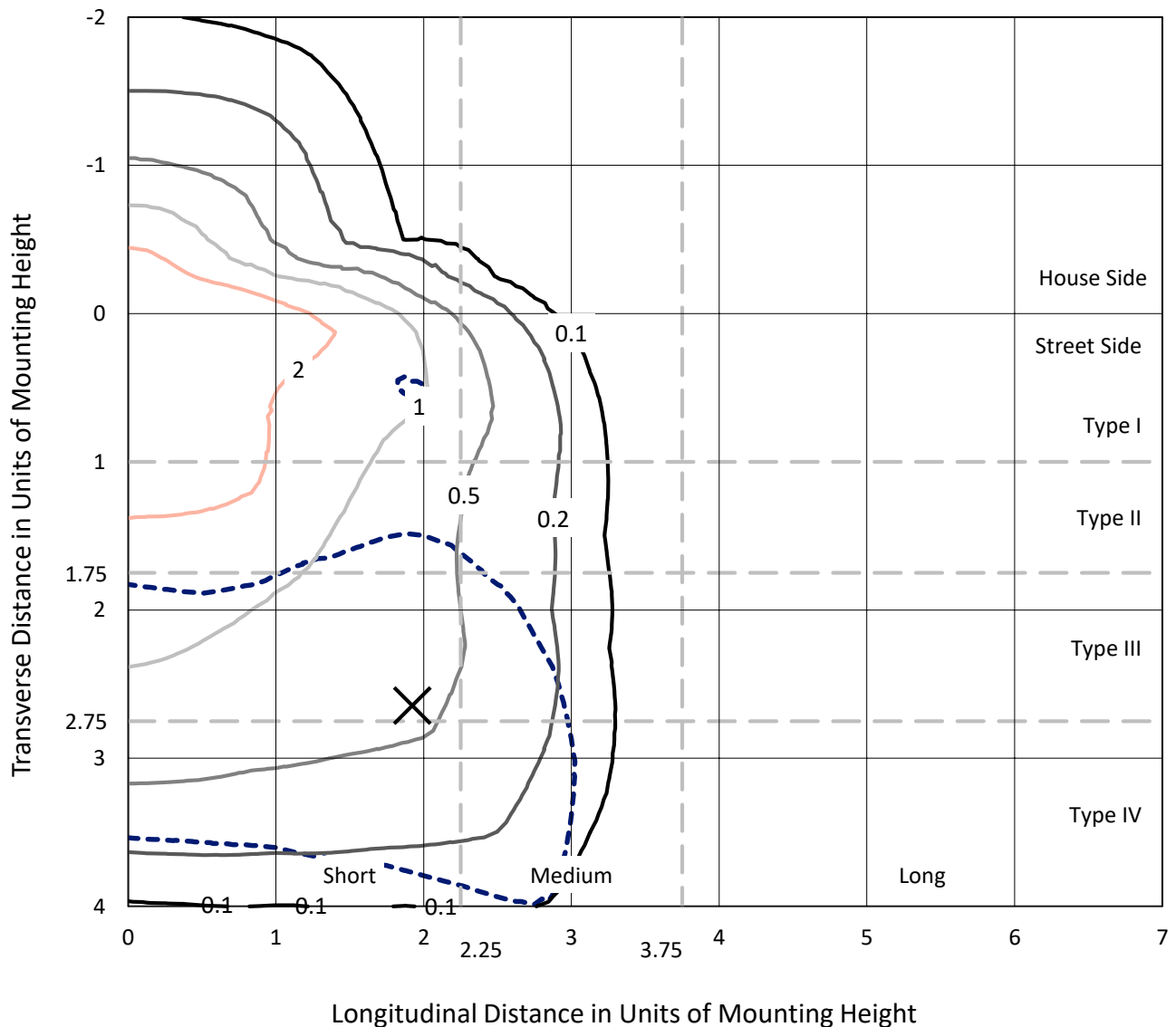


REPORT NUMBER: P270634

CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-7027-600

Iso-Footcandle Lines of Horizontal Illumination

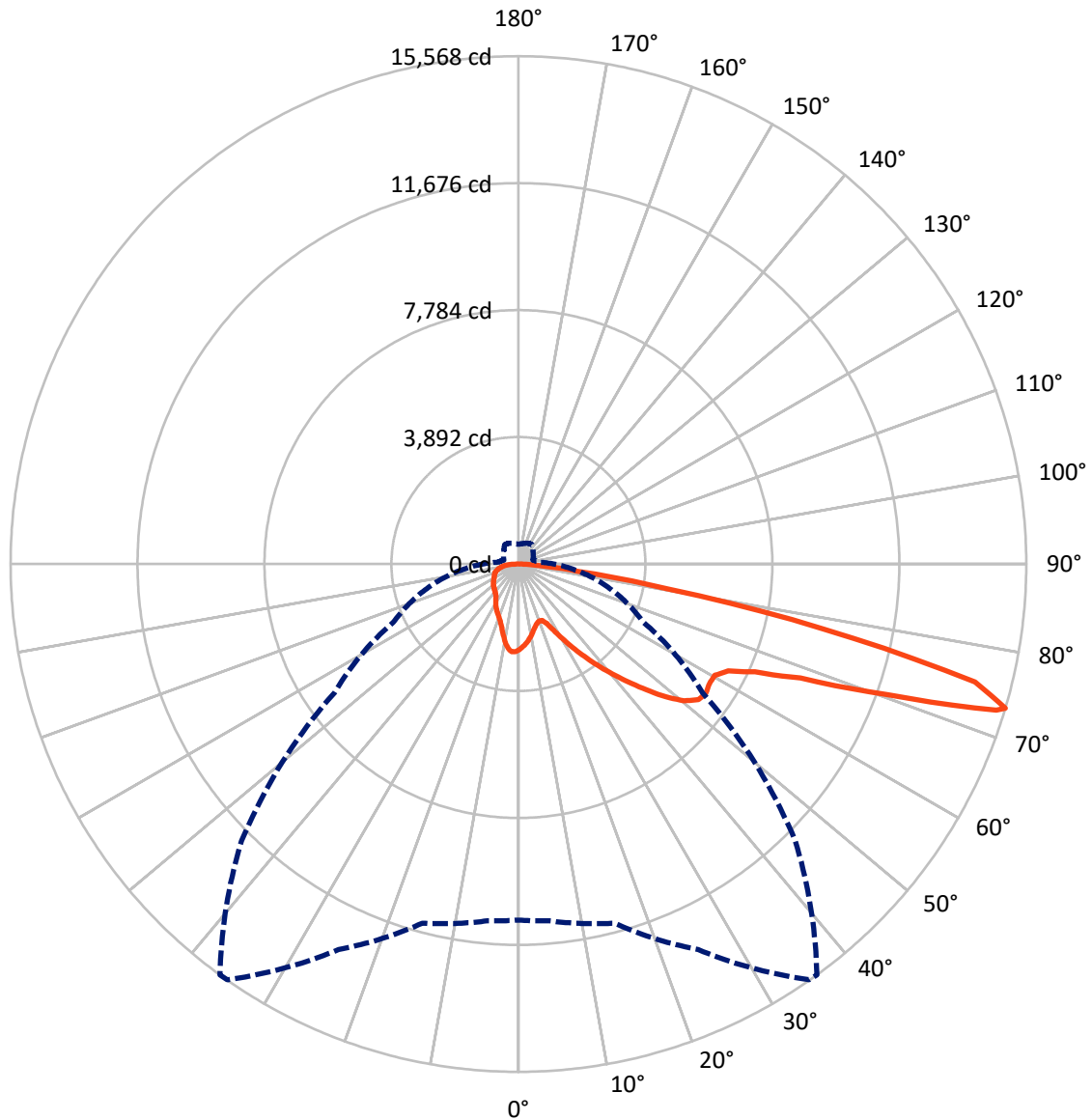
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270634
CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-7027-600

Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

REPORT NUMBER: P270634

CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-7027-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3345.3	0.0	3345.3
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	14003.3	0.0	14003.3
	% Fixture	80.7	0.0	80.7
Total	Lumens	17348.7	0.0	17348.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.7	1.4
10°-20°	599.5	3.5
20°-30°	961.1	5.5
30°-40°	1589.7	9.2
40°-50°	2459.9	14.2
50°-60°	3293.1	19.0
60°-70°	4301.8	24.8
70°-80°	3513.8	20.3
80°-90°	391.1	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°	17348.7	100.0
0°-180°	17348.7	100.0

Coefficient of Utilization



REPORT NUMBER: P270634

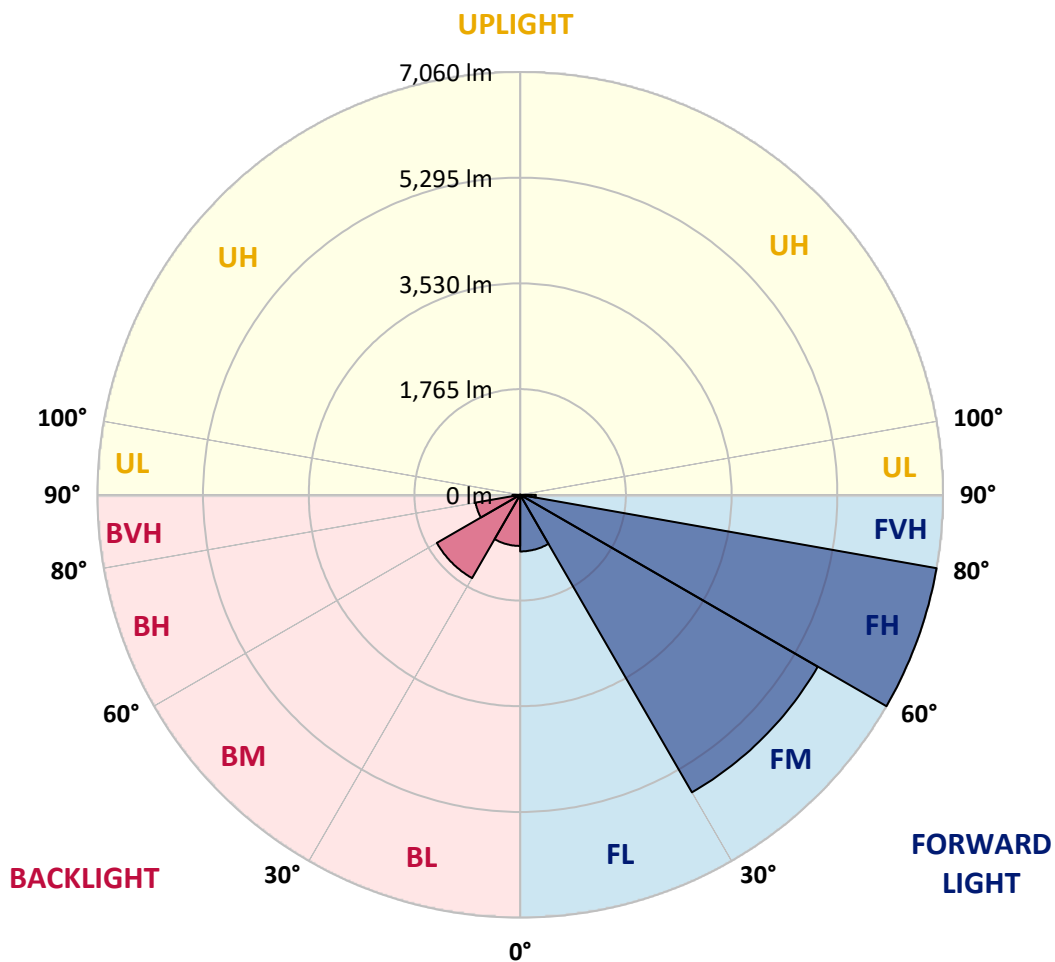
CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-7027-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	945.3	5.4			
FM	(30°-60°)	5736.1	33.1			
FH	(60°-80°)	7059.6	40.7			G3/7500
FVH	(80°-90°)	262.3	1.5			G3/500
BL	(0°-30°)	853.9	4.9	B2/1000		
BM	(30°-60°)	1606.6	9.3	B2/2500		
BH	(60°-80°)	756.0	4.4	B2/1000		G2/1000
BVH	(80°-90°)	128.8	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





REPORT NUMBER: P270634

CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-7027-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8
2.5°	2527.6	2534.1	2535.2	2542.9	2542.9	2541.8	2545.2	2558.4	2565.0	2580.4	2593.6
5°	2403.0	2410.7	2413.9	2427.2	2443.7	2444.8	2457.0	2482.3	2506.6	2540.8	2569.4
7.5°	2263.0	2271.8	2280.5	2308.1	2332.4	2334.7	2357.7	2398.6	2430.5	2472.3	2524.1
10°	2127.4	2129.6	2138.4	2173.7	2205.7	2208.9	2242.0	2288.3	2331.3	2389.8	2448.2
12.5°	2016.1	2022.7	2020.5	2046.9	2074.5	2076.7	2120.8	2179.2	2242.0	2308.1	2377.6
15°	1977.4	1976.5	1953.3	1952.1	1964.2	1966.5	2009.5	2077.8	2148.3	2230.0	2319.2
17.5°	2003.8	1995.1	1934.5	1897.0	1889.2	1891.6	1923.5	1998.4	2073.4	2167.2	2274.0
20°	2149.5	2115.2	1973.0	1882.7	1857.3	1857.3	1876.1	1936.7	2019.4	2128.4	2263.0
22.5°	2494.5	2441.6	2138.4	1977.4	1888.1	1879.3	1865.1	1911.4	2002.9	2134.1	2308.1
25°	2928.7	2903.4	2441.6	2230.0	2045.8	2017.1	1922.4	1938.9	2036.9	2193.5	2431.6
27.5°	3331.1	3287.0	2839.5	2597.0	2336.9	2292.7	2092.2	2024.9	2118.6	2303.8	2610.1
30°	3565.8	3536.1	3248.5	3016.9	2707.2	2651.0	2363.4	2194.6	2264.1	2485.6	2863.6
32.5°	3821.6	3804.0	3658.4	3448.0	3108.4	3043.4	2713.8	2471.2	2486.7	2727.1	3169.0
35°	4069.6	4092.8	4010.0	3855.7	3540.5	3479.9	3184.5	2832.8	2761.2	2998.3	3495.3
37.5°	4367.2	4372.7	4320.8	4220.5	3994.7	3945.0	3701.5	3218.6	3059.8	3287.0	3810.6
40°	4961.2	4874.3	4671.5	4592.0	4457.6	4426.8	4148.9	3572.5	3337.7	3583.5	4108.2
42.5°	5603.9	5468.4	5150.9	5020.8	4966.9	4938.3	4521.4	3808.4	3597.8	3880.0	4400.3
45°	6121.9	6011.7	5701.0	5540.0	5546.7	5500.3	4846.6	4018.8	3880.0	4177.6	4726.5
47.5°	6632.4	6448.4	6100.0	6076.9	6154.0	6085.7	5157.4	4229.4	4174.3	4501.6	5052.8
50°	6665.5	6497.9	6356.8	6541.9	6674.2	6589.3	5439.7	4505.0	4479.7	4894.1	5473.9
52.5°	6263.2	6238.9	6453.9	6765.8	6985.1	6909.0	5670.1	4788.2	4791.6	5384.6	5986.5
55°	6116.5	6085.7	6343.7	6727.1	7023.7	6978.6	5842.0	5107.9	5137.6	5979.8	6536.4
57.5°	6363.5	6286.2	6337.0	6654.5	6933.3	6906.9	6020.6	5462.9	5516.9	6665.5	7044.6
60°	7129.5	6971.8	6703.0	6762.4	6936.6	6921.3	6276.4	5858.6	5948.9	7379.8	7366.6
62.5°	8277.0	8098.4	7550.6	7286.1	7247.4	7217.7	6698.5	6344.6	6389.9	7895.7	7179.2
65°	9535.8	9344.0	8692.4	8259.3	8032.3	7968.3	7379.8	6931.1	6647.7	7894.5	6449.4
67.5°	10948.9	10746.1	10096.8	9683.5	9437.7	9328.4	8485.3	7405.1	6564.1	7226.4	5160.9
70°	12396.3	12203.2	11905.6	12050.0	12158.1	11991.7	10226.8	7562.7	5962.2	5665.7	3465.5
72.5°	11627.9	11612.4	11838.5	13207.4	15289.6	15322.7	11966.3	7117.5	4606.4	3367.4	1847.5
73°	10914.6	10979.8	11398.7	13036.7	15557.4	15568.4	12000.5	6886.9	4229.4	2901.2	1622.6
75°	5654.7	6095.5	7649.7	10570.7	14405.6	14457.4	10578.5	5213.8	2521.0	1611.5	1093.4
77.5°	1514.5	1494.7	2464.7	5149.9	9604.0	9535.8	6684.2	2524.1	1208.1	1010.9	767.2
80°	519.2	525.8	838.8	1883.7	4482.9	4642.8	2901.2	1101.1	794.7	704.4	543.5
82.5°	264.6	273.4	438.7	801.4	1874.9	1835.2	933.6	648.1	532.3	427.8	304.3
85°	141.2	145.4	241.5	415.6	687.8	695.6	328.5	346.0	338.4	242.5	149.8
87.5°	69.4	71.7	115.7	183.0	254.6	245.7	114.7	149.8	166.5	136.7	82.6
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: P270634

CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-7027-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8	2627.8
2.5°	2610.1	2610.1	2624.5	2648.7	2666.3	2683.0	2693.9	2711.7	2721.5	2720.3	2719.3
5°	2592.6	2603.6	2632.3	2661.9	2681.8	2695.1	2695.1	2702.8	2702.8	2699.4	2695.1
7.5°	2551.7	2570.5	2612.5	2638.9	2644.3	2630.0	2601.3	2579.4	2551.7	2537.4	2532.0
10°	2486.7	2511.0	2563.9	2576.0	2547.4	2496.7	2427.2	2367.8	2314.8	2290.5	2282.9
12.5°	2422.8	2454.8	2504.4	2485.6	2417.2	2318.0	2211.2	2129.6	2070.1	2046.9	2039.2
15°	2369.9	2408.4	2447.1	2388.7	2269.6	2131.8	2013.8	1937.9	1892.5	1874.9	1870.6
17.5°	2334.7	2379.8	2393.1	2283.9	2118.6	1964.2	1859.5	1809.9	1790.1	1782.3	1780.3
20°	2336.9	2387.5	2355.5	2182.5	1973.0	1817.6	1748.2	1733.9	1733.9	1733.9	1732.8
22.5°	2397.4	2441.6	2340.2	2087.8	1833.1	1694.3	1664.4	1676.5	1685.4	1685.4	1684.3
25°	2523.1	2547.4	2351.1	1996.3	1701.8	1587.2	1588.4	1611.5	1619.3	1619.3	1616.9
27.5°	2714.9	2695.1	2370.9	1894.9	1572.9	1490.3	1505.6	1526.7	1532.1	1528.8	1527.7
30°	2955.2	2875.8	2387.5	1775.8	1451.8	1399.9	1413.2	1425.3	1420.8	1413.2	1412.0
32.5°	3224.1	3059.8	2377.6	1642.5	1344.8	1306.1	1314.0	1320.5	1314.0	1295.1	1295.1
35°	3491.0	3226.4	2323.6	1496.8	1260.0	1215.8	1214.7	1235.7	1234.5	1212.5	1213.6
37.5°	3724.6	3357.5	2218.9	1363.4	1187.1	1149.7	1154.1	1167.3	1173.9	1144.1	1140.8
40°	3928.5	3448.0	2071.1	1250.0	1128.7	1131.0	1118.7	1097.9	1090.2	1076.9	1074.7
42.5°	4120.3	3510.8	1914.6	1155.2	1098.9	1124.3	1083.5	1033.9	1013.0	1025.1	1032.8
45°	4308.8	3581.4	1763.6	1076.9	1061.4	1104.5	1048.2	993.2	968.9	974.4	982.1
47.5°	4539.1	3679.4	1581.7	993.2	1004.1	1068.2	1026.3	966.7	930.4	908.2	901.7
50°	4842.3	3821.6	1345.9	902.7	943.5	1028.4	1007.4	928.0	888.5	844.3	833.3
52.5°	5221.5	3956.0	1107.8	830.0	894.0	994.2	976.5	895.0	846.6	793.7	784.8
55°	5599.6	3974.8	902.7	767.2	837.7	947.9	939.2	868.7	800.2	757.2	748.5
57.5°	5864.0	3797.3	764.9	714.2	783.7	890.6	905.0	836.6	761.7	728.5	723.0
60°	5868.4	3373.0	681.3	678.9	742.9	841.1	869.6	799.1	737.4	715.4	711.0
62.5°	5402.2	2718.2	627.1	652.6	713.2	800.2	843.1	778.2	731.8	723.0	718.6
65°	4528.1	2008.3	584.2	628.4	685.5	766.1	821.2	771.6	729.8	726.4	723.0
67.5°	3343.2	1376.7	547.8	597.5	654.8	730.9	800.2	761.7	716.5	729.8	725.3
70°	2103.1	919.2	513.7	562.2	614.0	690.0	772.7	744.1	699.9	692.2	678.0
72.5°	1187.1	664.7	472.9	517.0	561.0	636.0	735.3	714.2	662.5	631.6	617.2
73°	1072.4	629.4	462.9	505.9	549.0	625.0	726.4	705.4	651.5	617.2	604.0
75°	784.8	514.8	417.7	460.7	498.2	574.2	684.5	661.3	602.9	562.2	553.4
77.5°	568.7	396.8	359.3	397.9	430.9	503.7	621.6	595.2	537.9	515.8	507.1
80°	410.0	300.9	297.6	335.1	363.8	437.7	554.4	526.9	471.8	536.7	522.5
82.5°	244.7	192.9	218.3	260.1	290.0	367.0	481.8	449.7	396.8	401.3	341.7
85°	116.8	109.1	135.6	170.9	191.8	251.3	401.3	375.9	317.5	260.1	254.6
87.5°	51.8	49.5	65.0	76.0	102.4	151.1	274.4	243.6	230.3	137.8	108.1
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)