

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: P270336

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270336
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-AFL-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8759.7 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 85
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

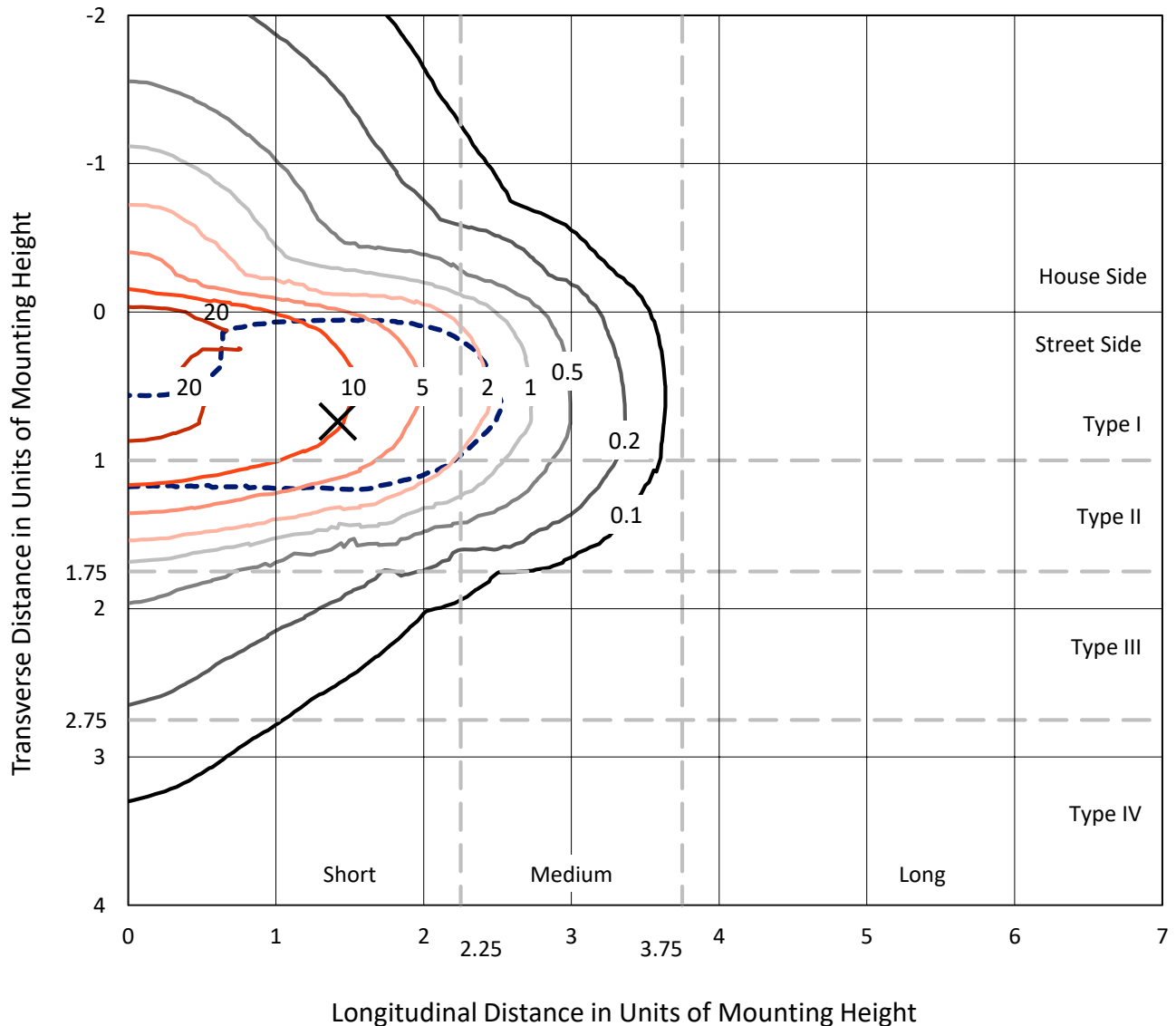


REPORT NUMBER: P270336

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7027-800

Iso-Footcandle Lines of Horizontal Illumination

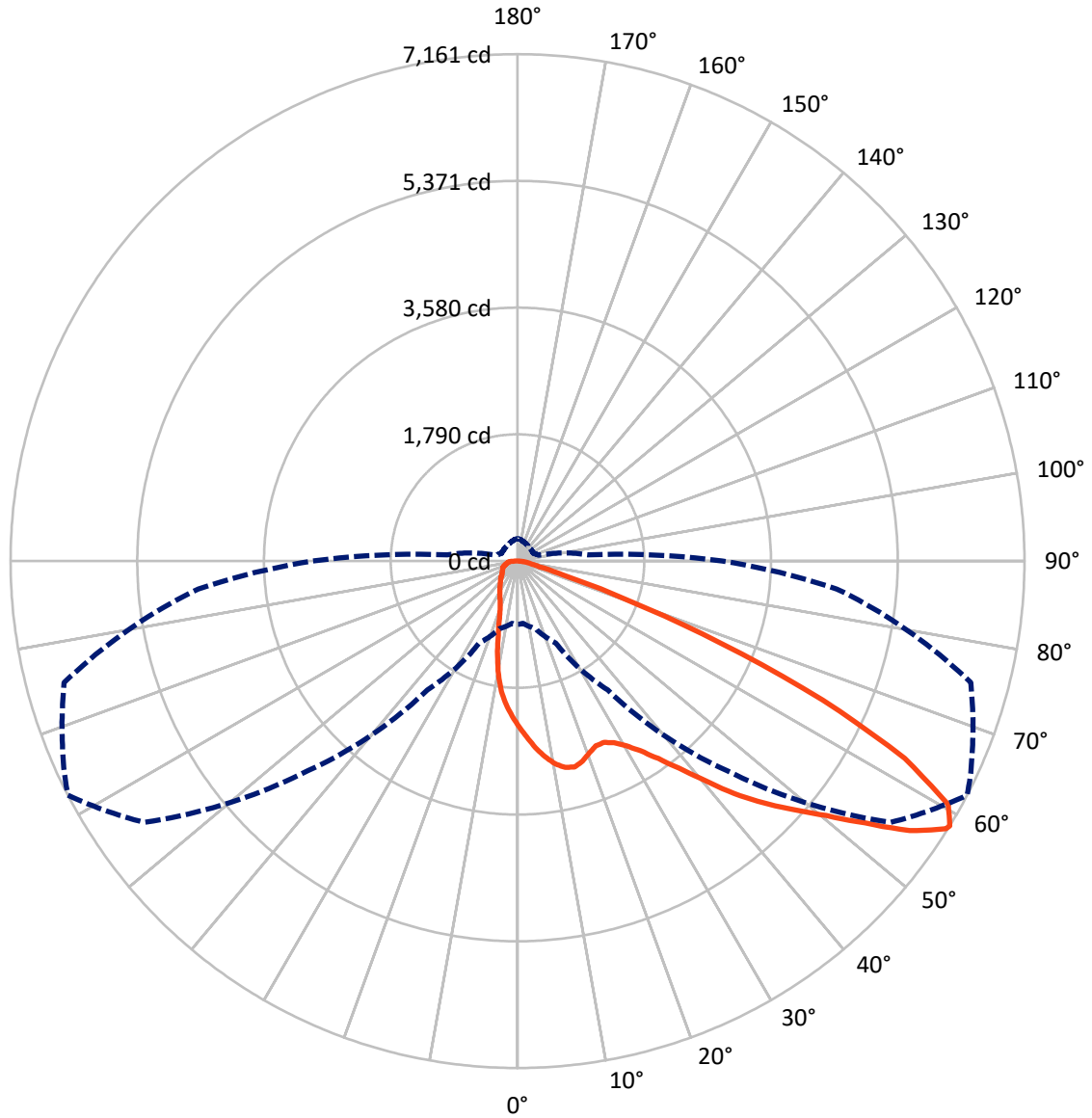
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 27.4 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P270336
CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7027-800

Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

REPORT NUMBER: P270336

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7027-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1345.0	0.0	1345.0
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	7414.8	0.0	7414.8
	% Fixture	84.6	0.0	84.6
Total	Lumens	8759.7	0.0	8759.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.0	2.4
10°-20°	527.6	6.0
20°-30°	855.0	9.8
30°-40°	1365.1	15.6
40°-50°	1985.6	22.7
50°-60°	2077.7	23.7
60°-70°	1266.7	14.5
70°-80°	354.2	4.0
80°-90°	118.7	1.4
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°	8759.7	100.0
0°-180°	8759.7	100.0



REPORT NUMBER: P270336

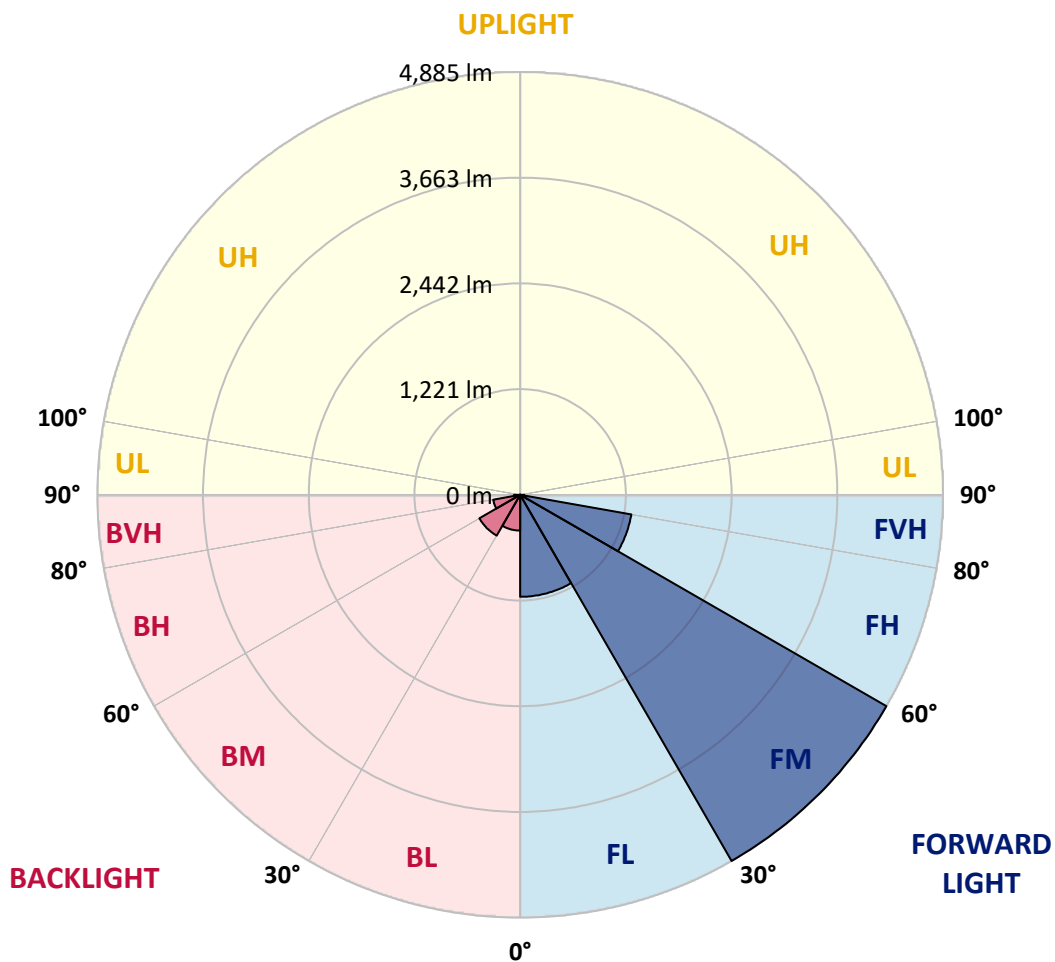
CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7027-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1178.2	13.5			
FM	(30°-60°)	4884.5	55.8			
FH	(60°-80°)	1304.3	14.9			G1/1800
FVH	(80°-90°)	47.8	0.5			G1/100
BL	(0°-30°)	413.4	4.7	B1/500		
BM	(30°-60°)	543.9	6.2	B1/1000		
BH	(60°-80°)	316.6	3.6	B1/500		G1/500
BVH	(80°-90°)	71.0	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





REPORT NUMBER: P270336

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7027-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7
2.5°	2654.8	2653.1	2630.5	2615.9	2598.3	2557.7	2517.3	2487.1	2471.9	2413.2	2356.3
5°	2874.1	2867.7	2855.1	2839.2	2816.1	2765.3	2701.3	2645.9	2623.9	2519.9	2415.5
7.5°	2758.2	2768.5	2807.5	2851.2	2897.3	2900.4	2855.1	2789.3	2765.3	2626.3	2472.9
10°	2436.8	2432.4	2481.1	2566.5	2718.2	2868.2	2943.1	2910.9	2885.7	2727.0	2530.3
12.5°	2339.4	2338.3	2346.5	2368.3	2463.6	2669.5	2920.7	2990.8	2982.1	2833.8	2591.7
15°	2368.9	2370.0	2369.5	2372.2	2398.5	2496.5	2795.3	3017.6	3045.1	2939.3	2654.1
17.5°	2463.6	2459.7	2447.7	2434.5	2438.4	2473.5	2660.2	2971.7	3053.8	3033.5	2706.8
20°	2609.8	2609.8	2577.4	2540.8	2516.7	2524.3	2603.7	2892.8	3013.3	3113.4	2746.1
22.5°	2793.2	2796.0	2748.3	2681.5	2626.7	2606.0	2636.0	2834.2	2964.0	3187.4	2781.2
25°	3020.9	3020.5	2950.8	2855.1	2768.5	2718.7	2718.2	2836.9	2948.6	3273.9	2817.9
27.5°	3302.9	3277.1	3196.1	3059.7	2937.6	2861.6	2827.1	2905.9	2980.9	3380.1	2867.1
30°	3621.0	3594.7	3488.5	3313.3	3147.9	3036.8	2979.9	3025.3	3079.5	3515.2	2941.6
32.5°	3935.7	3941.9	3817.0	3619.4	3406.9	3250.3	3166.0	3194.0	3231.7	3680.6	3042.3
35°	4396.8	4396.1	4233.1	3986.0	3733.7	3517.0	3410.1	3425.0	3459.5	3913.8	3183.6
37.5°	4740.5	4735.1	4630.0	4411.4	4127.4	3867.4	3713.0	3715.1	3744.7	4206.8	3369.7
40°	4775.6	4774.5	4774.0	4742.7	4548.4	4303.2	4109.8	4070.0	4081.9	4517.8	3567.3
42.5°	4507.9	4547.8	4662.8	4839.1	4893.2	4764.6	4581.7	4492.6	4466.3	4874.7	3776.5
45°	4126.3	4146.5	4347.9	4744.4	5066.8	5198.2	5060.8	4872.4	4827.6	5221.8	3946.8
47.5°	3948.9	3940.1	4056.7	4488.7	5049.8	5543.1	5553.1	5244.2	5168.0	5521.3	4091.8
50°	3568.3	3556.8	3704.3	4112.6	4864.9	5714.5	6058.3	5649.4	5508.6	5805.9	4223.2
52.5°	2810.2	2799.2	2996.8	3523.0	4450.9	5650.3	6484.2	6146.5	5906.6	6080.2	4345.8
55°	1828.5	1829.7	2018.0	2560.4	3601.8	5277.1	6684.1	6720.7	6451.9	6354.5	4445.0
57.5°	1006.8	997.5	1131.7	1465.0	2477.9	4429.1	6517.7	7134.6	6994.5	6589.8	4516.6
58°	895.2	884.1	987.6	1275.1	2221.6	4189.8	6433.9	7160.8	7064.0	6628.8	4527.0
60°	637.7	619.2	603.3	718.9	1279.9	3020.9	5875.5	6990.6	7084.3	6706.4	4517.1
62.5°	537.6	516.3	459.4	454.9	602.8	1477.6	4646.4	6139.3	6401.5	6527.4	4358.3
65°	499.3	478.0	402.9	376.1	409.0	637.7	2873.0	4740.5	5091.0	5905.0	3958.7
67.5°	471.9	446.7	366.2	331.3	337.9	381.6	1219.2	3100.3	3506.5	4604.7	3175.9
70°	447.3	419.4	337.3	296.7	291.2	290.2	476.3	1618.8	2010.2	3013.3	2127.5
72.5°	419.4	392.0	311.5	268.2	256.1	235.4	286.3	669.0	917.0	1477.1	975.0
75°	378.8	356.4	283.1	244.7	223.9	191.1	211.3	320.9	395.3	565.6	452.7
77.5°	333.5	315.3	254.0	225.0	197.1	156.0	161.5	217.3	244.2	318.5	262.2
80°	236.0	242.5	221.7	198.2	173.6	125.9	124.2	159.3	175.2	214.1	176.2
82.5°	162.7	167.5	180.6	156.6	140.1	97.9	91.4	110.6	118.8	129.1	85.3
85°	116.2	112.7	125.4	112.2	102.9	62.4	58.6	70.1	75.0	78.8	41.1
87.5°	70.6	70.1	72.3	58.0	53.7	31.8	29.0	33.3	35.7	34.5	19.8
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: P270336

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7027-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7	2338.7
2.5°	2335.0	2308.1	2249.5	2202.5	2151.5	2112.6	2073.7	2051.9	2027.8	2014.1	2012.6
5°	2360.7	2305.9	2181.2	2065.1	1945.6	1838.4	1733.3	1655.5	1592.1	1556.0	1553.7
7.5°	2389.1	2303.3	2110.5	1909.5	1697.2	1485.8	1299.2	1167.2	1082.4	1042.9	1040.1
10°	2411.1	2291.7	2024.5	1711.9	1375.2	1096.0	926.3	848.5	822.8	816.3	815.2
12.5°	2437.3	2283.5	1916.2	1458.5	1051.1	834.3	783.0	777.9	783.4	786.7	787.3
15°	2462.0	2267.6	1770.0	1177.6	822.8	745.7	746.8	757.1	768.1	773.0	773.6
17.5°	2473.5	2228.8	1577.9	927.9	719.9	705.7	718.3	731.9	741.8	745.7	745.7
20°	2473.5	2166.4	1355.1	751.7	666.3	669.0	684.2	694.7	696.9	693.6	692.1
22.5°	2463.1	2089.2	1138.2	655.9	622.4	632.9	645.0	637.7	612.0	592.3	588.5
25°	2453.8	1997.7	929.6	597.4	584.2	597.8	592.9	544.3	504.8	484.5	481.2
27.5°	2438.4	1887.1	755.6	549.1	546.9	557.8	509.2	462.1	442.3	431.4	429.2
30°	2434.5	1767.2	632.3	506.5	510.2	495.0	439.1	423.7	419.4	413.3	410.5
32.5°	2447.3	1647.3	555.2	471.4	475.3	424.9	403.5	405.7	405.1	397.5	394.7
35°	2481.7	1530.7	505.8	439.6	428.8	380.5	383.2	389.9	389.9	380.5	377.2
37.5°	2541.9	1422.3	474.7	412.9	375.0	357.4	364.6	373.3	373.3	366.8	364.1
40°	2606.0	1316.6	451.0	391.4	341.0	341.6	348.7	355.3	358.1	359.1	356.9
42.5°	2664.0	1207.1	425.9	368.5	325.7	329.6	332.8	337.9	349.4	356.9	355.9
45°	2697.9	1097.1	398.6	340.0	315.3	317.0	315.8	324.6	338.3	349.8	349.8
47.5°	2729.1	1006.8	376.1	311.5	305.0	305.0	301.7	310.5	323.0	336.7	337.9
50°	2758.7	948.3	360.2	289.7	291.8	290.2	289.1	297.2	314.2	330.7	333.5
52.5°	2788.8	928.5	345.9	273.8	278.1	275.9	276.9	288.5	307.7	324.6	327.4
55°	2831.0	941.2	331.3	262.8	265.0	264.5	268.9	282.0	299.0	315.8	317.0
57.5°	2883.0	987.1	318.5	254.6	252.3	255.7	262.8	275.4	291.8	312.0	313.7
58°	2893.4	998.0	316.5	252.3	249.6	254.6	261.6	273.8	290.7	312.0	313.7
60°	2909.3	1037.0	311.0	248.0	240.3	249.1	257.9	269.9	288.5	314.8	318.1
62.5°	2832.6	1044.5	309.3	243.1	230.4	241.5	251.9	265.4	286.3	324.1	331.3
65°	2567.0	965.8	297.8	234.8	222.3	235.4	246.3	262.2	292.8	352.0	355.3
67.5°	2060.7	802.0	269.9	222.3	213.0	228.3	242.0	262.2	295.6	356.4	358.7
70°	1416.8	602.8	234.8	208.5	201.9	219.5	240.3	268.2	286.3	337.3	330.7
72.5°	740.2	419.4	205.8	192.6	188.9	211.9	256.1	262.2	275.4	314.8	308.2
75°	372.8	285.2	181.2	174.6	174.1	209.1	286.9	252.3	263.9	296.3	310.5
77.5°	220.1	223.4	161.5	157.7	160.3	204.3	287.4	242.5	250.7	272.6	287.9
80°	150.6	184.5	146.2	145.0	147.2	187.7	265.0	230.4	235.4	257.9	274.3
82.5°	84.9	101.9	128.1	135.3	134.1	153.8	228.9	209.7	215.8	305.0	322.4
85°	41.1	61.4	107.3	126.5	114.4	102.3	186.2	186.2	187.7	218.5	221.3
87.5°	15.4	27.4	72.3	100.3	79.9	61.4	126.5	132.0	146.8	151.2	154.4
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)