

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: P196861

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196861
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-T4W-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5839.9 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

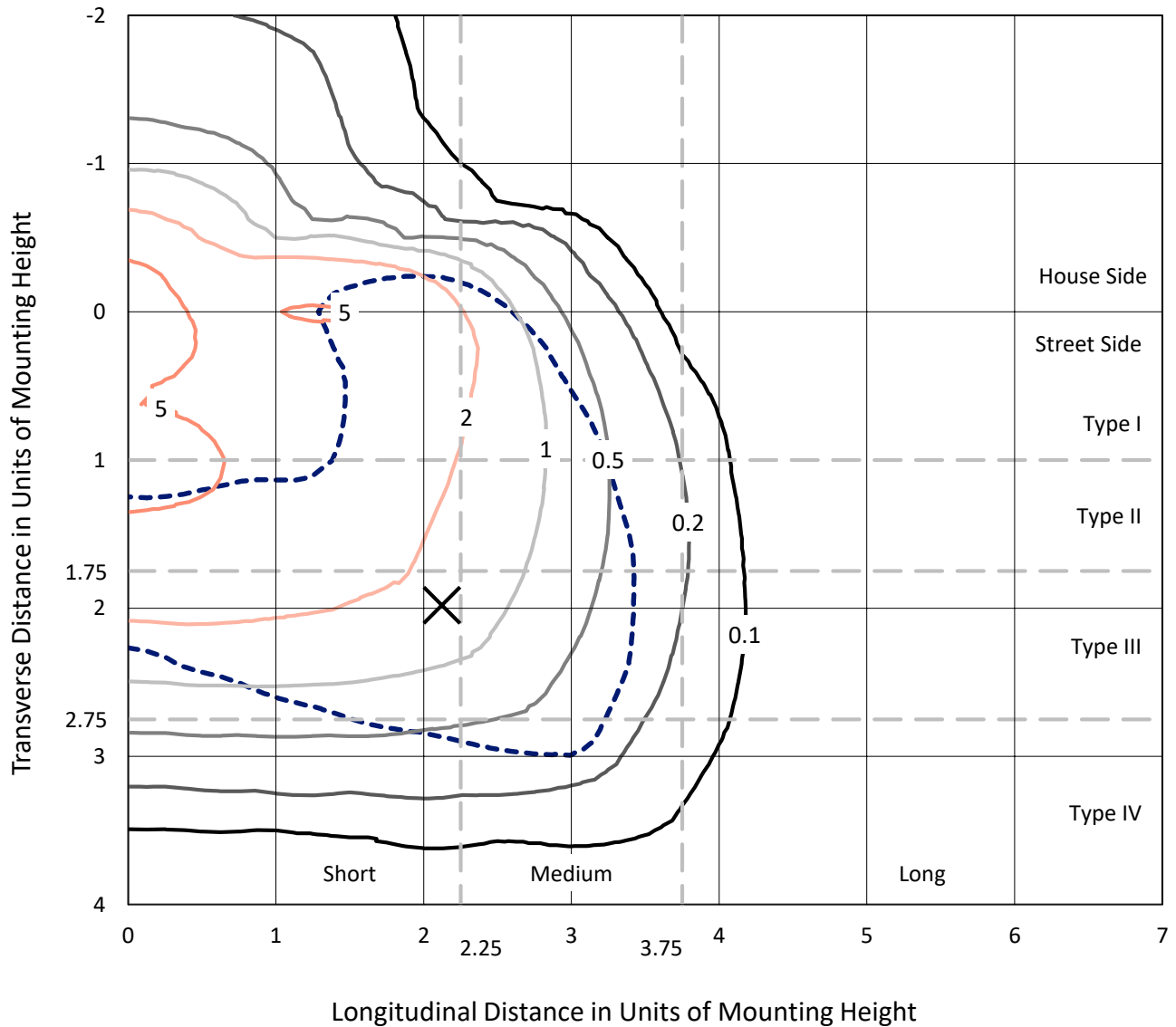
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

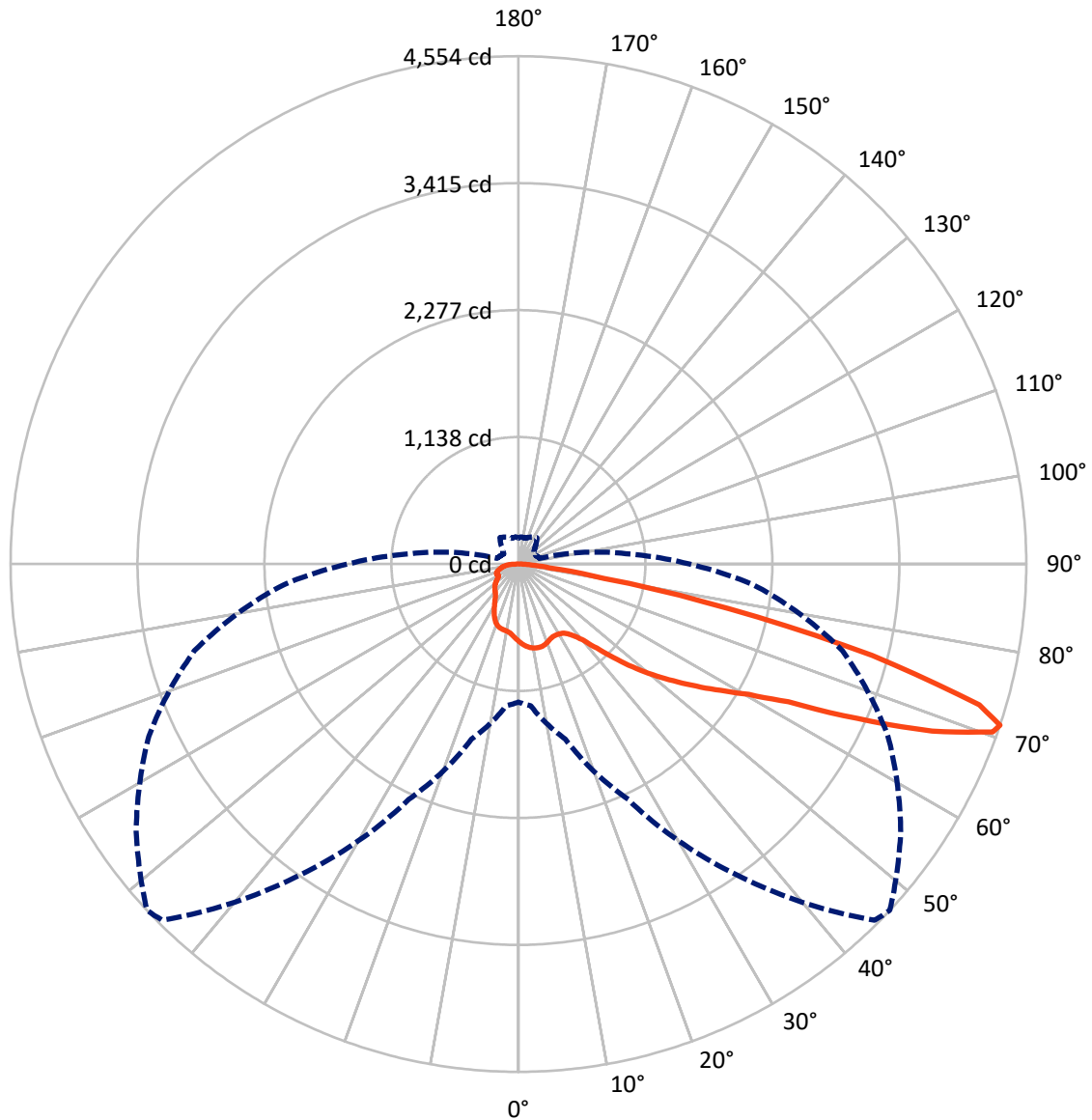
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1251.6	0.0	1251.6
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	4588.3	0.0	4588.3
	% Fixture	78.6	0.0	78.6
Total	Lumens	5839.9	0.0	5839.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.3	1.1
10°-20°	194.0	3.3
20°-30°	288.3	4.9
30°-40°	413.9	7.1
40°-50°	733.8	12.6
50°-60°	1255.7	21.5
60°-70°	1782.7	30.5
70°-80°	976.4	16.7
80°-90°	128.9	2.2
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°	5839.9	100.0
0°-180°	5839.9	100.0



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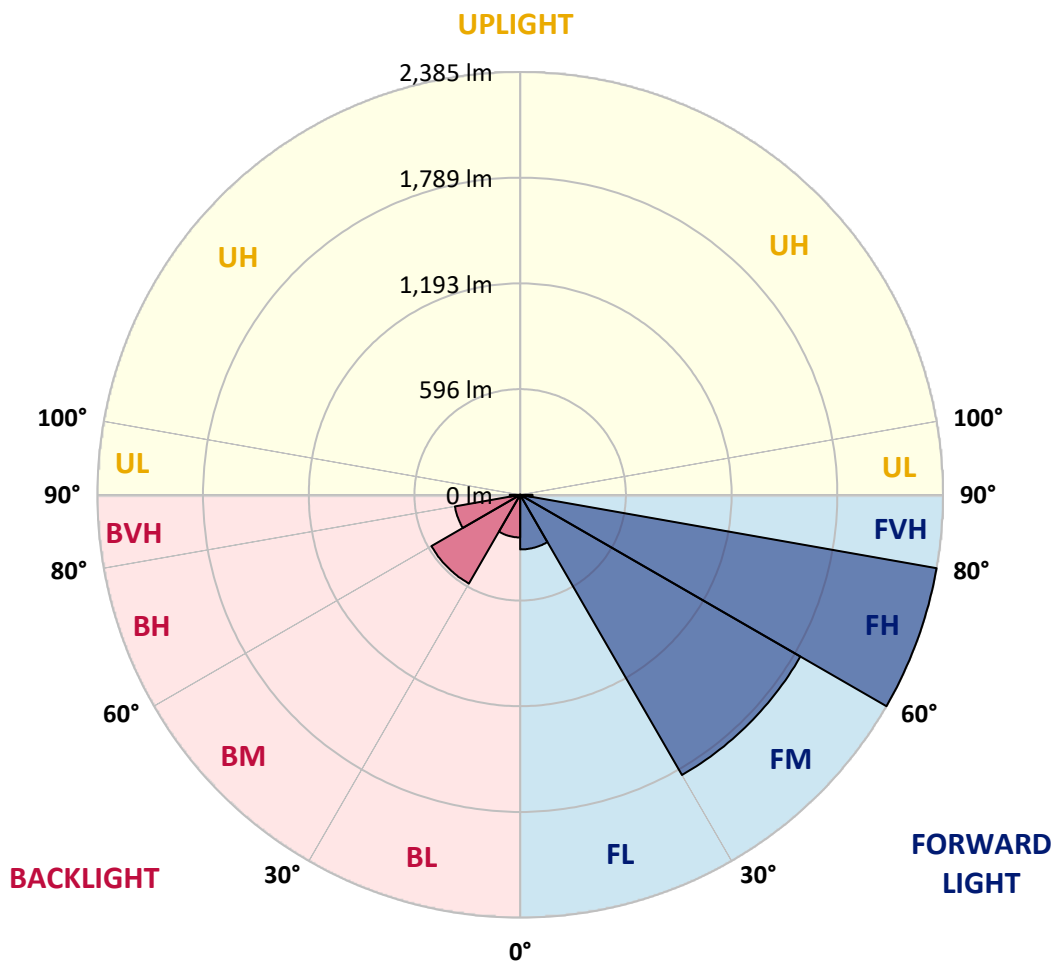
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	308.2	5.3			
FM	(30°-60°)	1825.2	31.3			
FH	(60°-80°)	2385.1	40.8			G2/5000
FVH	(80°-90°)	69.9	1.2			G1/100
BL	(0°-30°)	240.3	4.1	B1/500		
BM	(30°-60°)	578.3	9.9	B1/1000		
BH	(60°-80°)	374.0	6.4	B1/500		G1/500
BVH	(80°-90°)	59.0	1.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5
2.5°	736.9	735.4	736.1	733.4	727.0	720.2	720.2	713.0	705.5	697.8	689.5
5°	782.7	780.3	778.5	770.2	757.7	743.6	741.5	727.0	711.5	696.0	680.8
7.5°	820.9	818.6	812.9	797.8	779.6	758.8	756.2	737.3	716.7	695.2	674.0
10°	848.1	846.6	835.7	816.2	795.1	770.5	766.0	746.7	722.4	695.6	668.7
12.5°	863.2	861.0	847.8	825.0	800.1	775.0	770.5	752.0	724.4	694.9	663.4
15°	857.2	856.0	843.6	820.5	795.5	774.0	770.2	751.2	723.2	692.1	658.5
17.5°	831.5	834.0	824.3	801.5	781.1	766.0	761.9	744.0	717.5	685.7	650.9
20°	795.9	798.9	794.0	771.0	759.2	749.3	747.2	732.7	708.1	676.4	641.9
22.5°	758.0	760.7	761.1	739.4	735.8	731.9	730.1	719.8	699.8	670.7	635.8
25°	731.9	735.0	735.8	716.7	719.0	720.2	719.8	712.6	698.2	670.7	636.6
27.5°	725.2	726.7	725.9	708.4	712.6	719.0	719.5	718.0	704.2	678.2	647.2
30°	748.5	749.3	739.9	713.8	718.0	726.2	726.7	725.9	717.2	697.8	671.0
32.5°	850.0	849.3	816.7	749.3	735.0	737.9	739.1	745.9	746.7	730.4	705.5
35°	1004.4	1004.1	966.2	851.1	783.4	767.5	768.9	779.6	789.1	778.2	763.7
37.5°	1174.3	1175.5	1152.3	996.5	887.8	821.6	820.1	828.0	845.1	848.8	850.8
40°	1362.8	1368.5	1367.4	1163.4	1034.3	914.0	898.8	889.7	922.7	943.5	970.3
42.5°	1578.1	1576.6	1577.3	1346.5	1201.7	1059.3	1031.3	988.9	1027.1	1063.1	1122.1
45°	1763.2	1769.2	1773.9	1541.4	1388.9	1225.5	1197.1	1119.8	1154.4	1208.0	1298.1
47.5°	1949.4	1938.8	1947.1	1758.3	1597.5	1415.0	1378.3	1274.3	1306.4	1382.1	1519.1
50°	2166.3	2161.3	2123.5	2041.4	1849.5	1607.3	1559.2	1435.4	1482.4	1583.5	1792.0
52.5°	2360.8	2334.4	2304.9	2264.0	2097.3	1801.8	1740.9	1603.2	1689.3	1814.7	2130.7
55°	2431.9	2414.2	2449.7	2502.7	2359.7	2000.1	1932.0	1798.9	1923.0	2079.2	2529.3
57.5°	2507.6	2513.7	2594.0	2701.0	2607.9	2211.7	2137.8	2030.4	2179.1	2375.2	2974.7
60°	2545.5	2569.7	2729.8	2930.8	2844.1	2443.7	2372.9	2296.4	2463.4	2702.2	3418.9
62.5°	2552.0	2584.4	2811.1	3011.4	3169.2	2799.0	2717.3	2634.5	2818.4	3063.6	3740.6
65°	2433.9	2483.8	2803.9	3110.5	3465.4	3392.8	3341.0	3196.4	3293.7	3381.9	3795.5
67.5°	2086.8	2141.3	2526.5	3069.6	3703.2	4008.9	3999.1	3785.8	3660.7	3504.8	3388.6
70°	1531.6	1575.5	1945.6	2624.2	3599.4	4492.6	4510.0	4167.5	3763.3	3243.7	2519.7
71°	1238.7	1276.4	1625.4	2329.7	3397.4	4517.7	4553.9	4184.5	3656.6	3007.9	2109.5
72.5°	771.0	792.1	1079.4	1758.3	2925.4	4260.2	4321.5	3966.5	3320.6	2542.5	1491.1
75°	291.0	299.4	400.4	775.4	1746.2	3200.5	3274.7	2997.7	2332.8	1451.4	624.1
77.5°	156.3	160.5	198.8	322.5	699.8	1834.8	1930.1	1709.9	1119.2	507.8	255.1
80°	104.8	107.5	137.3	191.1	321.7	698.6	778.2	686.4	418.9	289.9	181.7
82.5°	67.7	69.3	93.5	125.6	207.8	245.7	280.5	293.0	261.4	207.8	109.8
85°	44.7	45.8	61.7	80.2	128.7	121.1	124.1	162.4	178.2	137.0	56.0
87.5°	25.7	26.4	37.0	41.3	57.9	45.5	49.1	77.2	106.0	89.3	32.1
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°	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5	694.5
2.5°	685.7	682.8	675.9	671.7	669.9	669.1	668.3	669.9	669.9	669.1	667.6
5°	673.2	667.6	656.2	648.4	644.1	643.0	644.5	646.4	647.6	647.6	646.4
7.5°	664.2	655.9	640.7	629.8	623.4	621.4	625.6	632.4	637.0	639.1	639.6
10°	656.6	645.2	628.6	617.2	612.0	611.2	616.6	625.2	634.7	638.8	639.6
12.5°	649.8	637.0	618.7	608.1	604.4	606.3	613.5	621.4	632.4	638.4	638.8
15°	643.3	630.1	610.9	599.9	599.1	602.1	608.9	615.3	623.7	631.3	631.3
17.5°	635.8	621.4	601.4	591.1	591.1	593.9	598.3	601.7	607.1	614.2	613.8
20°	626.7	612.0	591.5	580.9	578.6	577.1	577.1	577.9	582.5	588.9	590.0
22.5°	619.9	604.8	583.2	570.4	560.1	550.2	546.1	544.5	548.8	554.8	556.3
25°	619.9	604.8	580.5	559.0	533.9	515.0	507.2	504.9	509.0	514.7	517.1
27.5°	630.1	615.0	586.6	548.8	502.9	472.6	463.3	461.3	465.1	469.7	471.9
30°	653.9	639.1	603.9	537.0	468.5	428.9	418.3	416.3	418.3	420.1	422.8
32.5°	693.7	681.2	632.4	526.4	433.8	389.1	376.2	373.1	373.8	374.3	376.5
35°	758.4	752.8	670.2	513.9	400.8	356.5	343.3	337.2	336.8	338.7	341.3
37.5°	857.5	861.0	719.0	495.8	373.5	333.5	320.1	314.1	311.1	314.8	318.0
40°	997.6	1005.5	775.4	471.1	351.2	319.8	305.8	300.1	296.0	294.8	296.3
42.5°	1179.7	1177.4	833.0	439.8	327.0	310.8	296.0	289.9	283.1	274.3	272.5
45°	1395.4	1362.8	881.0	401.2	299.4	302.0	287.0	278.5	267.9	255.1	253.6
47.5°	1650.1	1560.3	910.5	359.9	273.5	290.6	276.7	263.8	248.2	240.0	238.8
50°	1957.0	1791.7	931.3	318.0	250.5	276.3	262.2	245.3	230.1	227.8	227.5
52.5°	2320.3	2064.5	957.1	280.0	232.4	257.8	247.9	230.4	218.4	219.5	219.5
55°	2706.7	2346.8	957.8	250.2	216.5	236.1	237.3	223.3	213.8	217.7	218.7
57.5°	3059.0	2593.6	882.6	229.0	201.4	219.2	234.0	225.9	218.7	231.9	233.2
60°	3366.4	2783.5	720.6	211.5	188.8	212.7	241.5	242.2	240.7	276.7	279.2
62.5°	3478.7	2785.4	511.7	196.7	182.0	216.5	257.3	258.5	258.5	291.8	296.7
65°	3321.3	2553.4	340.6	188.2	177.5	224.8	270.2	265.3	253.6	276.7	271.4
67.5°	2766.5	1987.7	249.0	182.5	171.1	225.2	281.6	269.1	249.0	268.7	259.6
70°	1901.3	1264.7	208.5	177.1	163.5	215.3	287.6	267.9	242.2	250.5	238.4
71°	1530.5	1009.3	198.0	175.3	160.5	209.7	288.3	266.5	238.8	244.0	233.2
72.5°	1008.3	621.8	185.0	171.1	155.9	199.8	286.5	263.0	234.3	234.7	227.5
75°	397.7	257.8	166.5	161.6	143.0	183.9	278.2	255.8	225.5	218.0	214.9
77.5°	200.9	168.4	146.4	148.4	128.0	167.6	266.5	244.0	213.5	203.2	200.9
80°	146.9	128.0	125.3	128.7	110.9	151.8	251.7	228.3	198.0	208.5	204.0
82.5°	89.3	78.0	98.0	106.3	92.8	135.5	234.3	209.7	178.2	164.2	159.0
85°	42.4	45.8	70.8	78.3	68.5	108.2	214.2	189.2	155.5	134.4	136.6
87.5°	20.9	25.3	40.5	47.0	45.1	79.4	161.6	146.9	122.6	101.1	98.8
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)