

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: P196315

Luminaire Tested: **NAV-AF-01-D-UNV-T3-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196315
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6857.9 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

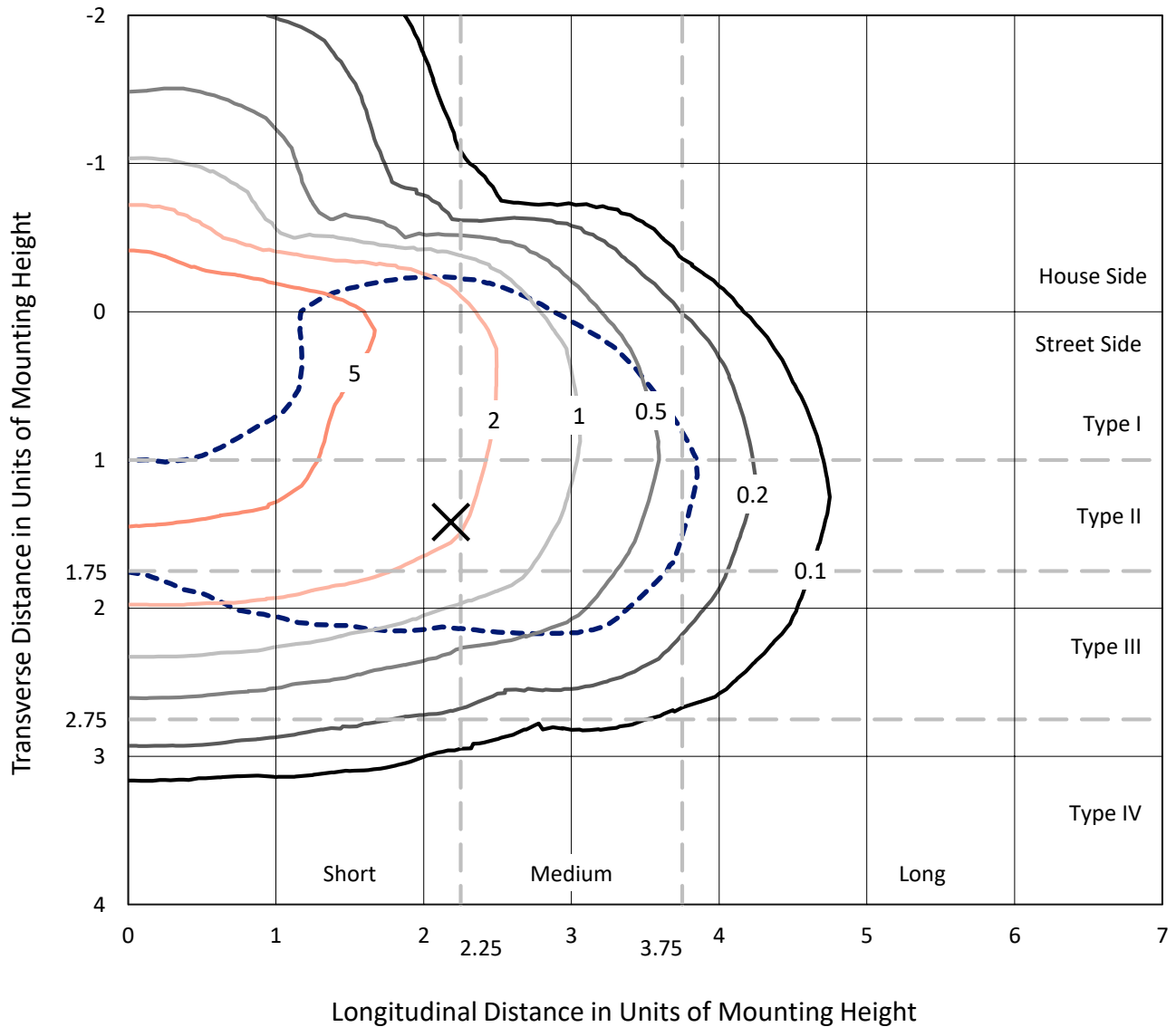
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

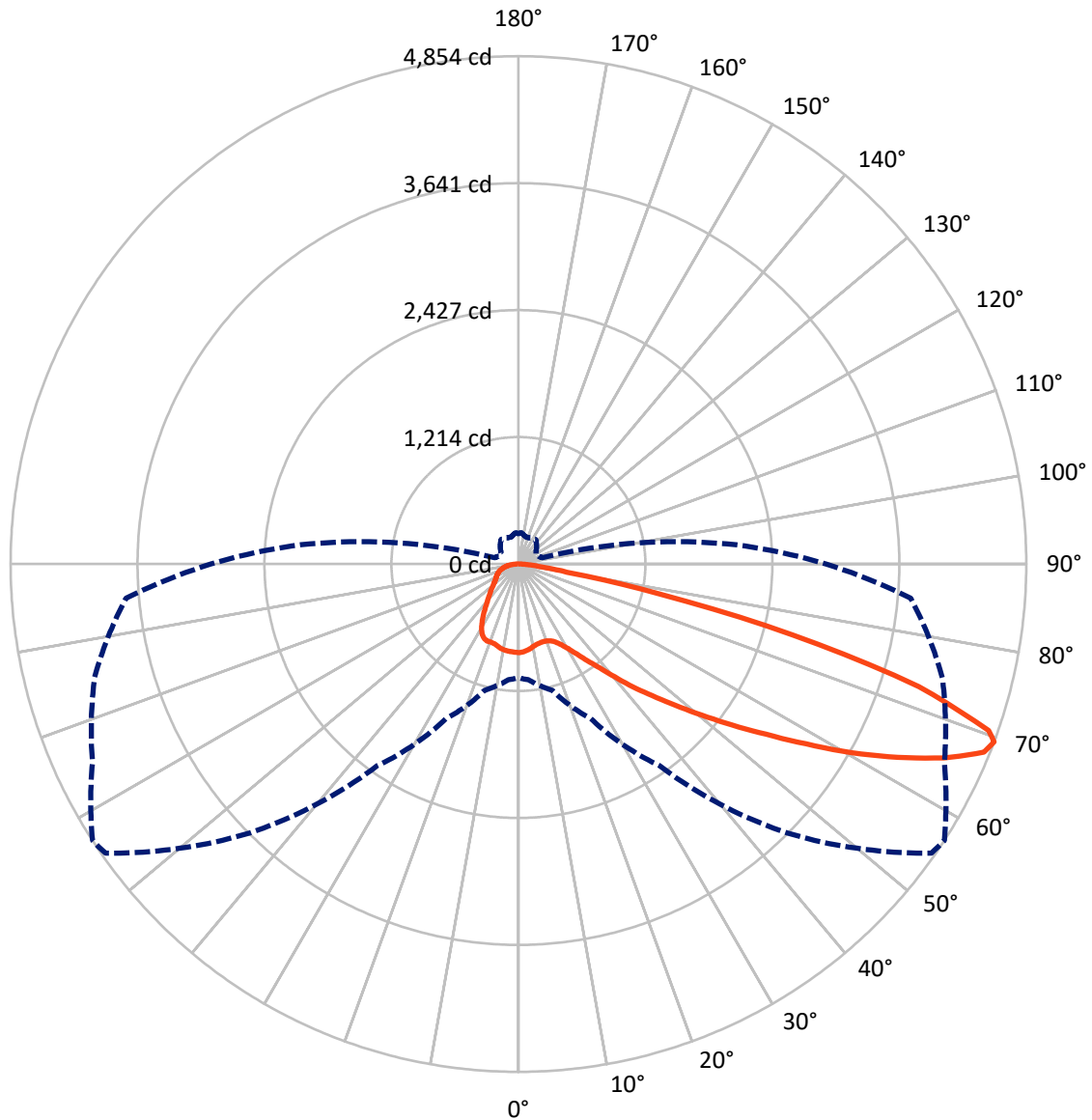
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.7 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1513.3	0.0	1513.3
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	5344.6	0.0	5344.6
	% Fixture	77.9	0.0	77.9
Total	Lumens	6857.9	0.0	6857.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.3	1.2
10°-20°	225.6	3.3
20°-30°	375.2	5.5
30°-40°	612.7	8.9
40°-50°	1034.1	15.1
50°-60°	1608.6	23.5
60°-70°	1916.2	27.9
70°-80°	892.7	13.0
80°-90°	113.5	1.7
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°	6857.9	100.0
0°-180°	6857.9	100.0



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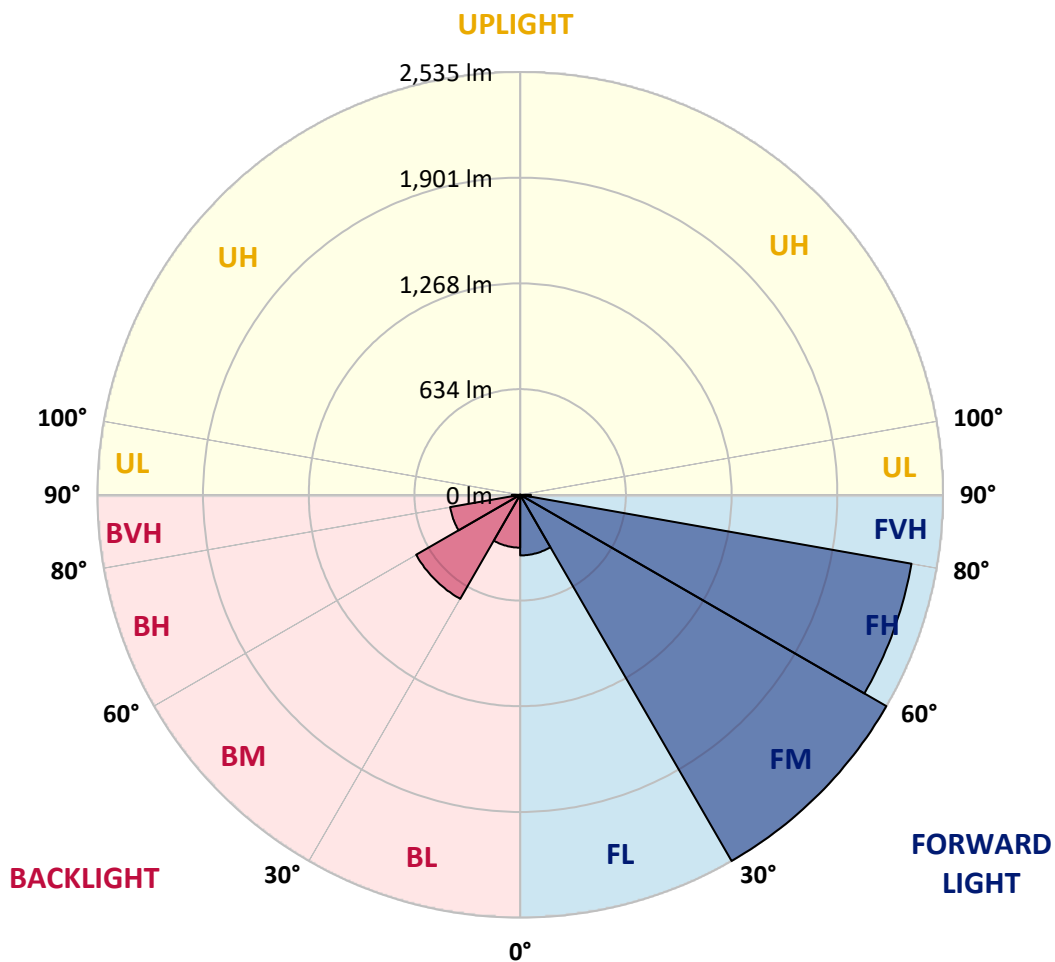
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	363.2	5.3			
FM	(30°-60°)	2535.1	37.0			
FH	(60°-80°)	2382.4	34.7			G2/5000
FVH	(80°-90°)	63.8	0.9			G1/100
BL	(0°-30°)	316.9	4.6	B1/500		
BM	(30°-60°)	720.2	10.5	B1/1000		
BH	(60°-80°)	426.4	6.2	B1/500		G1/500
BVH	(80°-90°)	49.7	0.7			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	847.3	847.3	847.3	847.3	847.3	847.3	847.3	847.3	847.3	847.3	847.3
2.5°	842.5	842.5	844.8	844.8	844.8	843.8	841.2	842.1	840.4	839.0	836.8
5°	825.4	826.2	828.9	829.8	831.1	831.6	831.6	831.1	831.6	831.6	830.2
7.5°	801.7	802.6	805.7	807.4	811.4	814.9	816.6	816.6	818.8	820.6	821.0
10°	787.2	787.2	789.0	789.0	792.1	793.8	799.5	799.0	805.2	810.9	813.6
12.5°	785.4	785.4	784.6	781.5	779.7	779.3	785.0	785.9	795.1	805.2	810.1
15°	791.2	791.2	788.5	782.4	775.8	772.7	778.5	780.2	790.2	802.1	809.6
17.5°	809.6	809.2	803.4	791.2	779.7	774.9	776.6	778.5	787.7	801.3	810.5
20°	850.4	850.4	838.1	815.7	796.0	784.6	781.9	783.3	789.8	802.6	814.5
22.5°	922.0	923.3	901.3	864.5	830.6	806.5	796.0	797.3	800.4	812.6	825.8
25°	1027.3	1023.9	992.7	940.4	887.7	846.5	825.0	826.2	826.2	837.7	851.3
27.5°	1138.9	1139.8	1095.0	1038.8	969.5	908.0	873.7	873.3	872.8	883.8	898.3
30°	1264.9	1265.3	1213.5	1148.6	1069.1	990.5	939.1	938.7	934.8	948.4	967.2
32.5°	1402.8	1402.3	1342.1	1268.9	1180.6	1091.5	1024.7	1024.3	1021.2	1039.6	1062.4
35°	1555.5	1555.5	1495.9	1405.4	1310.1	1210.9	1133.6	1133.1	1135.0	1159.9	1181.5
37.5°	1739.5	1743.4	1671.4	1561.6	1457.6	1351.8	1261.8	1259.2	1246.1	1288.2	1323.7
40°	1931.3	1942.4	1867.7	1739.5	1627.1	1517.8	1418.5	1416.8	1405.4	1450.1	1507.7
42.5°	2139.0	2164.1	2081.1	1950.3	1827.7	1709.7	1610.0	1605.1	1561.2	1631.1	1721.0
45°	2411.2	2427.5	2307.2	2188.6	2073.2	1938.4	1819.8	1793.9	1750.1	1839.6	1956.4
47.5°	2596.6	2588.6	2513.5	2434.1	2359.8	2230.7	2048.6	2015.6	1962.1	2080.7	2209.3
50°	2711.5	2717.3	2675.1	2671.1	2667.2	2577.2	2306.8	2267.3	2205.3	2345.8	2496.0
52.5°	2787.5	2761.6	2769.0	2858.6	2967.1	2924.0	2598.7	2554.8	2491.1	2631.6	2801.1
55°	2755.9	2721.7	2790.6	2967.1	3222.2	3231.8	2919.2	2874.0	2819.6	2935.5	3168.2
57.5°	2625.1	2642.2	2751.0	2996.4	3396.4	3507.5	3287.6	3241.4	3134.3	3252.0	3516.7
60°	2441.1	2475.7	2642.2	2950.0	3518.5	3722.2	3691.9	3661.1	3476.8	3560.2	3882.9
62.5°	2243.5	2277.8	2482.4	2870.5	3463.6	3912.3	4088.8	4069.9	3854.8	3857.0	4115.1
65°	1951.6	1965.6	2174.6	2653.5	3311.3	4084.0	4486.2	4469.5	4216.2	4110.3	4180.2
67.5°	1473.9	1491.5	1663.1	2094.7	2847.7	3990.9	4803.6	4800.9	4433.5	4204.3	4025.6
69°	1088.4	1109.9	1249.9	1626.2	2354.6	3636.2	4818.5	4854.1	4492.3	4194.6	3764.4
70°	796.5	821.0	950.5	1290.8	1961.2	3244.5	4690.7	4767.2	4469.9	4133.6	3560.7
72.5°	338.5	346.9	410.5	582.6	994.9	1956.4	3842.1	4002.8	4037.0	3703.8	2781.8
75°	212.1	214.7	239.7	299.0	442.5	809.2	2488.0	2707.1	3014.0	2873.6	1862.4
77.5°	159.8	162.0	176.5	205.9	274.9	302.1	1154.3	1376.4	1726.3	1690.3	926.8
80°	122.4	123.8	133.5	149.8	193.6	189.2	374.5	470.7	720.5	635.8	328.0
82.5°	96.2	96.6	105.0	108.0	135.2	127.4	187.9	209.4	291.1	241.9	160.3
85°	85.2	86.5	94.8	79.1	86.5	76.8	103.2	111.9	154.6	145.8	60.6
87.5°	43.5	45.6	79.5	67.6	43.5	36.4	45.2	48.7	62.8	68.0	29.5
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°	847.3	847.3	847.3	847.3	847.3	847.3	847.3	847.3	847.3	847.3	847.3
2.5°	837.3	837.7	839.0	841.2	844.8	849.2	854.4	859.7	862.8	864.9	864.1
5°	830.2	830.6	833.3	837.3	841.7	848.2	857.0	863.6	868.4	871.6	871.0
7.5°	821.4	822.8	828.1	832.5	838.6	843.8	850.9	857.0	861.8	864.9	864.5
10°	814.9	816.2	822.8	828.5	833.7	834.6	833.3	831.6	831.1	833.3	832.5
12.5°	811.8	814.5	820.6	824.5	822.4	814.0	804.3	800.4	799.0	803.4	803.9
15°	812.6	814.9	820.1	817.5	805.7	791.6	786.3	789.4	792.1	794.6	795.1
17.5°	814.9	816.2	817.5	807.8	791.2	781.9	780.2	777.1	769.2	764.9	764.3
20°	818.8	820.6	818.4	803.0	788.1	775.8	754.7	735.8	717.8	708.2	704.2
22.5°	832.5	833.7	827.2	812.2	789.4	749.4	706.9	674.3	646.7	631.8	626.0
25°	859.2	861.4	852.2	833.3	773.6	703.8	643.6	599.8	565.1	547.1	542.3
27.5°	906.2	908.4	898.3	849.2	736.7	642.7	569.9	526.4	496.5	481.2	479.0
30°	976.4	979.5	970.3	848.6	680.6	565.1	497.9	472.4	455.3	444.8	444.3
32.5°	1073.9	1085.4	1047.6	833.7	611.1	486.4	443.4	434.7	426.3	419.3	419.3
35°	1197.7	1224.5	1123.9	802.6	534.8	432.9	413.2	404.8	394.2	386.8	386.0
37.5°	1345.7	1387.4	1178.4	747.3	468.9	407.0	394.7	381.0	364.4	350.0	346.4
40°	1549.0	1558.6	1205.1	657.2	419.7	392.9	377.6	360.5	339.4	323.2	321.4
42.5°	1753.1	1721.5	1199.9	560.7	391.6	380.2	360.0	341.2	322.2	308.6	308.6
45°	1985.3	1863.7	1159.9	463.6	366.1	365.7	343.8	325.8	311.3	301.2	299.0
47.5°	2207.5	1991.5	1091.0	392.1	339.8	351.3	333.3	318.8	305.6	295.9	294.2
50°	2477.1	2139.5	1017.7	342.0	314.4	338.5	328.9	321.4	308.6	292.0	290.2
52.5°	2744.9	2312.5	961.1	304.2	292.0	328.4	331.4	332.4	320.5	288.1	285.8
55°	3032.4	2497.3	901.3	274.9	273.5	323.6	337.7	336.8	331.0	288.9	285.4
57.5°	3306.0	2683.0	812.2	254.2	259.0	318.8	338.9	324.9	314.8	293.3	287.6
60°	3532.6	2836.6	681.4	239.7	246.7	309.1	330.2	309.1	292.0	292.4	287.1
62.5°	3642.7	2879.7	521.2	223.0	236.6	293.3	317.4	297.3	281.4	294.2	291.1
65°	3558.8	2757.2	371.4	207.7	224.3	274.9	310.0	287.1	276.2	302.9	299.4
67.5°	3257.7	2423.6	269.5	194.1	212.5	255.9	295.9	277.9	270.9	309.5	301.7
69°	2937.6	2092.4	233.5	186.2	204.2	245.8	286.7	273.1	266.9	300.3	288.9
70°	2671.5	1837.4	215.5	181.4	197.1	240.2	279.7	270.1	263.0	289.3	275.7
72.5°	1915.6	1187.6	181.4	166.8	178.7	227.4	264.3	258.6	248.1	261.3	252.5
75°	1157.4	619.9	154.1	151.9	159.4	209.9	246.3	239.3	228.7	230.1	225.7
77.5°	531.7	286.2	129.1	134.3	139.2	187.9	224.3	216.5	206.8	203.3	203.7
80°	233.1	167.3	108.0	114.6	117.2	169.0	200.6	191.9	181.4	200.2	185.7
82.5°	126.0	97.1	84.3	88.7	96.2	147.1	174.3	162.9	152.8	177.8	143.5
85°	50.9	49.6	57.1	61.5	66.7	105.8	145.8	133.9	121.6	108.8	106.3
87.5°	22.0	23.7	28.1	29.9	35.6	65.9	97.9	85.6	86.0	73.8	72.4
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)