

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: P196855

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196855
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-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4717.8 lumens
Efficiency: N/A
Efficacy: 107.2 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

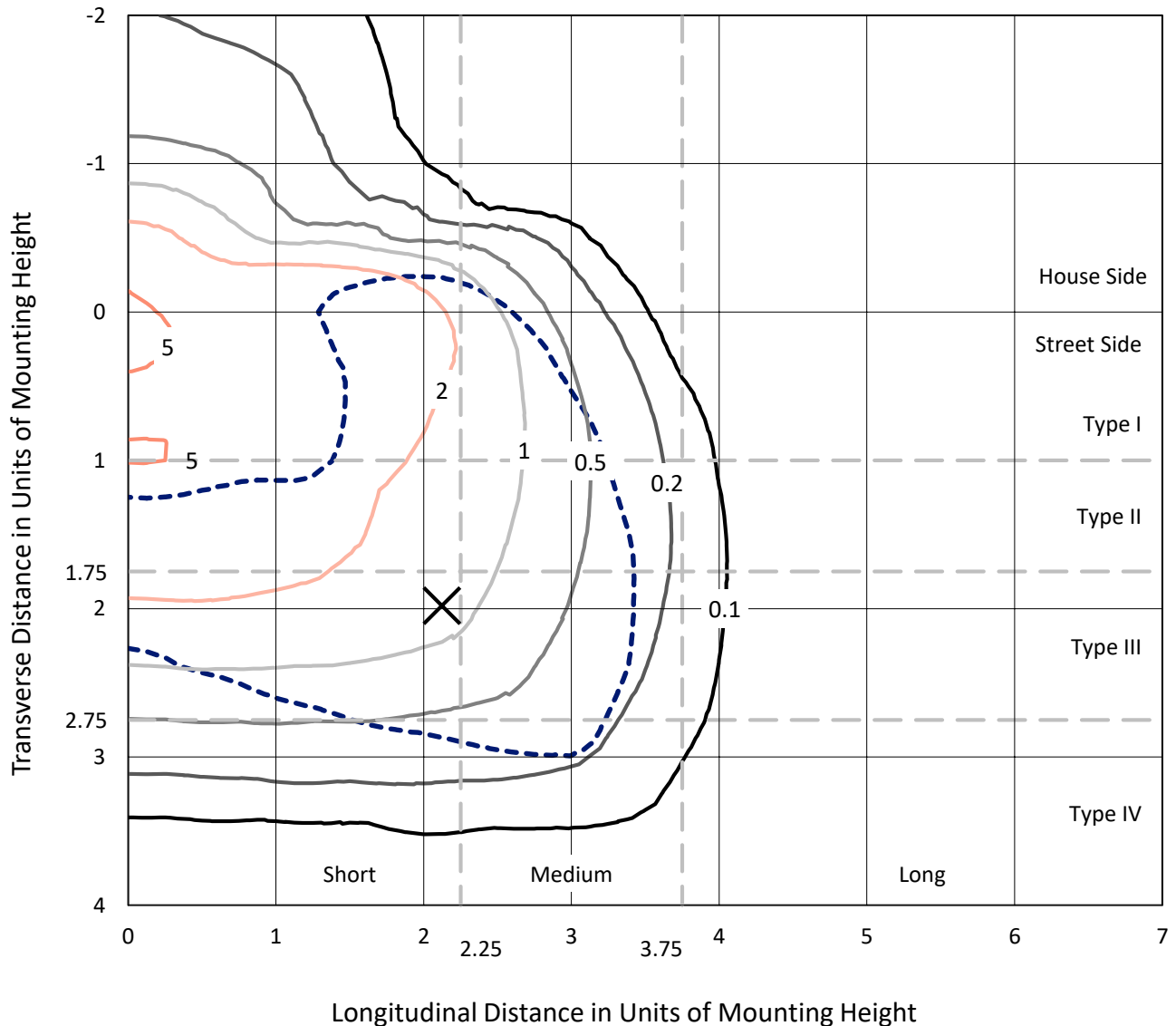
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

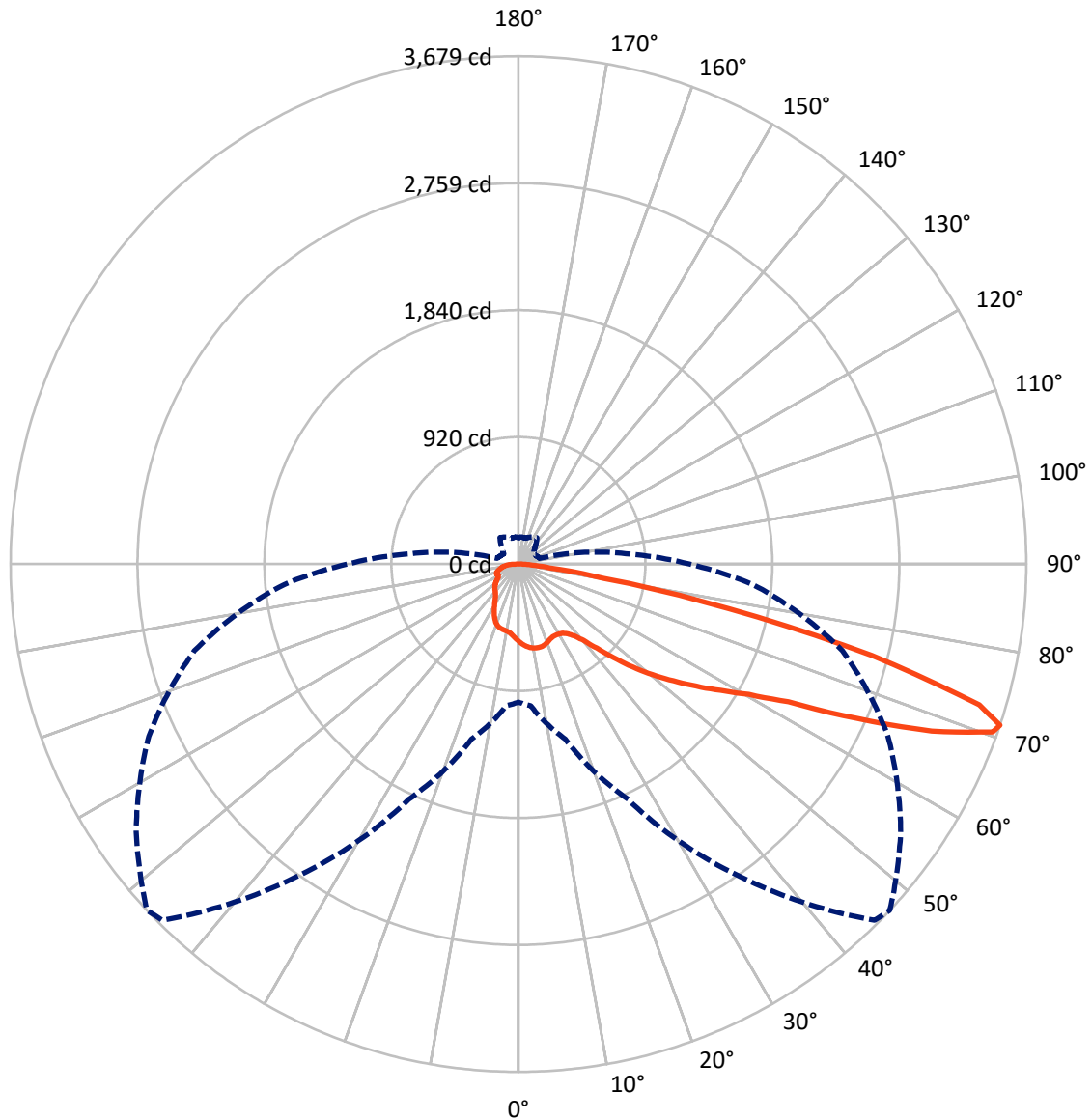
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.4 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	1011.1	0.0	1011.1
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	3706.7	0.0	3706.7
	% Fixture	78.6	0.0	78.6
Total	Lumens	4717.8	0.0	4717.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.6	1.1
10°-20°	156.7	3.3
20°-30°	232.9	4.9
30°-40°	334.4	7.1
40°-50°	592.8	12.6
50°-60°	1014.4	21.5
60°-70°	1440.2	30.5
70°-80°	788.8	16.7
80°-90°	104.1	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°	4717.8	100.0
0°-180°	4717.8	100.0



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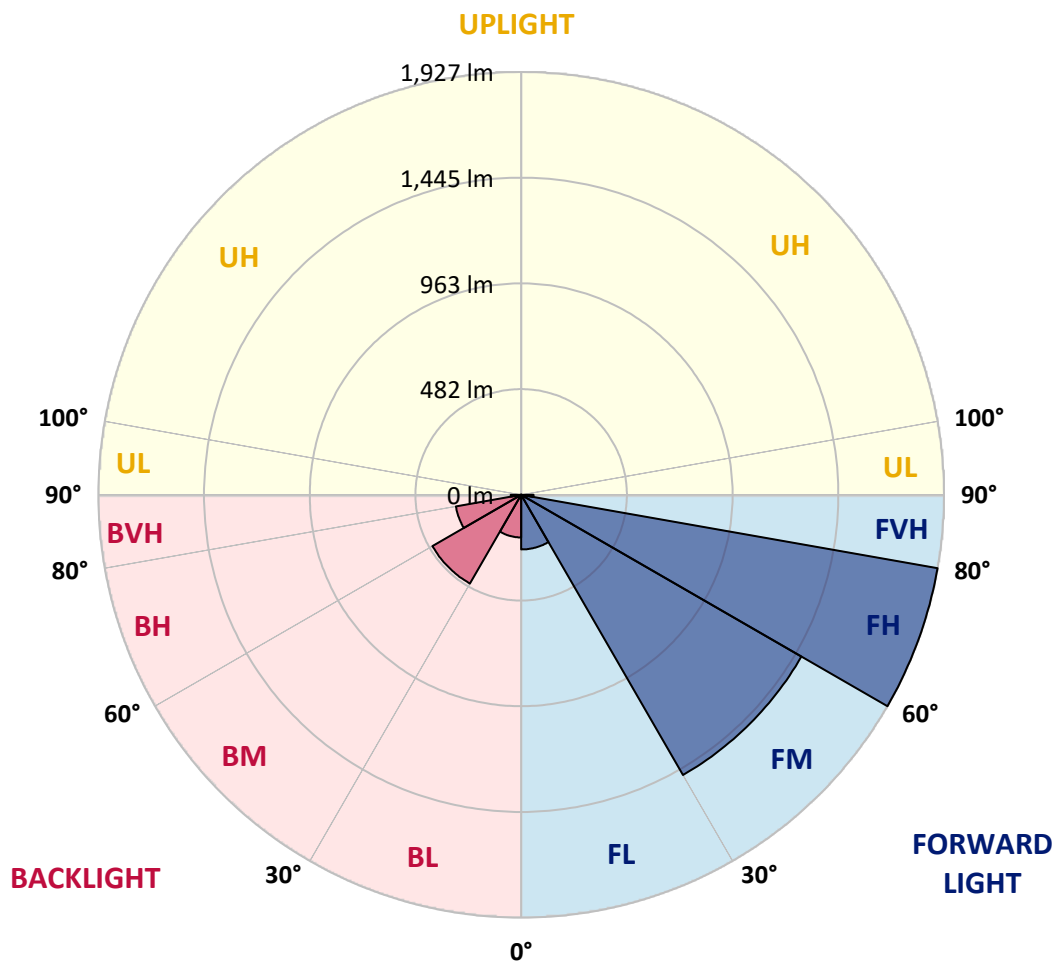
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	249.0	5.3			
FM	(30°-60°)	1474.5	31.3			
FH	(60°-80°)	1926.8	40.8			G2/5000
FVH	(80°-90°)	56.5	1.2			G1/100
BL	(0°-30°)	194.2	4.1	B1/500		
BM	(30°-60°)	467.2	9.9	B1/1000		
BH	(60°-80°)	302.1	6.4	B1/500		G1/500
BVH	(80°-90°)	47.6	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°	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0
2.5°	595.3	594.1	594.7	592.5	587.3	581.8	581.8	576.1	569.9	563.8	557.0
5°	632.3	630.4	628.9	622.1	612.1	600.8	599.0	587.3	574.8	562.2	550.0
7.5°	663.1	661.3	656.7	644.5	629.8	613.1	610.9	595.6	579.1	561.6	544.5
10°	685.2	684.0	675.1	659.5	642.3	622.4	618.9	603.2	583.7	561.9	540.3
12.5°	697.4	695.6	684.8	666.5	646.4	626.2	622.4	607.5	585.2	561.4	535.9
15°	692.4	691.6	681.4	662.8	642.7	625.2	622.1	606.9	584.2	559.2	532.0
17.5°	671.7	673.8	665.9	647.6	631.1	618.9	615.4	601.0	579.7	554.0	525.9
20°	643.0	645.4	641.5	622.8	613.3	605.4	603.5	591.8	572.1	546.4	518.6
22.5°	612.4	614.6	614.8	597.4	594.4	591.3	589.8	581.5	565.3	541.8	513.6
25°	591.3	593.8	594.4	579.1	580.9	581.8	581.5	575.7	564.1	541.8	514.3
27.5°	585.7	587.0	586.4	572.3	575.7	580.9	581.3	579.9	569.0	547.8	522.8
30°	604.8	605.4	597.7	576.7	579.9	586.7	587.0	586.4	579.4	563.8	542.0
32.5°	686.7	686.0	659.8	605.4	593.8	596.2	597.1	602.6	603.2	590.1	569.9
35°	811.5	811.1	780.5	687.6	632.8	620.0	621.2	629.8	637.4	628.6	617.0
37.5°	948.7	949.6	931.0	805.0	717.3	663.8	662.5	669.0	682.8	685.8	687.4
40°	1101.0	1105.6	1104.6	939.8	835.7	738.4	726.1	718.8	745.3	762.2	783.9
42.5°	1274.9	1273.8	1274.3	1087.7	970.8	855.7	833.1	798.9	829.9	858.8	906.6
45°	1424.4	1429.3	1432.9	1245.2	1122.1	990.0	967.1	904.6	932.5	975.9	1048.7
47.5°	1574.9	1566.3	1573.0	1420.5	1290.5	1143.2	1113.5	1029.4	1055.5	1116.5	1227.2
50°	1750.0	1746.1	1715.5	1649.2	1494.1	1298.4	1259.6	1159.7	1197.6	1279.2	1447.6
52.5°	1907.2	1885.9	1861.9	1828.9	1694.4	1455.7	1406.3	1295.0	1364.7	1466.0	1721.3
55°	1964.7	1950.3	1979.0	2021.9	1906.2	1615.8	1560.8	1453.1	1553.4	1679.8	2043.2
57.5°	2025.7	2030.7	2095.5	2182.0	2106.8	1786.7	1727.1	1640.3	1760.3	1918.8	2403.0
60°	2056.4	2075.9	2205.3	2367.6	2297.6	1974.1	1917.0	1855.2	1990.0	2183.0	2762.1
62.5°	2061.6	2087.8	2271.1	2432.7	2560.3	2261.2	2195.2	2128.3	2276.9	2474.9	3021.9
65°	1966.2	2006.5	2265.2	2512.9	2799.7	2740.9	2699.0	2582.3	2660.8	2732.0	3066.3
67.5°	1685.9	1729.9	2041.1	2479.8	2991.6	3238.7	3230.7	3058.2	2957.4	2831.5	2737.6
70°	1237.4	1272.8	1571.8	2119.9	2907.8	3629.4	3643.5	3366.9	3040.2	2620.5	2035.6
71°	1000.7	1031.3	1313.2	1882.1	2744.6	3649.6	3679.0	3380.5	2954.1	2430.0	1704.2
72.5°	622.8	639.9	872.0	1420.5	2363.4	3441.6	3491.2	3204.5	2682.6	2054.0	1204.6
75°	235.1	241.8	323.5	626.5	1410.6	2585.6	2645.5	2421.7	1884.6	1172.5	504.1
77.5°	126.3	129.6	160.5	260.5	565.3	1482.2	1559.2	1381.4	904.0	410.3	206.1
80°	84.6	86.9	111.0	154.4	259.9	564.5	628.6	554.6	338.4	234.2	146.7
82.5°	54.7	55.9	75.5	101.5	167.8	198.5	226.6	236.6	211.3	167.8	88.6
85°	36.0	37.0	49.8	64.8	103.9	97.8	100.3	131.1	144.0	110.7	45.3
87.5°	20.8	21.5	29.9	33.4	46.8	36.7	39.8	62.4	85.7	72.1	26.0
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°	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0
2.5°	554.0	551.5	546.1	542.7	541.2	540.5	540.0	541.2	541.2	540.5	539.3
5°	543.9	539.3	530.1	523.7	520.4	519.4	520.6	522.1	523.2	523.2	522.1
7.5°	536.6	529.8	517.6	508.7	503.5	502.0	505.5	510.9	514.5	516.4	516.7
10°	530.5	521.2	507.8	498.7	494.4	493.8	498.0	505.1	512.8	516.0	516.7
12.5°	525.0	514.5	499.9	491.3	488.3	489.8	495.6	502.0	510.9	515.8	516.0
15°	519.7	509.0	493.5	484.6	484.0	486.4	491.8	497.1	503.9	510.0	510.0
17.5°	513.6	502.0	485.7	477.6	477.6	479.6	483.4	486.1	490.3	496.2	495.9
20°	506.3	494.4	477.9	469.3	467.5	466.2	466.2	466.9	470.6	475.8	476.7
22.5°	500.9	488.6	471.1	460.7	452.5	444.5	441.2	440.0	443.3	448.2	449.4
25°	500.9	488.6	469.0	451.6	431.3	416.1	409.7	407.9	411.3	415.8	417.6
27.5°	509.0	496.8	473.8	443.3	406.3	381.9	374.2	372.7	375.8	379.4	381.2
30°	528.3	516.4	488.0	433.9	378.5	346.4	337.8	336.3	337.8	339.4	341.6
32.5°	560.4	550.3	510.9	425.2	350.4	314.3	303.8	301.4	302.1	302.3	304.2
35°	612.7	608.1	541.5	415.1	323.7	288.0	277.3	272.4	272.0	273.5	275.8
37.5°	692.8	695.6	580.9	400.6	301.8	269.4	258.6	253.8	251.3	254.3	256.9
40°	805.9	812.4	626.5	380.7	283.7	258.4	247.0	242.4	239.1	238.1	239.4
42.5°	953.0	951.1	672.9	355.3	264.2	251.0	239.1	234.2	228.7	221.7	220.1
45°	1127.2	1101.0	711.8	324.1	241.8	243.9	231.7	225.1	216.5	206.1	204.9
47.5°	1333.0	1260.6	735.7	290.7	221.0	234.8	223.6	213.0	200.6	193.8	193.0
50°	1581.0	1447.3	752.5	256.9	202.3	223.2	211.9	198.1	185.8	184.1	183.8
52.5°	1874.5	1667.9	773.2	226.2	187.7	208.2	200.3	186.2	176.5	177.3	177.3
55°	2186.6	1895.8	773.8	202.1	175.0	190.7	191.7	180.4	172.7	175.8	176.7
57.5°	2471.2	2095.3	713.0	184.9	162.7	177.0	188.9	182.6	176.7	187.4	188.4
60°	2719.6	2248.7	582.2	170.9	152.5	171.9	195.0	195.7	194.5	223.6	225.6
62.5°	2810.3	2250.2	413.3	159.0	147.1	175.0	207.9	208.8	208.8	235.7	239.8
65°	2683.2	2062.9	275.2	152.0	143.3	181.6	218.3	214.3	204.9	223.6	219.2
67.5°	2234.9	1605.8	201.1	147.4	138.2	181.9	227.5	217.4	201.1	217.1	209.8
70°	1536.0	1021.8	168.5	143.1	132.1	173.9	232.4	216.5	195.7	202.3	192.7
71°	1236.4	815.4	159.8	141.6	129.6	169.4	232.9	215.2	193.0	197.2	188.4
72.5°	814.5	502.4	149.4	138.2	125.9	161.3	231.4	212.5	189.2	189.6	183.8
75°	321.3	208.2	134.5	130.6	115.6	148.6	224.7	206.7	182.3	176.1	173.6
77.5°	162.4	136.0	118.3	119.8	103.4	135.5	215.2	197.2	172.4	164.2	162.4
80°	118.6	103.4	101.2	103.9	89.6	122.6	203.3	184.3	159.8	168.5	164.8
82.5°	72.1	63.0	79.2	85.9	75.0	109.5	189.2	169.4	144.0	132.6	128.4
85°	34.2	37.0	57.2	63.3	55.2	87.4	173.0	152.9	125.6	108.5	110.4
87.5°	16.8	20.4	32.7	37.9	36.4	64.3	130.6	118.6	99.1	81.6	79.8
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)