

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: P197269

Luminaire Tested: **NAV-AF-01-D-UNV-T3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197269
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-T3-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4987 lumens
Efficiency: N/A
Efficacy: 84.5 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 - G1

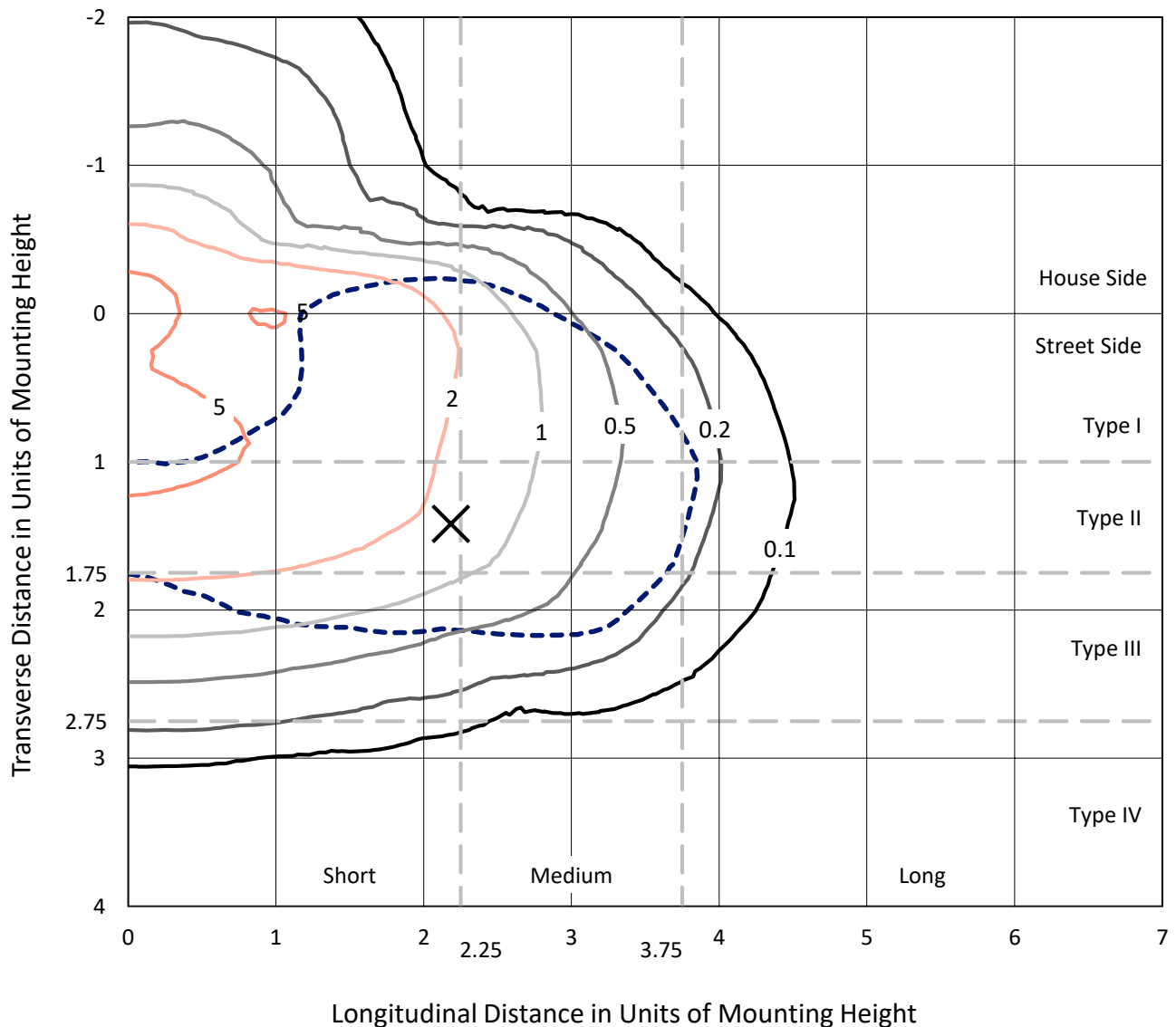
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

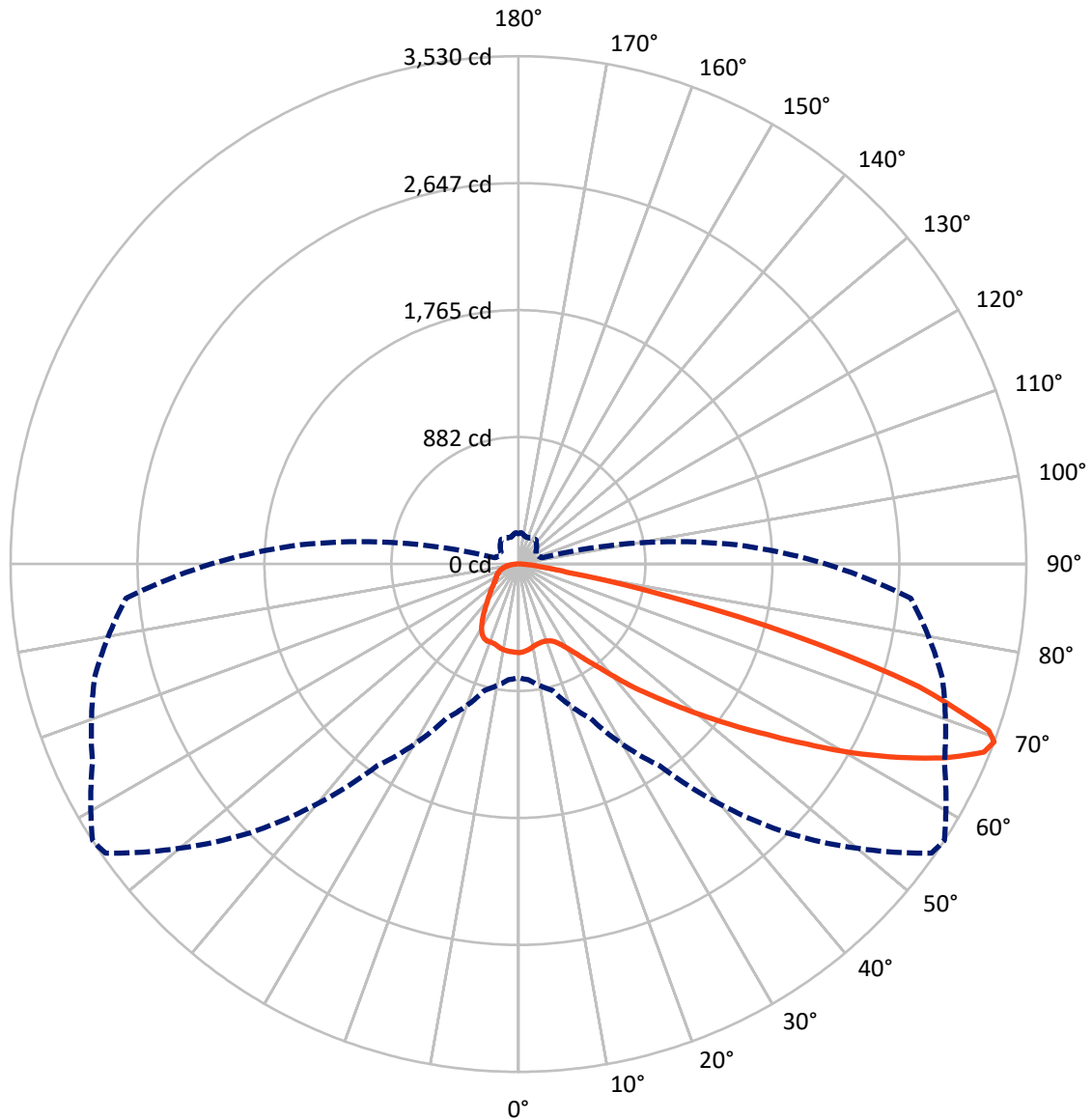
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.3 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	1100.5	0.0	1100.5
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	3886.5	0.0	3886.5
	% Fixture	77.9	0.0	77.9
Total	Lumens	4987.0	0.0	4987.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.7	1.2
10°-20°	164.0	3.3
20°-30°	272.8	5.5
30°-40°	445.6	8.9
40°-50°	752.0	15.1
50°-60°	1169.8	23.5
60°-70°	1393.4	27.9
70°-80°	649.1	13.0
80°-90°	82.6	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°	4987.0	100.0
0°-180°	4987.0	100.0



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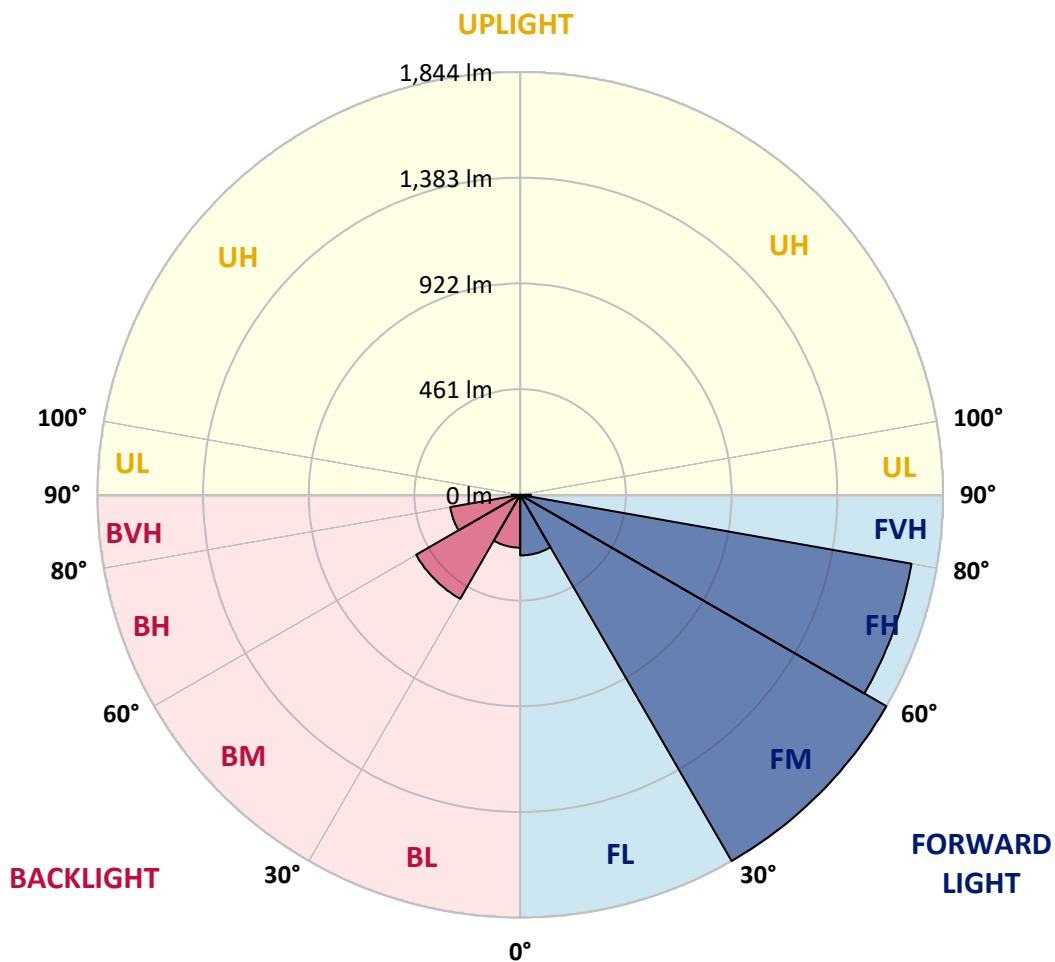
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	264.1	5.3			
FM	(30°-60°)	1843.5	37.0			
FH	(60°-80°)	1732.5	34.7			G1/1800
FVH	(80°-90°)	46.4	0.9			G1/100
BL	(0°-30°)	230.5	4.6	B1/500		
BM	(30°-60°)	523.8	10.5	B1/1000		
BH	(60°-80°)	310.1	6.2	B1/500		G1/500
BVH	(80°-90°)	36.2	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-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	616.2	616.2	616.2	616.2	616.2	616.2	616.2	616.2	616.2	616.2	616.2
2.5°	612.7	612.7	614.3	614.3	614.3	613.6	611.7	612.4	611.1	610.1	608.5
5°	600.2	600.9	602.8	603.4	604.4	604.7	604.7	604.4	604.7	604.7	603.7
7.5°	583.0	583.6	585.9	587.1	590.0	592.6	593.8	593.8	595.4	596.7	597.0
10°	572.5	572.5	573.7	573.7	576.0	577.2	581.4	581.1	585.5	589.7	591.6
12.5°	571.2	571.2	570.5	568.3	567.0	566.7	570.9	571.5	578.2	585.5	589.1
15°	575.3	575.3	573.4	568.9	564.2	561.9	566.1	567.3	574.7	583.3	588.7
17.5°	588.7	588.4	584.3	575.3	567.0	563.5	564.8	566.1	572.8	582.7	589.4
20°	618.4	618.4	609.5	593.2	578.8	570.5	568.6	569.6	574.4	583.6	592.2
22.5°	670.5	671.4	655.5	628.6	604.1	586.5	578.8	579.8	582.0	591.0	600.5
25°	747.1	744.5	721.9	683.9	645.6	615.6	599.9	600.9	600.9	609.2	619.1
27.5°	828.2	828.8	796.3	755.4	704.9	660.3	635.3	635.0	634.7	642.7	653.2
30°	919.8	920.1	882.5	835.2	777.4	720.3	682.9	682.6	679.7	689.6	703.4
32.5°	1020.1	1019.8	976.0	922.7	858.5	793.7	745.2	744.9	742.6	756.0	772.6
35°	1131.2	1131.2	1087.8	1022.0	952.7	880.5	824.4	824.0	825.3	843.5	859.2
37.5°	1265.0	1267.8	1215.5	1135.6	1060.0	983.0	917.6	915.7	906.1	936.7	962.6
40°	1404.5	1412.5	1358.2	1265.0	1183.2	1103.7	1031.6	1030.3	1022.0	1054.6	1096.4
42.5°	1555.5	1573.7	1513.3	1418.2	1329.1	1243.2	1170.8	1167.3	1135.3	1186.1	1251.5
45°	1753.4	1765.2	1677.8	1591.6	1507.6	1409.6	1323.4	1304.5	1272.6	1337.7	1422.7
47.5°	1888.2	1882.4	1827.8	1770.0	1716.1	1622.2	1489.7	1465.8	1426.8	1513.0	1606.6
50°	1971.8	1976.0	1945.3	1942.4	1939.6	1874.1	1677.4	1648.7	1603.7	1705.9	1815.1
52.5°	2027.0	2008.2	2013.6	2078.8	2157.6	2126.3	1889.8	1857.8	1811.5	1913.7	2036.9
55°	2004.1	1979.2	2029.3	2157.6	2343.1	2350.2	2122.8	2089.9	2050.4	2134.6	2303.9
57.5°	1908.9	1921.4	2000.6	2179.0	2469.9	2550.7	2390.7	2357.2	2279.3	2364.8	2557.4
60°	1775.1	1800.4	1921.4	2145.2	2558.6	2706.8	2684.7	2662.4	2528.3	2589.0	2823.6
62.5°	1631.5	1656.4	1805.2	2087.4	2518.7	2845.0	2973.4	2959.6	2803.2	2804.8	2992.5
65°	1419.2	1429.4	1581.3	1929.7	2407.9	2969.9	3262.3	3250.2	3066.0	2989.0	3039.8
67.5°	1071.8	1084.6	1209.4	1523.2	2070.8	2902.2	3493.1	3491.2	3224.0	3057.3	2927.4
69°	791.5	807.1	909.0	1182.6	1712.2	2644.2	3504.0	3529.9	3266.8	3050.3	2737.4
70°	579.2	597.0	691.2	938.7	1426.2	2359.4	3411.1	3466.6	3250.5	3005.9	2589.3
72.5°	246.2	252.2	298.5	423.7	723.5	1422.7	2793.9	2910.8	2935.7	2693.4	2022.9
75°	154.2	156.1	174.3	217.4	321.8	588.4	1809.3	1968.6	2191.8	2089.6	1354.3
77.5°	116.2	117.8	128.3	149.7	199.9	219.7	839.4	1000.9	1255.4	1229.2	674.0
80°	89.1	90.0	97.1	108.9	140.8	137.6	272.3	342.3	523.9	462.3	238.5
82.5°	69.9	70.2	76.3	78.5	98.3	92.6	136.6	152.3	211.7	175.9	116.5
85°	61.9	62.9	69.0	57.5	62.9	55.9	75.0	81.4	112.4	106.0	44.1
87.5°	31.6	33.2	57.8	49.2	31.6	26.5	32.9	35.4	45.7	49.5	21.4
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°	616.2	616.2	616.2	616.2	616.2	616.2	616.2	616.2	616.2	616.2	616.2
2.5°	608.8	609.2	610.1	611.7	614.3	617.5	621.3	625.1	627.4	629.0	628.3
5°	603.7	604.1	606.0	608.8	612.0	616.8	623.2	628.0	631.5	633.8	633.4
7.5°	597.4	598.3	602.1	605.3	609.8	613.6	618.7	623.2	626.7	629.0	628.6
10°	592.6	593.5	598.3	602.5	606.3	606.9	606.0	604.7	604.4	606.0	605.3
12.5°	590.3	592.2	596.7	599.6	598.0	591.9	584.9	582.0	581.1	584.3	584.6
15°	591.0	592.6	596.4	594.5	585.9	575.6	571.8	574.0	576.0	577.9	578.2
17.5°	592.6	593.5	594.5	587.5	575.3	568.6	567.3	565.1	559.4	556.2	555.9
20°	595.4	596.7	595.1	583.9	573.1	564.2	548.8	535.1	522.0	515.0	512.1
22.5°	605.3	606.3	601.5	590.7	574.0	545.0	514.0	490.4	470.3	459.4	455.3
25°	624.8	626.4	619.7	606.0	562.6	511.8	468.1	436.1	410.9	397.8	394.3
27.5°	659.0	660.6	653.2	617.5	535.7	467.4	414.4	382.8	361.1	349.9	348.3
30°	710.1	712.3	705.6	617.2	494.9	410.9	362.1	343.5	331.1	323.4	323.1
32.5°	780.9	789.2	761.8	606.3	444.4	353.8	322.5	316.1	310.0	304.9	304.9
35°	871.0	890.4	817.3	583.6	388.9	314.8	300.4	294.4	286.7	281.3	280.6
37.5°	978.6	1008.9	856.9	543.4	341.0	296.0	287.0	277.1	265.0	254.5	251.9
40°	1126.4	1133.4	876.4	477.9	305.2	285.7	274.6	262.1	246.8	235.0	233.7
42.5°	1274.8	1251.9	872.6	407.7	284.8	276.5	261.8	248.1	234.3	224.4	224.4
45°	1443.7	1355.3	843.5	337.1	266.3	266.0	250.0	236.9	226.4	219.0	217.4
47.5°	1605.3	1448.2	793.4	285.1	247.1	255.4	242.3	231.8	222.2	215.2	213.9
50°	1801.3	1555.8	740.1	248.7	228.6	246.2	239.1	233.7	224.4	212.3	211.0
52.5°	1996.1	1681.6	698.9	221.3	212.3	238.8	241.0	241.7	233.1	209.4	207.8
55°	2205.2	1816.0	655.5	199.9	198.9	235.3	245.5	244.9	240.7	210.1	207.5
57.5°	2404.1	1951.1	590.7	184.9	188.4	231.8	246.5	236.3	228.9	213.3	209.1
60°	2568.9	2062.8	495.5	174.3	179.4	224.8	240.1	224.8	212.3	212.6	208.8
62.5°	2649.0	2094.1	379.0	162.2	172.1	213.3	230.8	216.1	204.7	213.9	211.7
65°	2588.0	2005.0	270.1	151.0	163.1	199.9	225.4	208.8	200.8	220.3	217.7
67.5°	2369.0	1762.4	196.0	141.1	154.5	186.1	215.2	202.1	197.0	225.1	219.3
69°	2136.2	1521.6	169.9	135.4	148.5	178.8	208.5	198.6	194.1	218.4	210.1
70°	1942.8	1336.1	156.8	131.9	143.4	174.6	203.4	196.4	191.2	210.4	200.5
72.5°	1393.0	863.6	131.9	121.3	129.9	165.4	192.2	188.1	180.4	190.0	183.6
75°	841.6	450.8	112.1	110.5	115.9	152.6	179.1	174.0	166.3	167.3	164.1
77.5°	386.6	208.2	93.9	97.7	101.2	136.6	163.1	157.4	150.4	147.8	148.1
80°	169.5	121.6	78.5	83.3	85.2	122.9	145.9	139.5	131.9	145.6	135.1
82.5°	91.6	70.6	61.3	64.5	69.9	107.0	126.8	118.4	111.1	129.3	104.4
85°	37.0	36.1	41.5	44.7	48.5	76.9	106.0	97.4	88.4	79.2	77.3
87.5°	16.0	17.2	20.4	21.7	25.9	47.9	71.2	62.3	62.6	53.6	52.7
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)