

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: P197155

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197155
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
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-SL4-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5217 lumens
Efficiency: N/A
Efficacy: 77.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

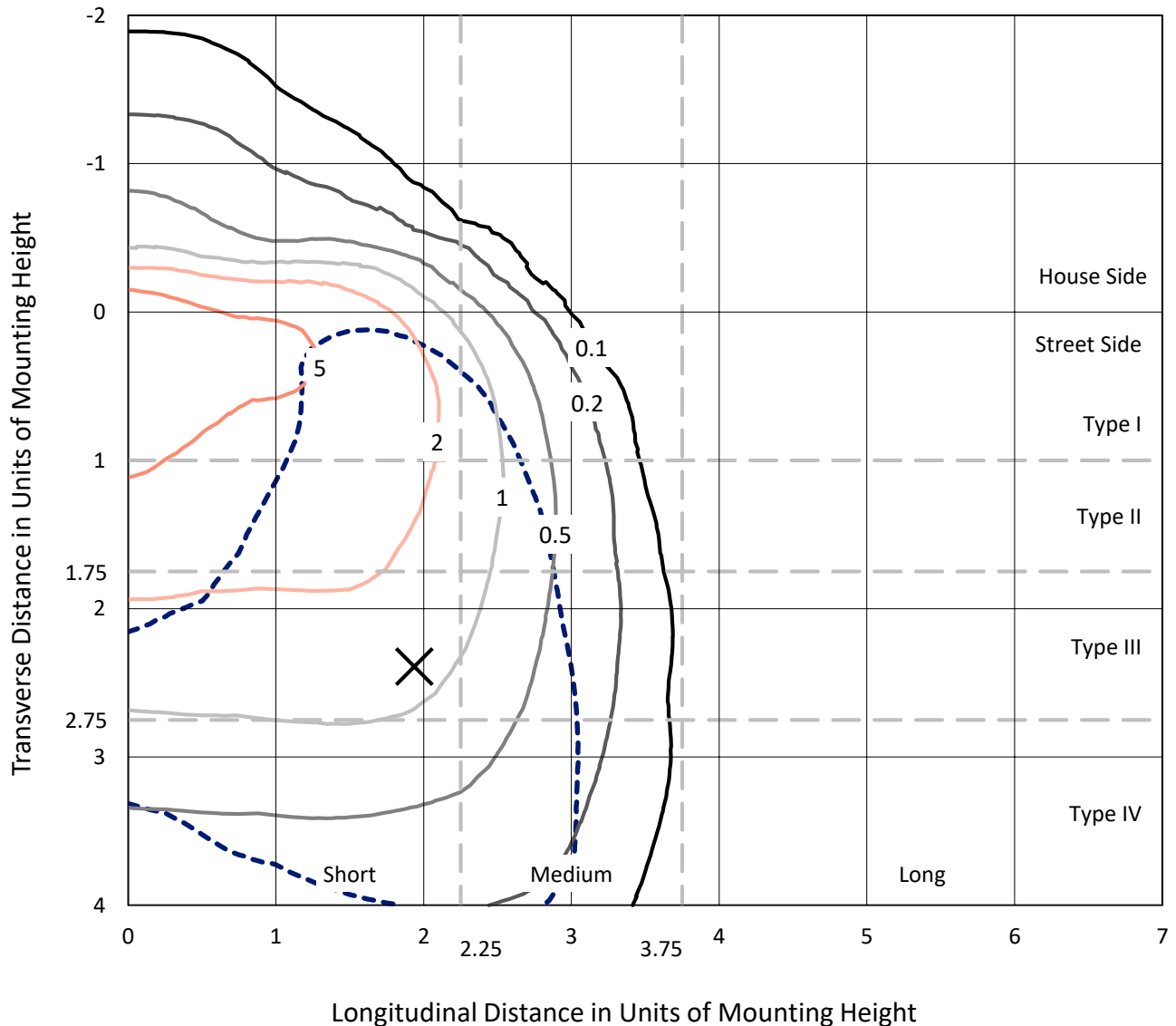
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

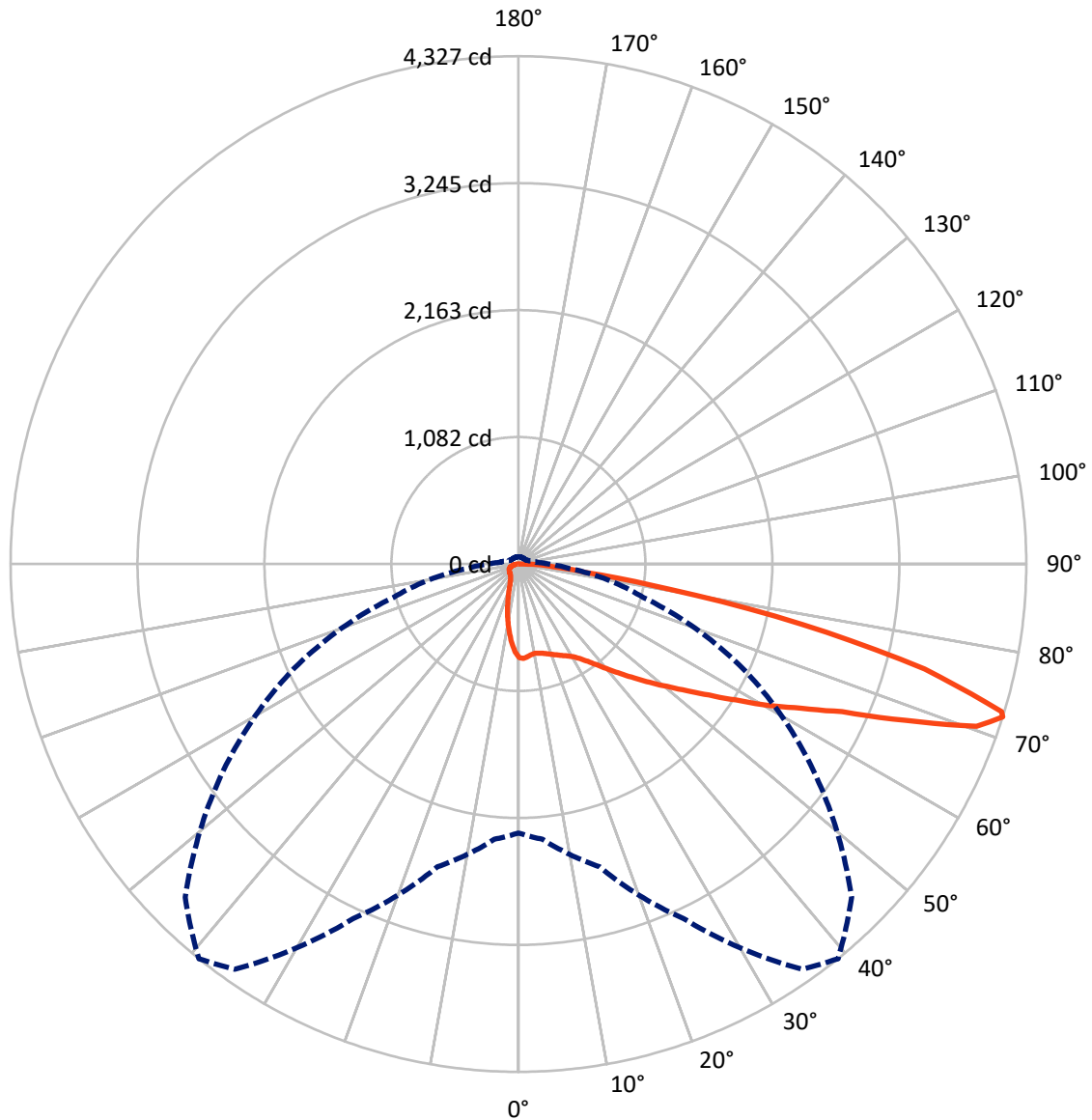
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	598.2	0.0	598.2
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	4618.8	0.0	4618.8
	% Fixture	88.5	0.0	88.5
Total	Lumens	5217.0	0.0	5217.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.5	1.3
10°-20°	172.0	3.3
20°-30°	268.1	5.1
30°-40°	412.8	7.9
40°-50°	673.0	12.9
50°-60°	1045.7	20.0
60°-70°	1399.7	26.8
70°-80°	1006.6	19.3
80°-90°	170.6	3.3
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°	5217.0	100.0
0°-180°	5217.0	100.0



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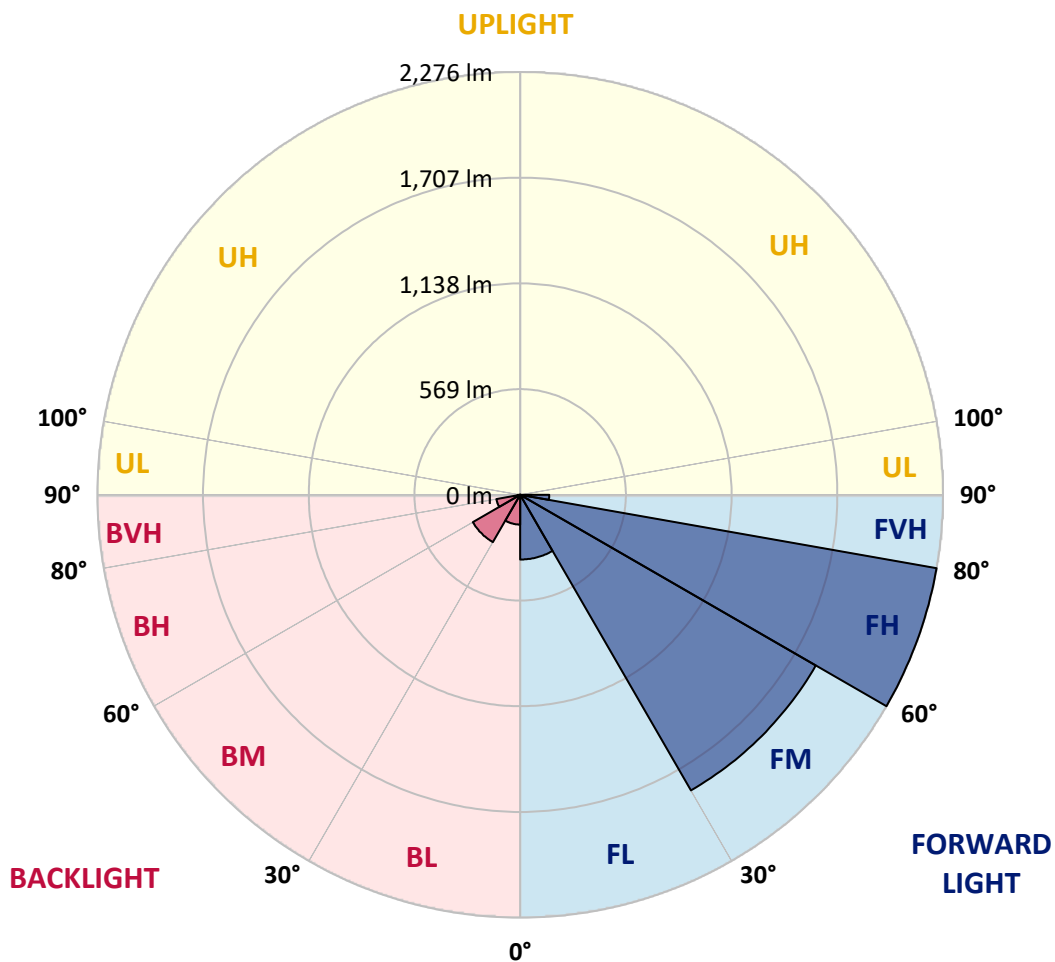
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	348.5	6.7			
FM	(30°-60°)	1837.5	35.2			
FH	(60°-80°)	2276.3	43.6			G2/5000
FVH	(80°-90°)	156.5	3.0			G2/225
BL	(0°-30°)	160.1	3.1	B1/500		
BM	(30°-60°)	294.0	5.6	B1/1000		
BH	(60°-80°)	130.0	2.5	B1/500		G1/500
BVH	(80°-90°)	14.1	0.3			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°	39°	45°	55°	65°	75°	85°
0°	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7
2.5°	813.9	814.2	813.2	810.0	807.2	805.8	803.4	799.2	793.6	789.7	786.6
5°	806.2	807.2	806.5	801.3	796.4	793.6	789.7	783.8	776.4	773.3	765.9
7.5°	800.2	800.9	798.8	792.9	783.4	779.9	772.9	765.2	758.6	754.0	745.2
10°	796.0	796.7	795.0	789.0	778.5	774.3	765.9	757.5	748.8	743.1	733.3
12.5°	790.1	791.5	791.5	788.7	781.7	778.9	770.5	761.4	753.3	747.3	735.1
15°	789.0	790.8	793.9	793.6	791.5	789.4	782.7	773.6	766.6	759.6	744.5
17.5°	797.8	801.6	807.9	810.0	808.6	804.1	796.4	788.0	780.3	773.6	755.1
20°	819.8	821.9	831.4	835.6	828.6	821.9	811.8	800.9	793.9	788.7	764.9
22.5°	853.1	855.9	863.6	864.0	849.3	841.2	828.2	814.9	808.3	806.2	778.2
25°	906.3	905.6	907.7	899.0	872.4	862.9	847.2	831.8	827.2	831.4	797.8
27.5°	970.1	968.3	961.7	938.9	898.6	886.4	867.5	853.8	853.8	863.6	824.4
30°	1043.6	1041.9	1020.2	982.0	929.8	915.8	895.8	881.5	888.8	907.7	860.5
32.5°	1121.4	1115.1	1084.6	1033.5	974.3	958.9	939.6	924.9	938.9	971.1	912.3
35°	1194.6	1191.1	1153.6	1093.0	1031.7	1018.8	1005.5	987.2	1009.7	1059.7	985.5
37.5°	1270.2	1267.4	1221.5	1157.1	1101.8	1093.0	1081.8	1069.2	1105.3	1171.1	1084.6
40°	1354.6	1349.0	1291.2	1226.8	1183.4	1179.2	1173.2	1169.7	1227.8	1325.9	1210.0
42.5°	1450.2	1439.4	1364.8	1303.5	1272.3	1275.8	1272.7	1286.7	1375.6	1504.5	1359.2
45°	1559.5	1537.8	1438.0	1385.1	1370.7	1384.7	1391.4	1427.1	1550.4	1710.8	1525.9
47.5°	1661.8	1633.7	1518.2	1473.7	1481.7	1505.9	1524.8	1587.9	1741.9	1914.6	1696.1
50°	1756.0	1724.4	1604.0	1565.4	1604.7	1639.0	1678.2	1767.2	1945.8	2124.4	1852.3
52.5°	1825.6	1802.9	1689.8	1665.6	1745.8	1791.3	1854.0	1966.4	2151.7	2324.3	1991.6
55°	1879.6	1867.3	1773.5	1780.5	1905.5	1970.6	2046.6	2175.9	2369.5	2503.7	2103.7
57.5°	1941.9	1932.8	1869.1	1919.2	2103.7	2185.7	2275.3	2418.9	2576.9	2661.6	2191.6
60°	2007.8	2007.8	1975.5	2086.2	2351.7	2445.5	2534.8	2646.5	2783.5	2803.8	2227.3
62.5°	2057.5	2070.4	2082.0	2264.1	2587.0	2703.6	2801.7	2908.9	2997.5	2873.8	2143.3
65°	2129.6	2157.3	2222.4	2469.7	2878.4	3031.1	3163.5	3253.5	3170.8	2818.1	1869.1
67.5°	2253.6	2294.6	2433.3	2775.8	3324.6	3553.2	3681.8	3526.3	3136.8	2467.6	1431.7
70°	2365.3	2423.1	2660.2	3164.2	3904.5	4141.9	4082.8	3462.9	2732.0	1808.8	880.8
72°	2291.1	2354.1	2670.7	3333.3	4214.4	4326.5	4014.5	3068.9	2111.1	1103.9	434.3
72.5°	2242.4	2307.9	2636.7	3329.1	4222.8	4303.0	3919.6	2912.4	1916.4	965.9	351.3
75°	1873.3	1929.3	2267.3	2950.5	3721.3	3574.3	3058.7	1884.8	880.8	312.0	180.7
77.5°	1223.3	1266.0	1563.3	2044.2	2606.6	2465.1	1861.7	882.5	330.2	189.5	135.9
80°	614.6	645.1	836.7	1074.8	1406.8	1294.4	859.4	426.9	221.0	136.9	106.8
82.5°	427.6	455.6	576.1	548.8	588.0	569.1	404.1	356.2	165.3	86.5	56.0
85°	358.6	387.7	476.6	391.2	320.1	291.7	289.6	336.6	109.3	42.7	47.3
87.5°	312.7	356.9	393.3	285.8	219.6	193.7	213.3	308.5	34.7	23.5	14.4
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°	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7
2.5°	781.3	780.3	775.0	767.0	761.0	757.2	749.8	749.5	750.2	743.8	746.3
5°	759.3	755.1	741.4	722.8	707.8	693.4	677.7	672.4	667.9	658.4	659.4
7.5°	736.1	728.8	705.0	674.5	645.4	618.8	592.6	579.6	569.8	557.5	557.5
10°	722.5	710.9	674.5	630.0	583.8	544.9	505.7	482.2	465.1	449.3	448.3
12.5°	721.8	704.3	653.5	592.2	528.8	474.2	420.6	384.5	359.0	340.4	338.7
15°	727.4	702.9	636.0	556.8	477.0	405.9	339.7	293.8	261.3	240.6	238.5
17.5°	732.3	701.1	617.1	519.7	426.6	340.1	266.5	218.9	188.1	171.3	169.5
20°	736.8	697.3	592.9	480.5	370.9	278.4	208.4	169.9	149.5	140.1	139.0
22.5°	743.5	693.8	567.7	436.4	316.2	226.6	172.0	144.3	133.4	128.9	128.2
25°	754.4	694.1	543.2	391.2	266.2	188.8	148.8	131.7	125.7	122.6	122.6
27.5°	770.1	698.3	519.0	345.3	223.8	162.8	135.2	125.0	121.2	118.7	118.0
30°	793.2	706.0	493.4	301.9	190.2	145.0	127.1	120.8	117.7	115.6	115.2
32.5°	826.8	719.7	466.5	262.3	164.6	132.4	121.2	117.3	114.9	113.1	112.8
35°	876.9	743.8	440.2	228.7	146.4	123.3	116.3	113.1	111.7	111.0	110.7
37.5°	950.5	782.7	415.4	202.4	134.5	117.3	111.4	109.6	108.9	108.9	108.9
40°	1042.9	833.9	392.9	183.9	127.8	112.8	107.9	106.5	106.5	106.8	106.8
42.5°	1155.3	897.9	373.7	171.3	124.0	109.6	105.4	104.7	104.4	104.4	104.7
45°	1286.0	973.6	361.8	161.4	121.2	107.9	103.7	103.3	101.9	101.2	101.2
47.5°	1417.3	1054.5	361.1	155.8	117.7	105.8	101.9	101.9	99.1	97.7	98.1
50°	1539.9	1127.0	368.8	154.4	115.6	102.6	100.2	100.5	96.7	94.9	94.6
52.5°	1638.6	1182.3	378.2	156.2	115.6	99.8	97.0	98.8	94.6	92.5	92.1
55°	1715.0	1220.8	381.7	160.0	117.0	97.4	94.2	97.0	93.9	91.1	91.1
57.5°	1769.6	1233.1	366.7	161.8	119.1	97.0	91.4	96.7	94.9	91.4	91.4
60°	1749.7	1162.0	310.6	155.1	118.7	96.3	89.3	97.4	98.4	94.6	94.6
62.5°	1593.8	972.2	249.4	140.1	112.8	93.9	86.9	96.7	100.9	99.5	98.8
65°	1297.5	713.0	193.3	122.2	102.6	88.6	81.6	90.4	95.3	96.7	97.0
67.5°	914.4	451.4	150.2	104.0	90.0	80.9	75.6	79.8	81.6	82.3	83.7
70°	500.1	244.4	119.4	87.6	77.0	73.2	69.3	69.7	69.0	68.3	69.0
72°	251.1	159.7	100.9	76.0	68.3	65.8	64.1	63.0	63.0	62.0	62.3
72.5°	216.1	148.5	97.4	73.2	66.2	64.1	62.7	61.6	61.3	60.6	60.9
75°	143.9	117.7	81.2	61.3	56.4	55.0	55.7	54.6	55.0	54.3	54.6
77.5°	116.3	101.2	69.0	51.8	48.3	46.2	47.6	48.0	48.7	48.0	47.6
80°	97.4	86.2	57.8	42.7	40.3	38.5	39.2	41.7	42.0	39.9	39.6
82.5°	63.0	69.3	45.5	33.3	30.8	30.1	31.9	34.3	35.0	32.2	31.5
85°	52.9	55.7	32.9	22.8	20.3	19.6	23.1	25.6	27.3	24.5	23.8
87.5°	14.7	27.3	16.1	10.9	9.1	9.1	11.2	13.3	15.8	16.1	16.1
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)