

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: P195715

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195715
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-SL4-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 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: 6393 lumens
Efficiency: N/A
Efficacy: 95.4 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

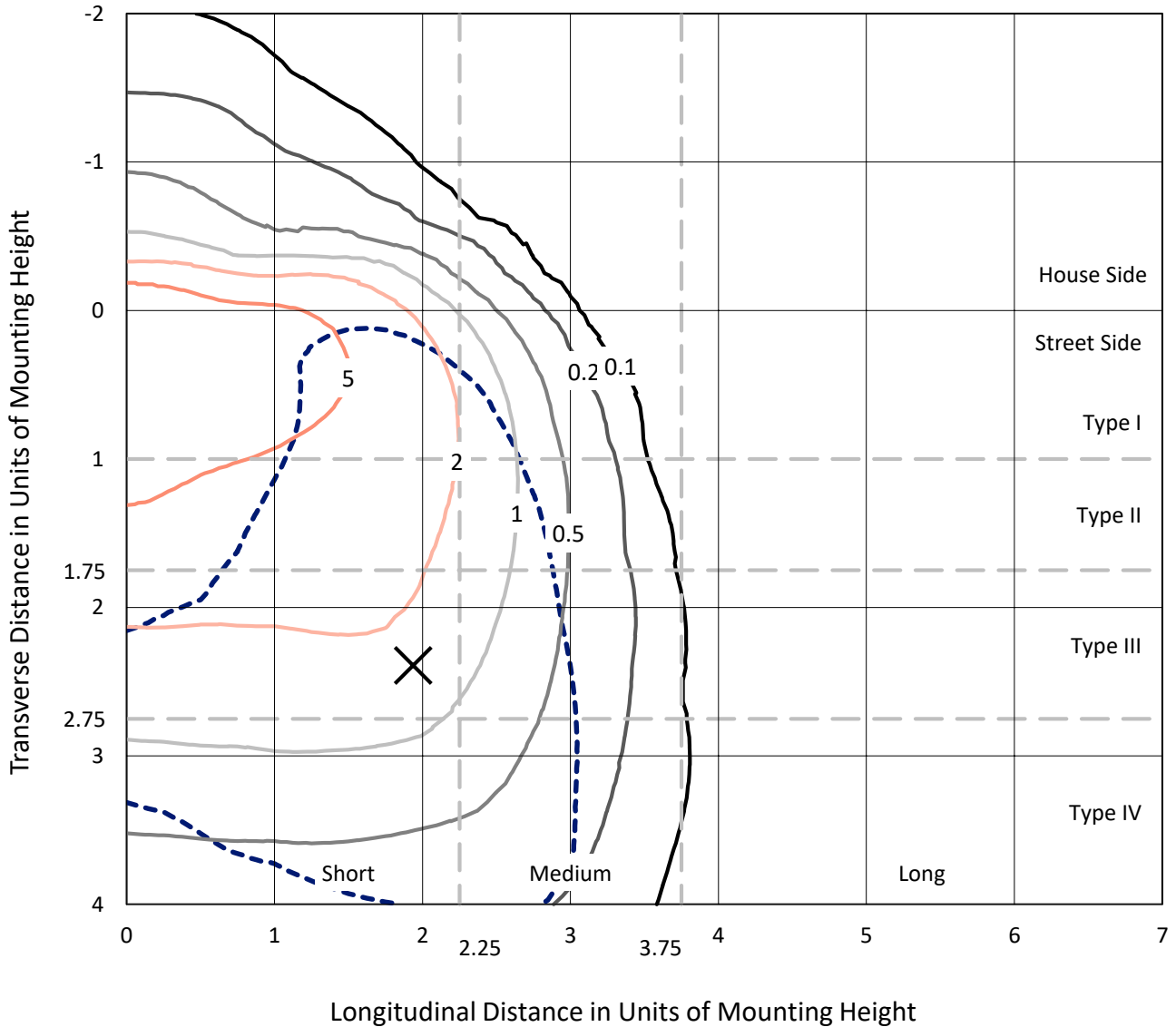
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

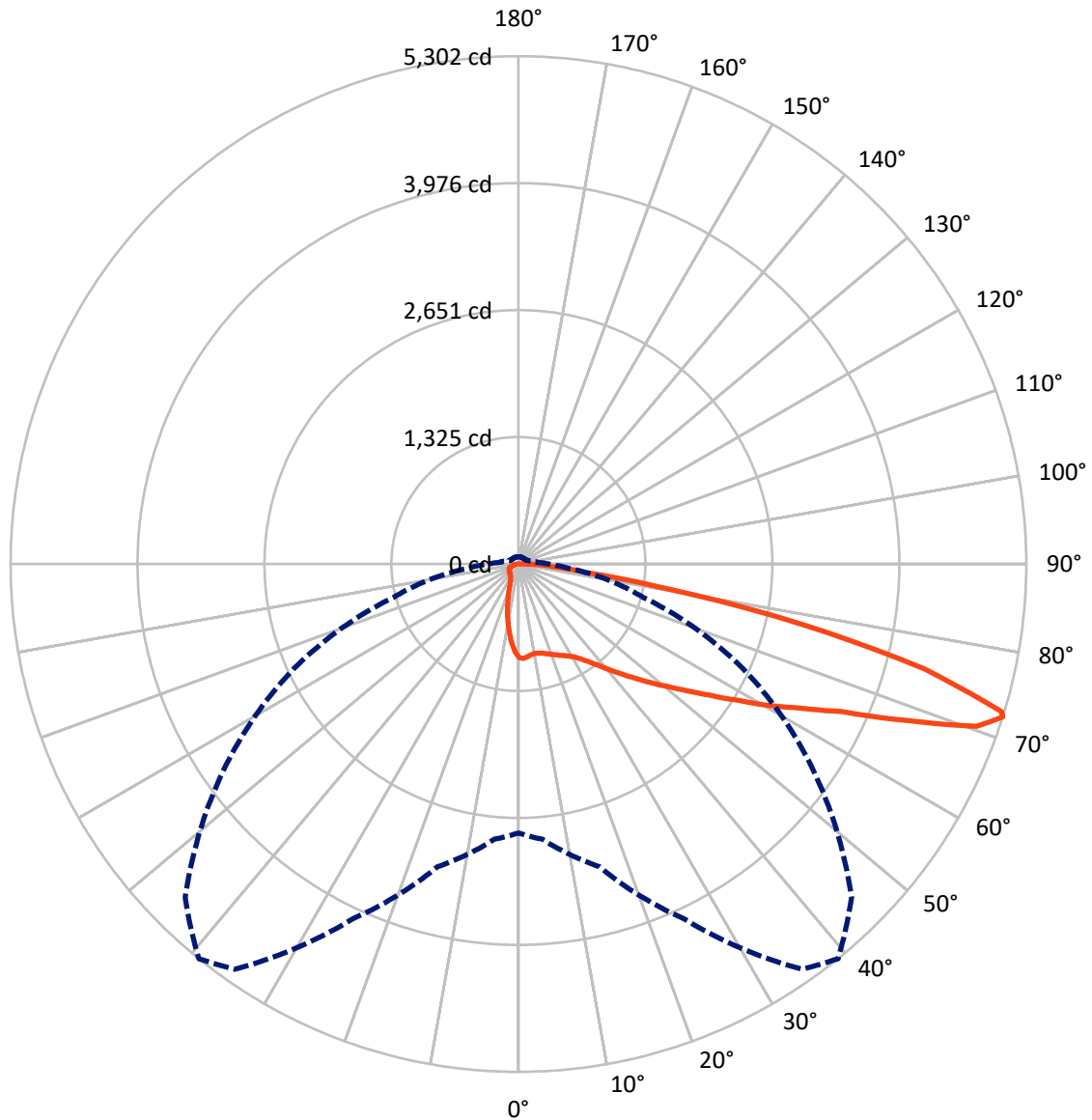
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.8 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	733.0	0.0	733.0
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	5660.0	0.0	5660.0
	% Fixture	88.5	0.0	88.5
Total	Lumens	6393.0	0.0	6393.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	1.3
10°-20°	210.8	3.3
20°-30°	328.5	5.1
30°-40°	505.9	7.9
40°-50°	824.7	12.9
50°-60°	1281.5	20.0
60°-70°	1715.2	26.8
70°-80°	1233.5	19.3
80°-90°	209.1	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°	6393.0	100.0
0°-180°	6393.0	100.0



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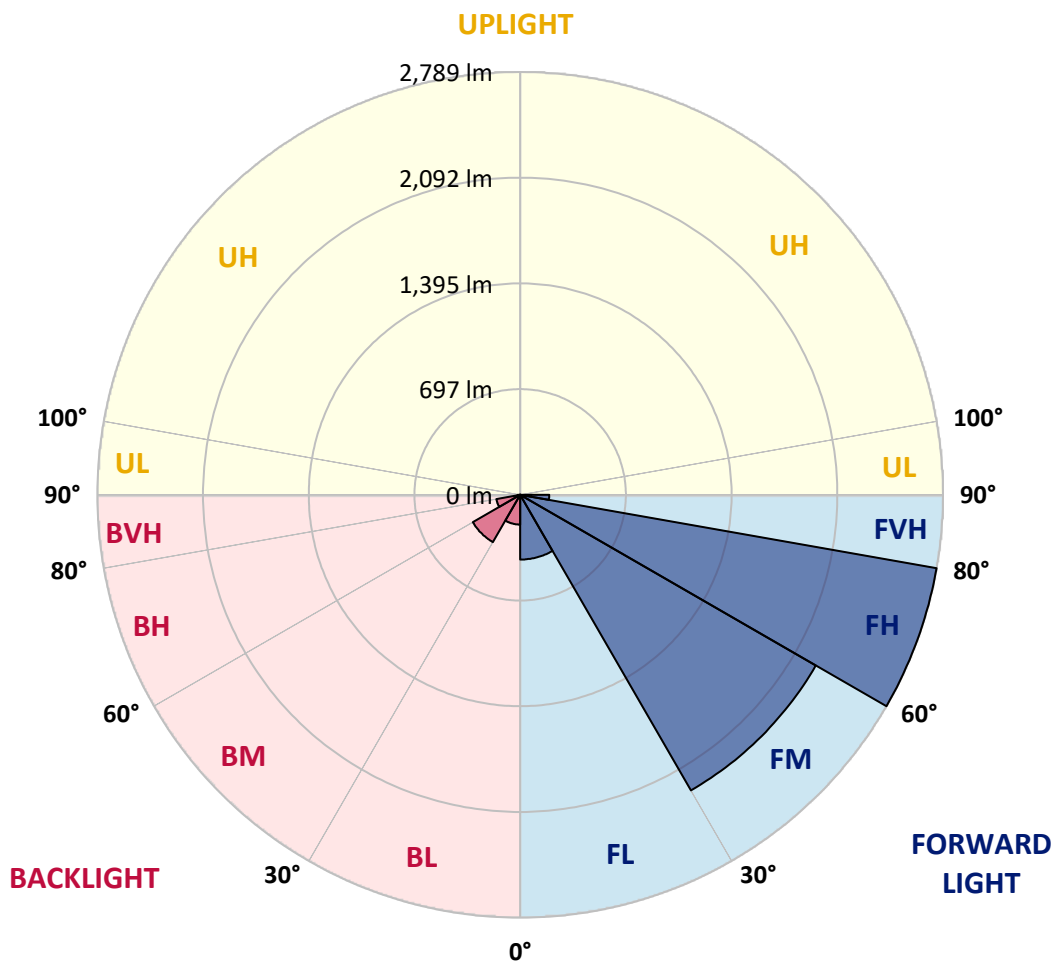
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	427.0	6.7			
FM (30°-60°)	2251.7	35.2			
FH (60°-80°)	2789.4	43.6			G2/5000
FVH (80°-90°)	191.8	3.0			G2/225
BL (0°-30°)	196.2	3.1	B1/500		
BM (30°-60°)	360.3	5.6	B1/1000		
BH (60°-80°)	159.3	2.5	B1/500		G1/500
BVH (80°-90°)	17.3	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°	976.3	976.3	976.3	976.3	976.3	976.3	976.3	976.3	976.3	976.3	976.3
2.5°	997.4	997.8	996.5	992.6	989.2	987.5	984.5	979.3	972.5	967.7	963.9
5°	987.9	989.2	988.3	981.9	975.9	972.5	967.7	960.4	951.4	947.6	938.6
7.5°	980.6	981.5	978.9	971.6	960.0	955.7	947.1	937.7	929.5	924.0	913.2
10°	975.5	976.3	974.2	966.9	954.0	948.9	938.6	928.3	917.5	910.7	898.6
12.5°	968.2	969.9	969.9	966.5	957.9	954.4	944.1	933.0	923.1	915.8	900.8
15°	966.9	969.0	972.9	972.5	969.9	967.3	959.2	948.0	939.4	930.8	912.4
17.5°	977.6	982.3	990.1	992.6	990.9	985.3	975.9	965.6	956.2	948.0	925.3
20°	1004.7	1007.2	1018.8	1024.0	1015.4	1007.2	994.8	981.5	972.9	966.5	937.3
22.5°	1045.4	1048.9	1058.3	1058.7	1040.7	1030.8	1014.9	998.6	990.5	987.9	953.6
25°	1110.7	1109.8	1112.4	1101.6	1069.0	1057.4	1038.1	1019.2	1013.7	1018.8	977.6
27.5°	1188.8	1186.6	1178.5	1150.6	1101.2	1086.2	1063.0	1046.3	1046.3	1058.3	1010.2
30°	1278.9	1276.7	1250.1	1203.3	1139.4	1122.2	1097.8	1080.2	1089.2	1112.4	1054.4
32.5°	1374.2	1366.4	1329.1	1266.4	1193.9	1175.0	1151.4	1133.4	1150.6	1190.0	1117.9
35°	1463.8	1459.6	1413.6	1339.4	1264.3	1248.4	1232.1	1209.8	1237.3	1298.6	1207.6
37.5°	1556.5	1553.1	1496.9	1417.9	1350.1	1339.4	1325.7	1310.2	1354.4	1435.1	1329.1
40°	1660.0	1653.1	1582.3	1503.3	1450.1	1445.0	1437.7	1433.4	1504.6	1624.8	1482.7
42.5°	1777.1	1763.8	1672.4	1597.3	1559.1	1563.4	1559.5	1576.7	1685.7	1843.6	1665.5
45°	1911.0	1884.4	1762.1	1697.3	1679.7	1696.9	1705.0	1748.8	1899.9	2096.4	1869.8
47.5°	2036.3	2002.0	1860.4	1805.9	1815.8	1845.4	1868.5	1945.8	2134.6	2346.2	2078.4
50°	2151.8	2113.2	1965.5	1918.3	1966.4	2008.4	2056.5	2165.5	2384.4	2603.2	2269.8
52.5°	2237.2	2209.3	2070.7	2041.1	2139.3	2195.1	2271.9	2409.7	2636.7	2848.3	2440.6
55°	2303.3	2288.3	2173.2	2181.8	2335.0	2414.9	2508.0	2666.3	2903.7	3068.0	2577.9
57.5°	2379.7	2368.5	2290.4	2351.8	2577.9	2678.4	2788.2	2964.2	3157.7	3261.6	2685.6
60°	2460.3	2460.3	2420.9	2556.5	2881.8	2996.8	3106.2	3243.1	3410.9	3435.8	2729.4
62.5°	2521.3	2537.2	2551.3	2774.5	3170.2	3313.1	3433.2	3564.6	3673.1	3521.6	2626.4
65°	2609.7	2643.6	2723.4	3026.4	3527.2	3714.3	3876.6	3986.8	3885.6	3453.4	2290.4
67.5°	2761.6	2811.8	2981.8	3401.5	4074.0	4354.2	4511.7	4321.2	3843.9	3023.8	1754.4
70°	2898.5	2969.3	3259.9	3877.4	4784.6	5075.6	5003.1	4243.5	3347.8	2216.6	1079.3
72°	2807.5	2884.8	3272.7	4084.7	5164.4	5301.8	4919.4	3760.7	2586.9	1352.7	532.2
72.5°	2747.9	2828.1	3231.1	4079.5	5174.7	5273.0	4803.1	3568.8	2348.3	1183.6	430.4
75°	2295.5	2364.2	2778.3	3615.6	4560.2	4379.9	3748.2	2309.7	1079.3	382.4	221.4
77.5°	1499.0	1551.4	1915.7	2505.0	3194.2	3020.8	2281.4	1081.5	404.7	232.2	166.5
80°	753.2	790.5	1025.2	1317.1	1723.9	1586.2	1053.1	523.1	270.8	167.8	130.9
82.5°	524.0	558.3	706.0	672.5	720.5	697.4	495.2	436.4	202.6	106.0	68.7
85°	439.5	475.1	584.1	479.4	392.2	357.5	354.9	412.4	133.9	52.4	57.9
87.5°	383.2	437.3	481.9	350.2	269.1	237.3	261.4	378.1	42.5	28.8	17.6
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°	976.3	976.3	976.3	976.3	976.3	976.3	976.3	976.3	976.3	976.3	976.3
2.5°	957.4	956.2	949.7	939.8	932.6	927.8	918.8	918.4	919.2	911.5	914.5
5°	930.4	925.3	908.5	885.8	867.3	849.7	830.4	824.0	818.4	806.8	808.1
7.5°	902.1	893.1	863.9	826.6	790.9	758.3	726.1	710.3	698.2	683.2	683.2
10°	885.3	871.2	826.6	772.0	715.4	667.8	619.7	590.9	569.9	550.6	549.3
12.5°	884.5	863.0	800.8	725.7	648.0	581.1	515.4	471.2	439.9	417.1	415.0
15°	891.4	861.3	779.3	682.4	584.5	497.4	416.3	360.1	320.1	294.8	292.3
17.5°	897.4	859.2	756.2	636.9	522.7	416.7	326.6	268.2	230.5	209.9	207.7
20°	902.9	854.4	726.6	588.8	454.5	341.2	255.3	208.1	183.2	171.7	170.4
22.5°	911.1	850.2	695.7	534.7	387.5	277.7	210.7	176.8	163.5	157.9	157.1
25°	924.4	850.6	665.6	479.4	326.2	231.3	182.4	161.4	154.1	150.2	150.2
27.5°	943.7	855.7	636.0	423.1	274.2	199.6	165.7	153.2	148.5	145.5	144.6
30°	972.0	865.2	604.7	369.9	233.0	177.7	155.8	148.1	144.2	141.6	141.2
32.5°	1013.2	881.9	571.6	321.4	201.7	162.2	148.5	143.8	140.8	138.6	138.2
35°	1074.6	911.5	539.4	280.2	179.4	151.1	142.5	138.6	136.9	136.0	135.6
37.5°	1164.7	959.2	509.0	248.1	164.8	143.8	136.5	134.3	133.5	133.5	133.5
40°	1278.0	1021.8	481.5	225.3	156.6	138.2	132.2	130.5	130.5	130.9	130.9
42.5°	1415.8	1100.4	457.9	209.9	151.9	134.3	129.2	128.3	127.9	127.9	128.3
45°	1575.9	1193.0	443.3	197.8	148.5	132.2	127.0	126.6	124.9	124.0	124.0
47.5°	1736.8	1292.2	442.5	191.0	144.2	129.6	124.9	124.9	121.5	119.7	120.2
50°	1887.0	1381.0	451.9	189.3	141.6	125.7	122.7	123.2	118.4	116.3	115.9
52.5°	2008.0	1448.8	463.5	191.4	141.6	122.3	118.9	121.0	115.9	113.3	112.9
55°	2101.6	1496.0	467.8	196.1	143.3	119.3	115.4	118.9	115.0	111.6	111.6
57.5°	2168.5	1511.1	449.3	198.3	145.9	118.9	112.0	118.4	116.3	112.0	112.0
60°	2144.1	1423.9	380.7	190.1	145.5	118.0	109.4	119.3	120.6	115.9	115.9
62.5°	1953.1	1191.3	305.6	171.7	138.2	115.0	106.4	118.4	123.6	121.9	121.0
65°	1590.0	873.8	236.9	149.8	125.7	108.6	100.0	110.7	116.7	118.4	118.9
67.5°	1120.5	553.2	184.1	127.5	110.3	99.1	92.7	97.8	100.0	100.9	102.6
70°	612.8	299.5	146.3	107.3	94.4	89.7	85.0	85.4	84.5	83.7	84.5
72°	307.7	195.7	123.6	93.1	83.7	80.7	78.5	77.2	77.2	76.0	76.4
72.5°	264.8	182.0	119.3	89.7	81.1	78.5	76.8	75.5	75.1	74.2	74.7
75°	176.4	144.2	99.6	75.1	69.1	67.4	68.2	66.9	67.4	66.5	66.9
77.5°	142.5	124.0	84.5	63.5	59.2	56.6	58.4	58.8	59.7	58.8	58.4
80°	119.3	105.6	70.8	52.4	49.4	47.2	48.1	51.1	51.5	48.9	48.5
82.5°	77.2	85.0	55.8	40.8	37.8	36.9	39.1	42.1	42.9	39.5	38.6
85°	64.8	68.2	40.3	27.9	24.9	24.0	28.3	31.3	33.5	30.0	29.2
87.5°	18.0	33.5	19.7	13.3	11.2	11.2	13.7	16.3	19.3	19.7	19.7
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)