

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: P197053

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197053
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4887 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

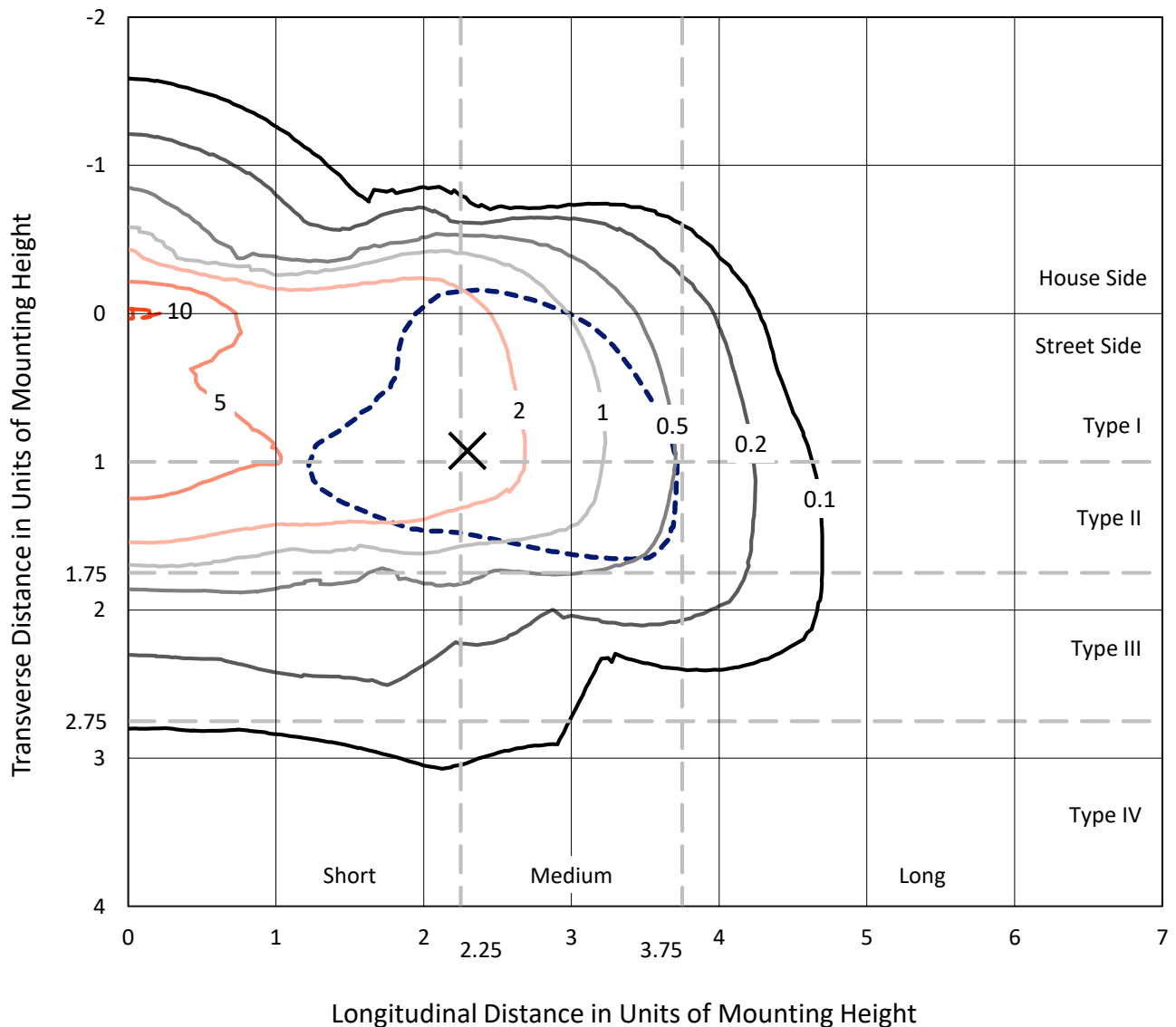
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

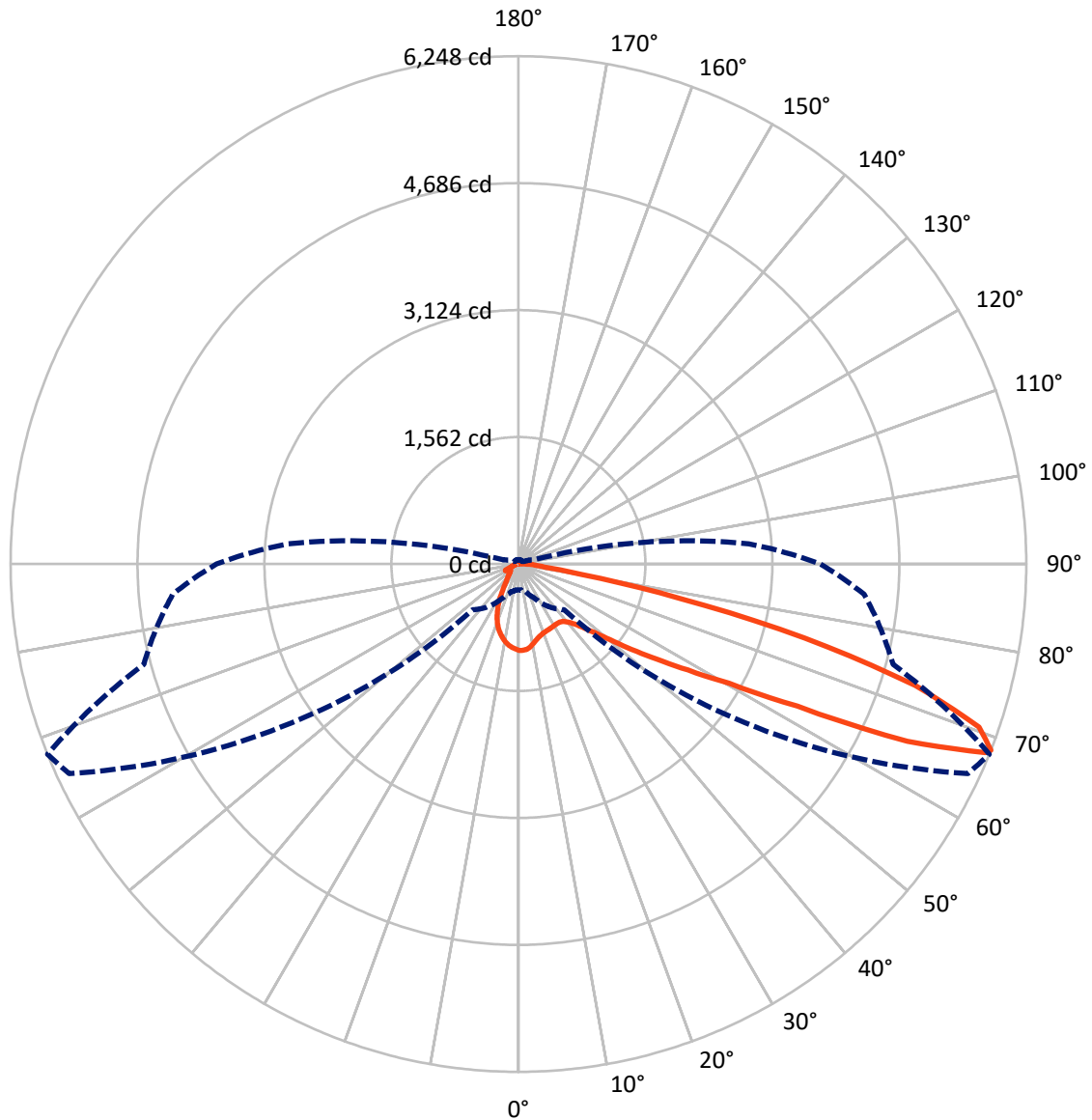
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.6 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	799.5	0.0	799.5
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	4087.5	0.0	4087.5
	% Fixture	83.6	0.0	83.6
Total	Lumens	4887.0	0.0	4887.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	1.9
10°-20°	211.3	4.3
20°-30°	285.8	5.8
30°-40°	403.0	8.2
40°-50°	662.6	13.6
50°-60°	1027.2	21.0
60°-70°	1331.8	27.3
70°-80°	764.2	15.6
80°-90°	110.0	2.3
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°	4887.0	100.0
0°-180°	4887.0	100.0



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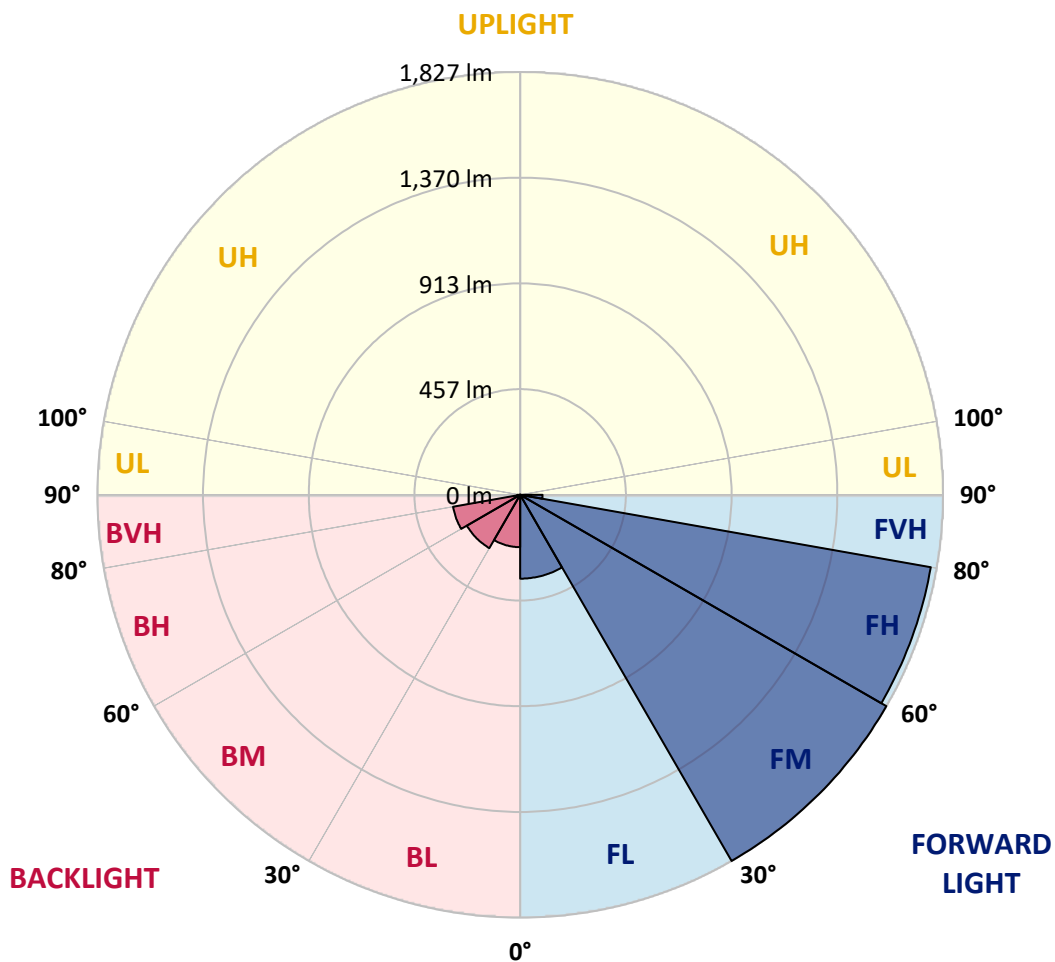
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	362.2	7.4			
FM	(30°-60°)	1826.8	37.4			
FH	(60°-80°)	1801.6	36.9			G2/5000
FVH	(80°-90°)	96.9	2.0			G1/100
BL	(0°-30°)	226.0	4.6	B1/500		
BM	(30°-60°)	265.9	5.4	B1/1000		
BH	(60°-80°)	294.5	6.0	B1/500		G1/500
BVH	(80°-90°)	13.1	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4
2.5°	1035.0	1043.3	1043.3	1049.3	1054.7	1059.2	1063.0	1063.0	1063.0	1060.5	1058.3
5°	926.1	937.3	938.9	954.2	974.3	998.9	1026.3	1050.6	1055.4	1064.3	1067.8
7.5°	850.4	854.0	860.0	870.6	891.0	921.3	964.4	1018.7	1031.8	1059.9	1074.5
10°	796.8	799.7	804.8	815.3	833.8	861.3	903.8	974.3	996.0	1045.8	1074.9
12.5°	757.5	759.8	764.6	774.1	793.0	817.6	861.0	934.4	961.2	1031.8	1079.3
15°	726.9	730.7	734.6	743.8	763.0	786.6	830.6	905.3	934.4	1020.6	1087.6
17.5°	714.8	716.7	717.3	722.1	739.3	763.3	807.3	884.9	914.9	1011.7	1094.0
20°	722.4	722.7	716.4	713.2	723.1	745.1	787.9	869.6	900.2	1003.7	1096.6
22.5°	755.9	755.9	739.3	725.3	718.6	732.3	774.8	859.1	892.3	997.6	1096.6
25°	819.8	816.9	791.1	763.3	733.6	727.9	766.5	852.4	886.2	994.4	1092.4
27.5°	903.8	901.2	868.3	827.1	773.5	737.4	763.6	846.9	880.1	989.6	1083.5
30°	1005.9	1003.7	966.3	912.4	833.2	767.8	770.3	843.1	875.3	981.6	1068.5
32.5°	1107.7	1106.5	1076.8	1021.5	915.6	819.2	787.9	842.5	872.8	972.1	1050.3
35°	1210.2	1210.2	1192.0	1145.4	1026.3	896.4	824.6	854.3	877.6	967.0	1034.6
37.5°	1361.5	1355.5	1321.6	1273.4	1165.8	996.6	884.0	879.2	896.1	975.6	1029.5
40°	1595.8	1578.3	1493.7	1412.6	1318.1	1125.0	970.8	927.4	937.6	1004.9	1041.7
42.5°	1841.0	1813.2	1701.2	1571.6	1475.5	1283.3	1084.8	1005.6	1005.3	1061.8	1080.3
45°	2051.4	2037.0	1915.7	1751.3	1655.2	1461.5	1228.7	1121.8	1110.3	1149.9	1154.7
47.5°	2173.7	2164.1	2091.0	1941.6	1868.5	1671.8	1411.3	1283.0	1261.3	1284.9	1277.6
50°	2139.8	2149.1	2128.0	2051.7	2097.7	1967.4	1644.1	1503.9	1462.7	1486.4	1468.5
52.5°	1961.7	1986.6	2005.4	2020.1	2229.5	2363.0	1936.5	1779.7	1745.6	1741.4	1724.2
55°	1640.9	1680.4	1739.8	1847.7	2194.1	2680.6	2447.2	2113.3	2063.5	2037.3	2044.1
57.5°	1116.7	1176.7	1304.7	1510.0	2009.9	2816.0	3202.6	2544.3	2460.0	2366.8	2388.5
60°	615.2	665.3	817.6	1024.4	1589.5	2795.8	3872.0	3244.7	2979.4	2732.3	2777.0
62.5°	398.1	408.9	522.3	699.8	975.6	2468.3	4243.9	4415.3	3853.2	3214.4	3277.3
65°	319.9	327.5	383.1	564.4	679.6	1587.9	4260.5	5629.7	5259.1	3869.4	3871.3
67.5°	312.5	316.0	348.3	474.7	637.5	864.5	3682.7	6108.5	6194.4	4642.6	4268.8
68°	317.0	321.1	353.7	460.0	637.2	796.8	3403.7	6101.2	6248.4	4771.9	4268.8
70°	279.6	284.8	360.7	476.0	610.1	685.1	2330.7	5777.2	6014.0	5069.1	4050.4
72.5°	146.2	142.1	178.5	375.7	686.7	713.8	1231.3	4826.5	5103.0	4694.7	3499.4
75°	114.0	103.8	99.9	148.4	604.0	740.3	715.1	3430.5	3639.3	3384.2	2339.0
77.5°	107.3	94.8	87.5	87.8	265.9	770.3	578.5	2018.8	2018.8	1614.4	746.4
80°	86.2	74.7	69.9	79.8	128.3	710.0	603.7	920.0	784.7	417.2	205.6
82.5°	56.8	50.8	51.1	64.8	97.4	474.1	699.1	454.3	341.3	184.8	121.0
85°	36.1	31.0	34.5	45.3	72.8	211.3	692.1	315.7	226.0	103.8	60.3
87.5°	18.2	14.0	17.2	23.6	44.4	60.7	569.8	281.9	167.6	43.1	32.9
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°	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4	1063.4
2.5°	1058.3	1051.2	1047.7	1042.0	1035.0	1027.9	1023.1	1020.9	1019.6	1020.3	1020.0
5°	1065.9	1056.7	1041.7	1020.3	998.2	974.9	957.1	943.3	934.7	932.2	931.5
7.5°	1071.7	1058.3	1030.2	991.2	953.6	912.7	877.9	850.1	831.3	822.7	822.3
10°	1070.7	1053.5	1009.1	951.6	896.4	836.4	781.8	735.2	701.4	685.1	684.4
12.5°	1071.7	1048.0	983.2	905.3	826.2	740.3	659.2	586.8	536.3	512.4	511.4
15°	1075.5	1042.3	956.7	853.6	744.1	622.8	506.9	416.0	370.0	354.3	354.3
17.5°	1075.2	1032.7	926.1	793.6	646.8	484.3	346.0	289.9	285.4	299.8	302.0
20°	1068.8	1017.4	886.5	722.4	532.5	335.2	234.6	226.7	262.4	302.0	306.5
22.5°	1058.9	997.6	840.9	639.7	399.4	218.4	181.0	193.1	241.7	290.8	297.8
25°	1045.2	973.7	788.5	543.7	265.6	157.1	151.0	166.0	200.2	233.0	238.1
27.5°	1025.1	943.3	731.4	439.6	169.5	129.3	131.5	142.1	156.7	170.8	173.7
30°	999.8	907.9	669.1	324.3	128.7	115.6	119.4	125.8	132.2	141.1	143.0
32.5°	974.3	871.8	604.3	222.8	112.4	108.2	112.1	115.6	121.0	127.1	128.3
35°	951.3	838.3	537.6	155.5	105.3	103.4	105.3	107.6	113.0	119.1	119.7
37.5°	934.7	810.9	468.0	122.9	101.2	99.3	100.2	101.2	107.6	116.5	117.5
40°	932.5	792.7	397.4	110.5	98.0	95.5	94.8	95.5	103.8	114.0	114.9
42.5°	954.2	793.6	328.5	105.3	95.5	92.6	90.0	91.3	98.6	106.6	107.3
45°	1005.6	816.0	268.8	103.1	93.2	91.0	87.2	87.8	91.3	95.5	96.1
47.5°	1096.2	864.8	223.1	101.8	91.3	89.4	84.6	82.7	83.0	85.2	85.2
50°	1241.2	946.5	195.4	100.6	89.7	86.2	80.8	76.9	76.0	77.3	77.6
52.5°	1457.3	1086.7	182.0	98.0	86.8	82.0	76.0	72.1	70.6	71.8	71.8
55°	1749.4	1310.5	175.6	94.5	83.3	76.9	71.5	68.3	67.0	68.0	68.0
57.5°	2082.4	1601.3	186.4	89.7	78.9	71.5	67.7	65.4	64.5	65.4	65.8
60°	2477.9	1981.8	261.1	83.6	74.1	66.7	64.5	63.2	62.6	63.5	63.5
62.5°	3003.7	2488.1	404.1	78.9	69.0	62.3	61.6	61.0	60.3	61.3	61.3
65°	3571.3	2948.8	416.0	76.0	64.5	58.4	58.7	58.7	58.1	59.1	59.1
67.5°	3752.0	2908.9	232.4	72.5	59.1	54.6	55.9	55.9	55.5	56.5	56.2
68°	3713.6	2845.6	202.4	71.5	58.1	53.6	54.9	55.2	54.9	55.9	55.5
70°	3428.3	2498.3	133.1	66.1	54.0	50.4	52.4	52.7	52.4	53.6	53.3
72.5°	2830.0	1873.9	98.3	57.8	48.8	46.3	48.2	48.5	48.8	50.1	49.8
75°	1797.3	1035.0	77.6	49.2	43.7	41.5	43.4	44.4	45.0	46.9	46.0
77.5°	492.3	314.1	62.9	41.8	37.7	36.7	38.0	39.3	39.9	42.1	40.5
80°	172.4	138.9	52.4	35.4	31.3	31.0	32.2	33.5	34.2	36.1	34.2
82.5°	104.7	90.7	41.8	27.8	24.6	24.3	25.9	27.1	27.8	27.8	26.5
85°	54.6	47.9	30.6	19.5	16.9	16.0	18.8	20.4	20.8	20.4	19.5
87.5°	30.6	27.1	16.3	9.3	7.7	8.0	9.9	12.1	13.1	12.8	12.1
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)