

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: P196657

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196657
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-SL4-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 615mA 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: 3713.7 lumens
Efficiency: N/A
Efficacy: 109.2 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

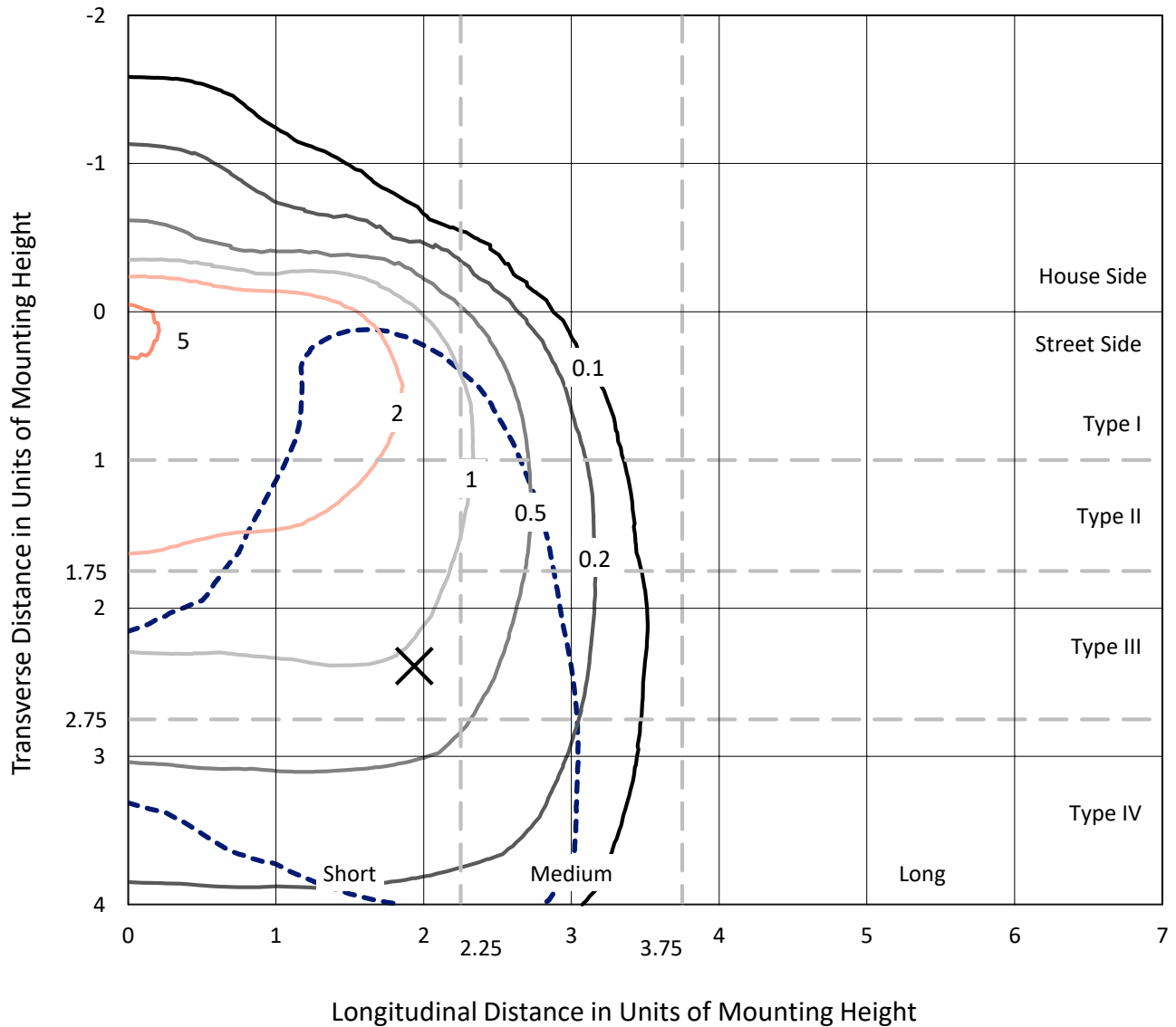
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

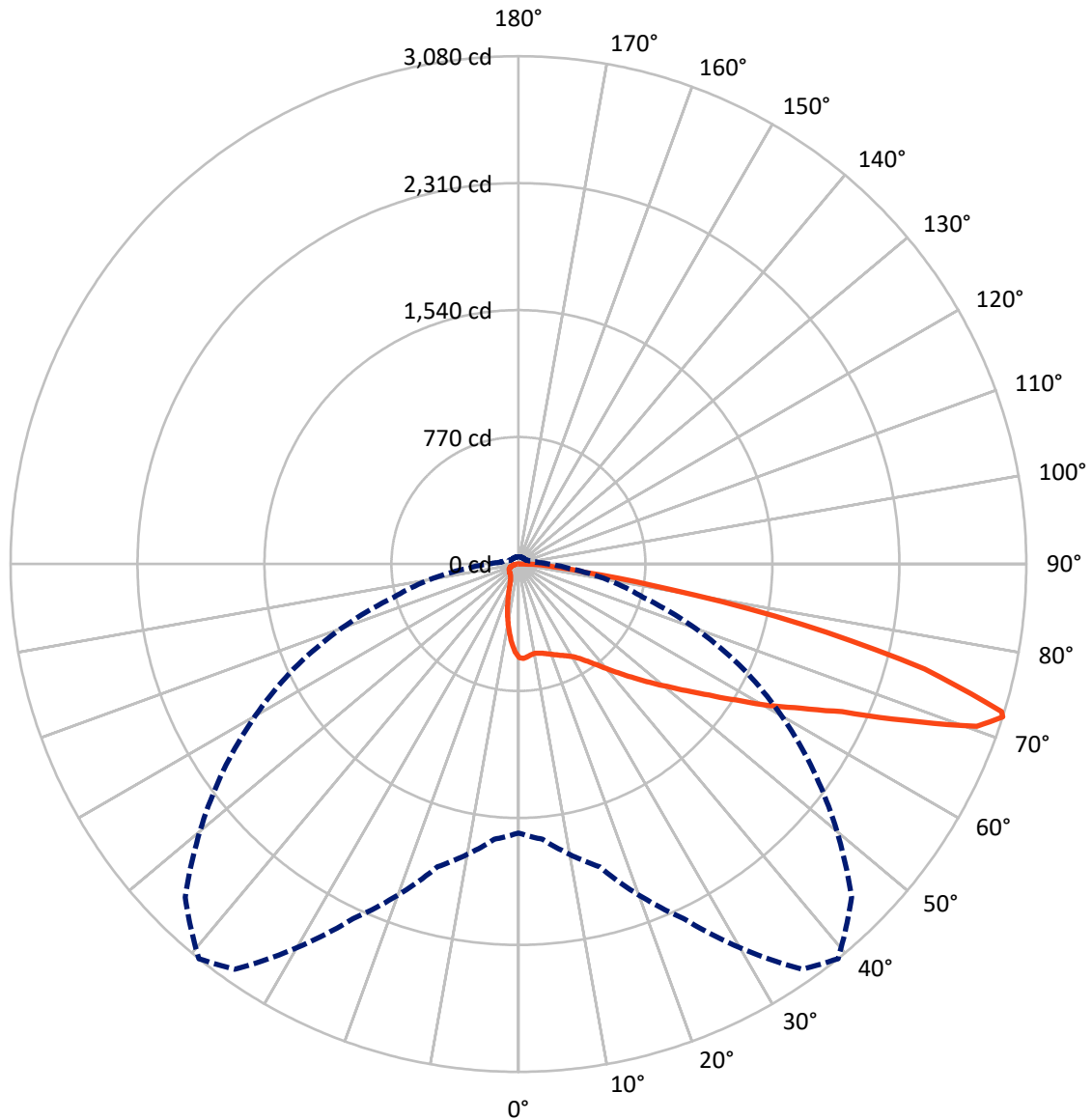
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.7 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	425.8	0.0	425.8
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	3287.9	0.0	3287.9
	% Fixture	88.5	0.0	88.5
Total	Lumens	3713.7	0.0	3713.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.7	1.3
10°-20°	122.5	3.3
20°-30°	190.9	5.1
30°-40°	293.9	7.9
40°-50°	479.1	12.9
50°-60°	744.4	20.0
60°-70°	996.4	26.8
70°-80°	716.5	19.3
80°-90°	121.5	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°	3713.7	100.0
0°-180°	3713.7	100.0



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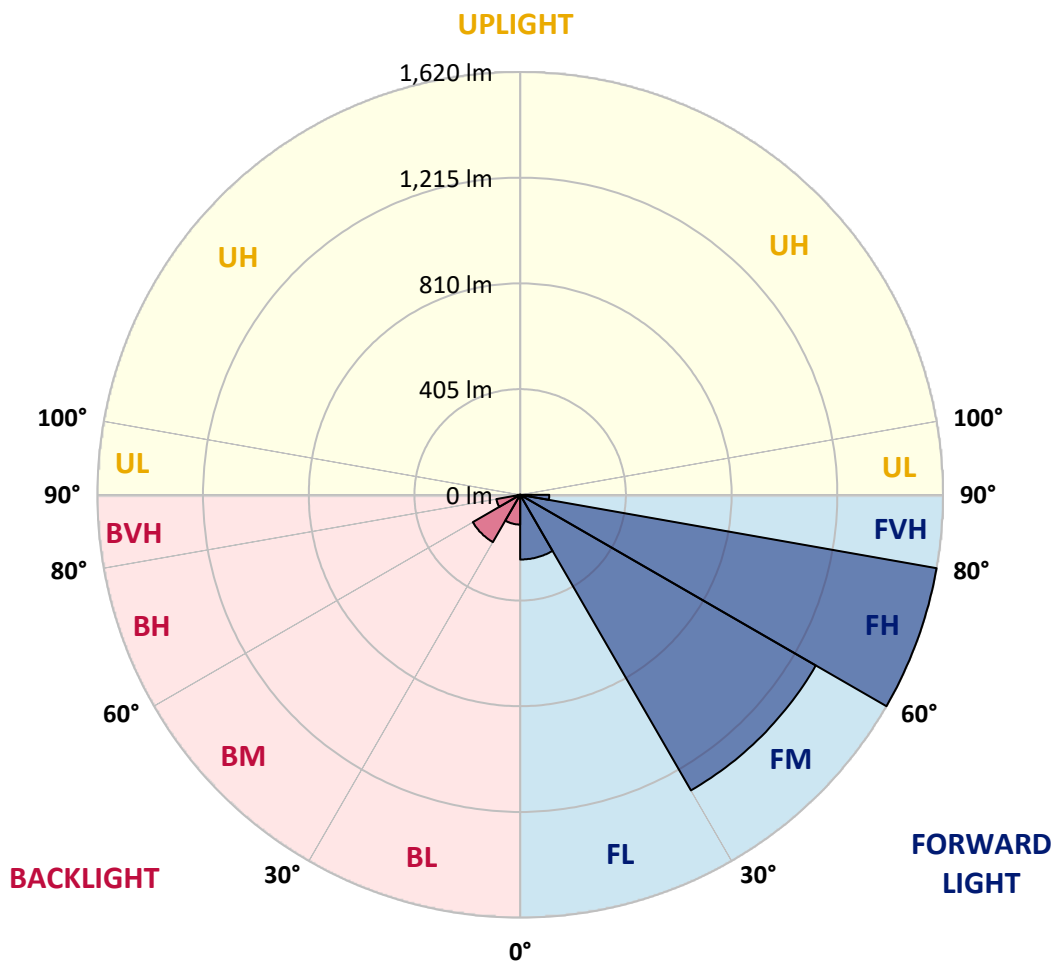
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	248.1	6.7			
FM	(30°-60°)	1308.0	35.2			
FH	(60°-80°)	1620.4	43.6			G1/1800
FVH	(80°-90°)	111.4	3.0			G2/225
BL	(0°-30°)	114.0	3.1	B1/500		
BM	(30°-60°)	209.3	5.6	B0/220		
BH	(60°-80°)	92.5	2.5	B0/110		G0/110
BVH	(80°-90°)	10.0	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°	567.2	567.2	567.2	567.2	567.2	567.2	567.2	567.2	567.2	567.2	567.2
2.5°	579.4	579.6	578.8	576.7	574.6	573.6	571.9	568.9	564.9	562.1	560.0
5°	573.8	574.6	574.1	570.5	566.9	564.9	562.1	557.9	552.8	550.4	545.2
7.5°	569.7	570.2	568.7	564.5	557.7	555.1	550.2	544.7	540.0	536.8	530.5
10°	566.6	567.2	565.9	561.7	554.2	551.2	545.2	539.2	532.9	529.1	522.0
12.5°	562.4	563.4	563.4	561.4	556.4	554.5	548.5	541.9	536.3	532.0	523.3
15°	561.7	562.9	565.2	564.9	563.4	561.9	557.2	550.6	545.8	540.8	530.0
17.5°	567.9	570.7	575.1	576.7	575.6	572.4	566.9	560.9	555.5	550.6	537.4
20°	583.6	585.1	591.8	594.8	589.9	585.1	577.9	570.2	565.2	561.4	544.4
22.5°	607.3	609.2	614.8	615.0	604.5	598.8	589.6	580.1	575.4	573.8	554.0
25°	645.1	644.6	646.2	639.9	621.0	614.2	603.0	592.0	588.8	591.8	567.9
27.5°	690.5	689.3	684.6	668.3	639.7	631.0	617.6	607.8	607.8	614.8	586.8
30°	742.9	741.7	726.2	699.0	661.9	651.9	637.7	627.4	632.7	646.2	612.5
32.5°	798.2	793.8	772.0	735.7	693.6	682.6	668.8	658.4	668.3	691.3	649.4
35°	850.4	847.9	821.2	778.0	734.4	725.2	715.7	702.7	718.7	754.3	701.6
37.5°	904.2	902.2	869.6	823.7	784.3	778.0	770.1	761.1	786.7	833.6	772.0
40°	964.3	960.3	919.2	873.3	842.4	839.4	835.2	832.7	874.1	943.9	861.3
42.5°	1032.4	1024.7	971.6	927.9	905.6	908.2	906.0	915.9	979.3	1071.0	967.5
45°	1110.1	1094.7	1023.6	985.9	975.8	985.7	990.4	1015.9	1103.6	1217.8	1086.1
47.5°	1183.0	1162.9	1080.7	1049.0	1054.8	1072.0	1085.5	1130.3	1240.0	1362.9	1207.4
50°	1249.9	1227.5	1141.8	1114.3	1142.3	1166.7	1194.6	1257.9	1385.1	1512.2	1318.5
52.5°	1299.6	1283.4	1202.8	1185.7	1242.8	1275.2	1319.8	1399.8	1531.7	1654.6	1417.7
55°	1338.0	1329.2	1262.5	1267.4	1356.5	1402.8	1456.9	1548.9	1686.8	1782.2	1497.5
57.5°	1382.3	1375.9	1330.4	1366.2	1497.5	1555.9	1619.7	1721.9	1834.4	1894.7	1560.1
60°	1429.2	1429.2	1406.2	1485.1	1674.1	1740.8	1804.4	1883.9	1981.4	1995.8	1585.6
62.5°	1464.6	1473.8	1482.1	1611.7	1841.6	1924.6	1994.4	2070.7	2133.8	2045.8	1525.7
65°	1516.0	1535.6	1582.1	1758.1	2048.9	2157.7	2252.0	2316.0	2257.2	2006.1	1330.4
67.5°	1604.3	1633.4	1732.1	1976.0	2366.5	2529.4	2620.9	2510.2	2232.9	1756.6	1019.2
70°	1683.8	1724.8	1893.7	2252.4	2779.4	2948.5	2906.3	2465.1	1944.9	1287.6	626.9
72°	1630.9	1675.8	1901.1	2372.8	3000.0	3079.8	2857.6	2184.6	1502.8	785.8	309.1
72.5°	1596.3	1642.8	1877.0	2369.9	3006.0	3063.1	2790.2	2073.2	1364.2	687.6	250.1
75°	1333.5	1373.4	1614.0	2100.3	2649.0	2544.3	2177.3	1341.7	626.9	222.2	128.6
77.5°	870.8	901.2	1113.0	1455.2	1855.5	1754.8	1325.4	628.2	235.1	134.8	96.7
80°	437.5	459.2	595.6	765.2	1001.5	921.4	611.8	303.8	157.4	97.5	76.1
82.5°	304.4	324.4	410.0	390.6	418.6	405.2	287.7	253.5	117.7	61.6	39.9
85°	255.2	276.0	339.2	278.5	227.8	207.7	206.2	239.6	77.8	30.4	33.7
87.5°	222.7	254.0	279.9	203.4	156.3	137.8	151.9	219.6	24.7	16.7	10.3
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°	567.2	567.2	567.2	567.2	567.2	567.2	567.2	567.2	567.2	567.2	567.2
2.5°	556.1	555.5	551.6	546.0	541.7	538.9	533.7	533.5	533.9	529.5	531.2
5°	540.5	537.4	527.7	514.5	503.8	493.7	482.4	478.7	475.4	468.7	469.4
7.5°	524.0	518.8	501.8	480.2	459.4	440.6	421.8	412.6	405.6	396.8	396.8
10°	514.3	506.1	480.2	448.5	415.6	387.9	360.0	343.3	331.0	319.8	319.1
12.5°	513.8	501.4	465.2	421.5	376.4	337.5	299.4	273.7	255.5	242.3	241.0
15°	517.8	500.3	452.8	396.4	339.6	288.9	241.8	209.1	186.0	171.3	169.8
17.5°	521.2	499.1	439.2	370.0	303.6	242.1	189.7	155.8	133.9	122.0	120.6
20°	524.6	496.4	422.1	342.1	264.0	198.2	148.4	121.0	106.4	99.8	99.0
22.5°	529.3	493.9	404.2	310.7	225.1	161.2	122.4	102.7	94.9	91.8	91.2
25°	537.0	494.1	386.7	278.5	189.4	134.4	106.0	93.8	89.5	87.3	87.3
27.5°	548.2	497.1	369.4	245.9	159.3	116.0	96.2	89.0	86.2	84.4	84.0
30°	564.7	502.6	351.3	214.9	135.4	103.2	90.4	86.0	83.8	82.3	82.1
32.5°	588.6	512.3	332.0	186.8	117.1	94.2	86.2	83.5	81.7	80.6	80.3
35°	624.2	529.5	313.3	162.8	104.3	87.7	82.8	80.6	79.5	79.0	78.7
37.5°	676.7	557.2	295.6	144.1	95.7	83.5	79.3	78.0	77.6	77.6	77.6
40°	742.4	593.6	279.7	130.9	91.0	80.3	76.8	75.8	75.8	76.1	76.1
42.5°	822.4	639.1	266.0	122.0	88.3	78.0	75.1	74.6	74.3	74.3	74.6
45°	915.4	693.0	257.6	114.9	86.2	76.8	73.8	73.5	72.5	72.0	72.0
47.5°	1008.9	750.6	257.0	110.9	83.8	75.3	72.5	72.5	70.6	69.6	69.8
50°	1096.2	802.3	262.6	110.0	82.3	73.1	71.3	71.6	68.9	67.5	67.3
52.5°	1166.5	841.7	269.3	111.2	82.3	71.0	69.1	70.3	67.3	65.8	65.5
55°	1220.9	869.0	271.7	113.9	83.2	69.3	67.0	69.1	66.7	64.8	64.8
57.5°	1259.6	877.8	261.0	115.2	84.7	69.1	65.1	68.9	67.5	65.1	65.1
60°	1245.4	827.2	221.1	110.5	84.4	68.5	63.6	69.3	70.0	67.3	67.3
62.5°	1134.5	692.0	177.5	99.8	80.3	66.7	61.8	68.9	71.8	70.8	70.3
65°	923.7	507.6	137.6	87.0	73.1	63.1	58.1	64.4	67.8	68.9	69.1
67.5°	650.9	321.3	107.0	74.1	64.0	57.6	53.9	56.9	58.1	58.6	59.5
70°	355.9	174.0	85.0	62.3	54.8	52.1	49.3	49.6	49.0	48.6	49.0
72°	178.7	113.6	71.8	54.1	48.6	46.9	45.7	44.9	44.9	44.1	44.4
72.5°	153.8	105.7	69.3	52.1	47.1	45.7	44.6	43.9	43.6	43.1	43.3
75°	102.4	83.8	57.8	43.6	40.1	39.2	39.7	38.9	39.2	38.7	38.9
77.5°	82.8	72.0	49.0	36.9	34.4	32.9	33.9	34.2	34.6	34.2	33.9
80°	69.3	61.3	41.1	30.4	28.6	27.5	28.0	29.7	29.9	28.4	28.2
82.5°	44.9	49.3	32.4	23.7	22.0	21.5	22.7	24.5	24.9	23.0	22.4
85°	37.7	39.7	23.4	16.2	14.4	13.9	16.5	18.2	19.4	17.5	16.9
87.5°	10.5	19.4	11.5	7.7	6.4	6.4	7.9	9.5	11.3	11.5	11.5
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)