

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: P197137

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197137
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-SL4-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 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: 3133 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B0 - U0 - G1

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

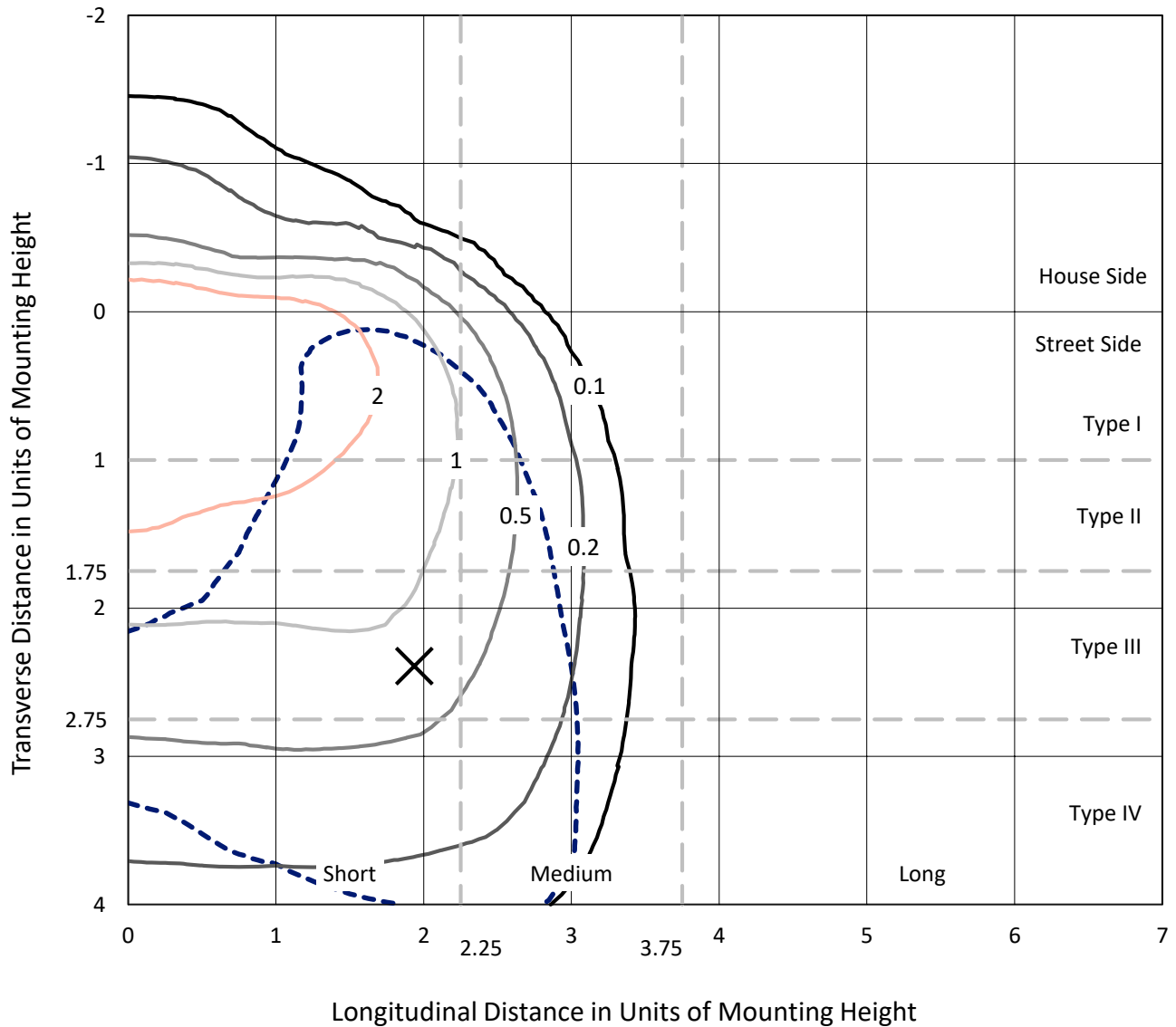


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Iso-Footcandle Lines of Horizontal Illumination

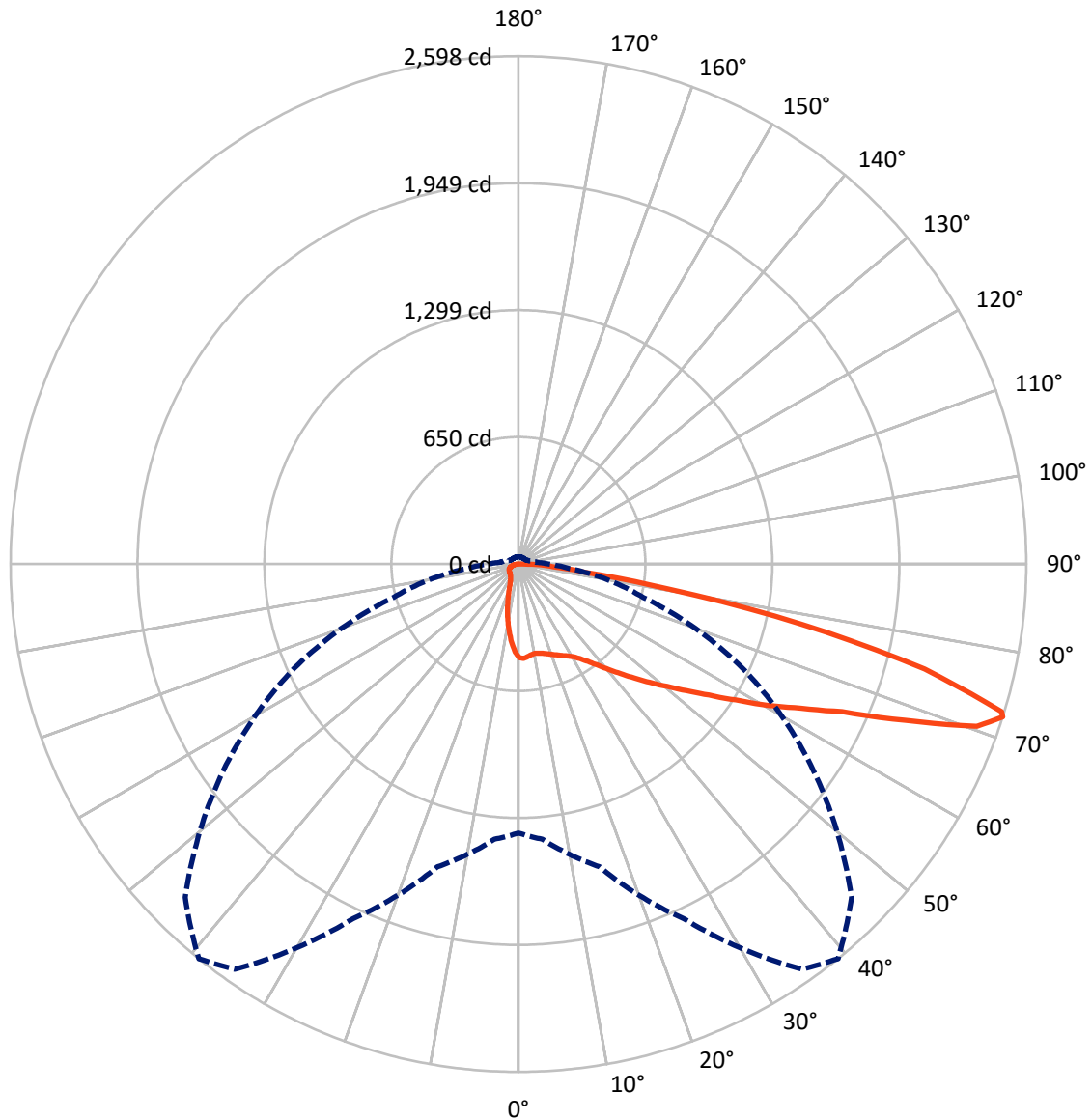
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.8 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	359.2	0.0	359.2
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	2773.8	0.0	2773.8
	% Fixture	88.5	0.0	88.5
Total	Lumens	3133.0	0.0	3133.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.1	1.3
10°-20°	103.3	3.3
20°-30°	161.0	5.1
30°-40°	247.9	7.9
40°-50°	404.1	12.9
50°-60°	628.0	20.0
60°-70°	840.6	26.8
70°-80°	604.5	19.3
80°-90°	102.5	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°	3133.0	100.0
0°-180°	3133.0	100.0



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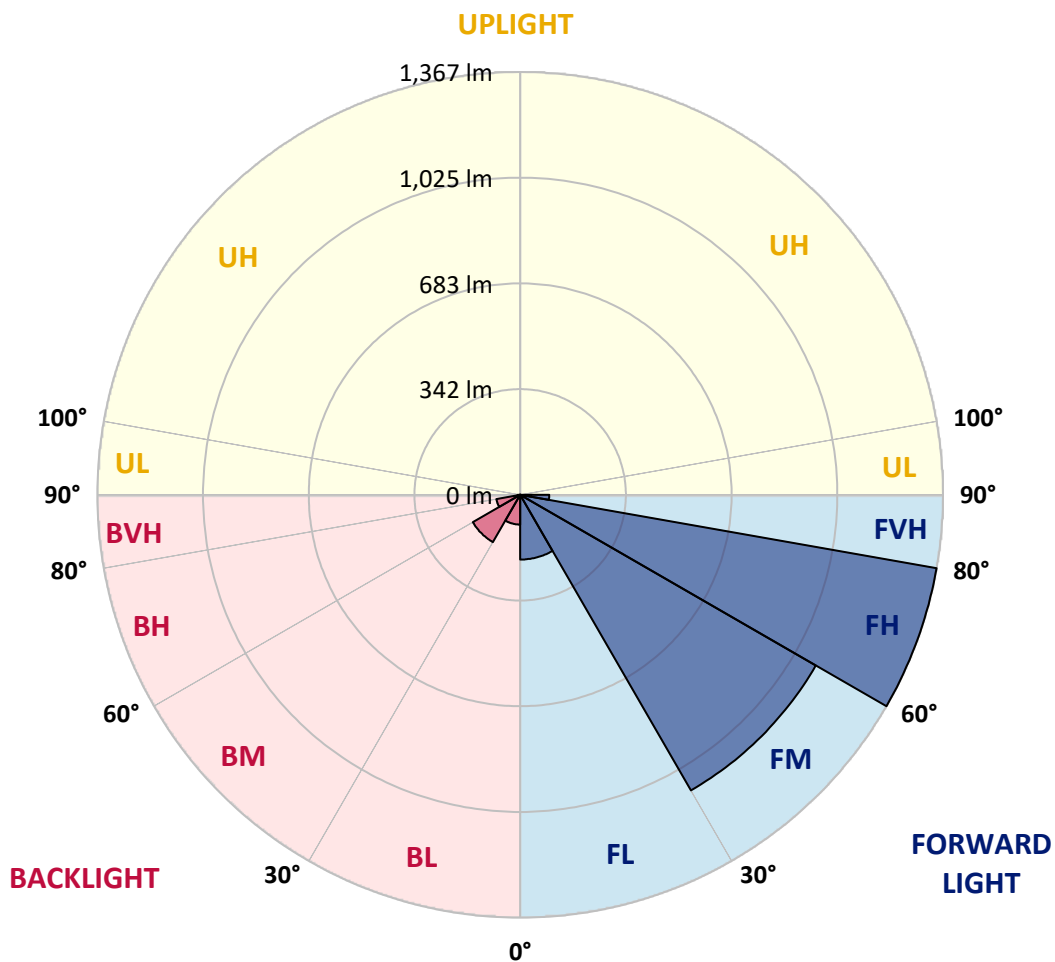
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	209.3	6.7			
FM	(30°-60°)	1103.5	35.2			
FH	(60°-80°)	1367.0	43.6			G1/1800
FVH	(80°-90°)	94.0	3.0			G1/100
BL	(0°-30°)	96.2	3.1	B0/110		
BM	(30°-60°)	176.6	5.6	B0/220		
BH	(60°-80°)	78.0	2.5	B0/110		G0/110
BVH	(80°-90°)	8.5	0.3			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	478.5	478.5	478.5	478.5	478.5	478.5	478.5	478.5	478.5	478.5	478.5
2.5°	488.8	489.0	488.4	486.5	484.8	483.9	482.5	479.9	476.6	474.3	472.4
5°	484.1	484.8	484.4	481.2	478.3	476.6	474.3	470.7	466.3	464.4	460.0
7.5°	480.6	481.0	479.7	476.2	470.5	468.4	464.2	459.5	455.5	452.8	447.5
10°	478.0	478.5	477.4	473.8	467.5	465.0	460.0	454.9	449.7	446.3	440.4
12.5°	474.5	475.3	475.3	473.6	469.4	467.7	462.7	457.2	452.4	448.8	441.5
15°	473.8	474.9	476.8	476.6	475.3	474.0	470.1	464.6	460.4	456.2	447.1
17.5°	479.1	481.4	485.2	486.5	485.6	482.9	478.3	473.2	468.6	464.6	453.4
20°	492.3	493.6	499.3	501.8	497.6	493.6	487.5	481.0	476.8	473.6	459.3
22.5°	512.3	514.0	518.6	518.8	510.0	505.2	497.4	489.4	485.4	484.1	467.3
25°	544.3	543.9	545.1	539.9	523.9	518.2	508.8	499.5	496.8	499.3	479.1
27.5°	582.6	581.5	577.5	563.9	539.7	532.3	520.9	512.7	512.7	518.6	495.1
30°	626.7	625.7	612.6	589.7	558.4	550.0	538.0	529.4	533.8	545.1	516.7
32.5°	673.4	669.6	651.3	620.6	585.1	575.8	564.3	555.4	563.9	583.2	547.9
35°	717.4	715.3	692.8	656.4	619.6	611.8	603.8	592.9	606.3	636.4	591.8
37.5°	762.8	761.1	733.6	694.9	661.6	656.4	649.7	642.1	663.8	703.3	651.3
40°	813.5	810.1	775.4	736.7	710.7	708.1	704.6	702.5	737.4	796.3	726.6
42.5°	870.9	864.4	819.6	782.8	764.1	766.2	764.3	772.7	826.1	903.5	816.2
45°	936.5	923.5	863.6	831.8	823.2	831.6	835.6	857.0	931.1	1027.4	916.3
47.5°	997.9	981.1	911.7	885.0	889.8	904.4	915.7	953.6	1046.1	1149.8	1018.6
50°	1054.5	1035.6	963.2	940.1	963.7	984.3	1007.8	1061.2	1168.5	1275.8	1112.4
52.5°	1096.4	1082.7	1014.8	1000.3	1048.4	1075.8	1113.4	1180.9	1292.2	1395.9	1196.1
55°	1128.8	1121.4	1065.0	1069.2	1144.3	1183.4	1229.1	1306.7	1423.0	1503.5	1263.4
57.5°	1166.2	1160.7	1122.4	1152.5	1263.4	1312.6	1366.4	1452.6	1547.5	1598.4	1316.1
60°	1205.7	1205.7	1186.4	1252.8	1412.3	1468.6	1522.3	1589.3	1671.6	1683.8	1337.6
62.5°	1235.6	1243.4	1250.3	1359.7	1553.6	1623.6	1682.5	1746.9	1800.1	1725.8	1287.1
65°	1278.9	1295.5	1334.7	1483.1	1728.6	1820.3	1899.8	1953.8	1904.2	1692.4	1122.4
67.5°	1353.4	1378.0	1461.3	1667.0	1996.5	2133.9	2211.0	2117.7	1883.8	1481.9	859.8
70°	1420.5	1455.2	1597.5	1900.2	2344.8	2487.4	2451.8	2079.6	1640.7	1086.3	528.9
72°	1375.9	1413.7	1603.9	2001.8	2530.9	2598.2	2410.8	1843.0	1267.8	662.9	260.8
72.5°	1346.6	1386.0	1583.5	1999.2	2536.0	2584.1	2353.8	1749.0	1150.8	580.0	210.9
75°	1125.0	1158.6	1361.6	1771.9	2234.8	2146.5	1836.9	1131.9	528.9	187.4	108.5
77.5°	734.6	760.3	938.8	1227.6	1565.4	1480.4	1118.0	530.0	198.3	113.8	81.6
80°	369.1	387.4	502.4	645.5	844.8	777.3	516.1	256.4	132.7	82.2	64.1
82.5°	256.8	273.6	346.0	329.6	353.1	341.8	242.7	213.9	99.3	51.9	33.7
85°	215.4	232.8	286.2	234.9	192.2	175.2	173.9	202.1	65.6	25.7	28.4
87.5°	187.8	214.3	236.2	171.6	131.9	116.3	128.1	185.3	20.8	14.1	8.6
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°	478.5	478.5	478.5	478.5	478.5	478.5	478.5	478.5	478.5	478.5	478.5
2.5°	469.2	468.6	465.4	460.6	457.0	454.7	450.3	450.1	450.5	446.7	448.2
5°	456.0	453.4	445.2	434.1	425.0	416.4	407.0	403.8	401.1	395.4	396.0
7.5°	442.1	437.7	423.4	405.1	387.6	371.6	355.9	348.1	342.2	334.8	334.8
10°	433.9	426.9	405.1	378.4	350.6	327.2	303.7	289.6	279.3	269.8	269.2
12.5°	433.5	422.9	392.4	355.6	317.6	284.8	252.6	230.9	215.6	204.4	203.4
15°	436.8	422.1	381.9	334.4	286.4	243.8	204.0	176.5	156.9	144.5	143.2
17.5°	439.8	421.0	370.6	312.1	256.2	204.2	160.0	131.4	112.9	102.8	101.8
20°	442.5	418.7	356.1	288.6	222.7	167.2	125.1	102.0	89.8	84.1	83.5
22.5°	446.5	416.6	340.9	262.1	189.9	136.1	103.3	86.6	80.1	77.4	77.0
25°	453.0	416.8	326.2	234.9	159.8	113.4	89.4	79.1	75.5	73.6	73.6
27.5°	462.5	419.4	311.7	207.4	134.4	97.8	81.2	75.1	72.8	71.3	70.9
30°	476.4	424.0	296.3	181.3	114.2	87.1	76.3	72.6	70.7	69.4	69.2
32.5°	496.6	432.2	280.1	157.5	98.8	79.5	72.8	70.5	69.0	67.9	67.7
35°	526.6	446.7	264.4	137.3	87.9	74.0	69.8	67.9	67.1	66.7	66.5
37.5°	570.8	470.1	249.4	121.6	80.8	70.5	66.9	65.8	65.4	65.4	65.4
40°	626.3	500.8	236.0	110.4	76.8	67.7	64.8	63.9	63.9	64.1	64.1
42.5°	693.8	539.2	224.4	102.8	74.5	65.8	63.3	62.9	62.7	62.7	62.9
45°	772.3	584.7	217.3	97.0	72.8	64.8	62.3	62.0	61.2	60.8	60.8
47.5°	851.1	633.3	216.8	93.6	70.7	63.5	61.2	61.2	59.5	58.7	58.9
50°	924.8	676.8	221.5	92.7	69.4	61.6	60.1	60.4	58.0	57.0	56.8
52.5°	984.1	710.0	227.1	93.8	69.4	59.9	58.3	59.3	56.8	55.5	55.3
55°	1029.9	733.2	229.2	96.1	70.2	58.5	56.6	58.3	56.4	54.7	54.7
57.5°	1062.7	740.5	220.2	97.2	71.5	58.3	54.9	58.0	57.0	54.9	54.9
60°	1050.7	697.8	186.5	93.2	71.3	57.8	53.6	58.5	59.1	56.8	56.8
62.5°	957.1	583.8	149.7	84.1	67.7	56.4	52.2	58.0	60.6	59.7	59.3
65°	779.2	428.2	116.1	73.4	61.6	53.2	49.0	54.3	57.2	58.0	58.3
67.5°	549.1	271.1	90.2	62.5	54.1	48.6	45.4	48.0	49.0	49.4	50.3
70°	300.3	146.8	71.7	52.6	46.3	44.0	41.6	41.9	41.4	41.0	41.4
72°	150.8	95.9	60.6	45.6	41.0	39.5	38.5	37.9	37.9	37.2	37.4
72.5°	129.8	89.2	58.5	44.0	39.7	38.5	37.6	37.0	36.8	36.4	36.6
75°	86.4	70.7	48.8	36.8	33.9	33.0	33.4	32.8	33.0	32.6	32.8
77.5°	69.8	60.8	41.4	31.1	29.0	27.8	28.6	28.8	29.2	28.8	28.6
80°	58.5	51.7	34.7	25.7	24.2	23.1	23.6	25.0	25.2	24.0	23.8
82.5°	37.9	41.6	27.3	20.0	18.5	18.1	19.1	20.6	21.0	19.3	18.9
85°	31.8	33.4	19.8	13.7	12.2	11.8	13.9	15.4	16.4	14.7	14.3
87.5°	8.8	16.4	9.7	6.5	5.5	5.5	6.7	8.0	9.5	9.7	9.7
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)