

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: P195697

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195697
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-SL4-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 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: 3840 lumens
Efficiency: N/A
Efficacy: 112.9 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

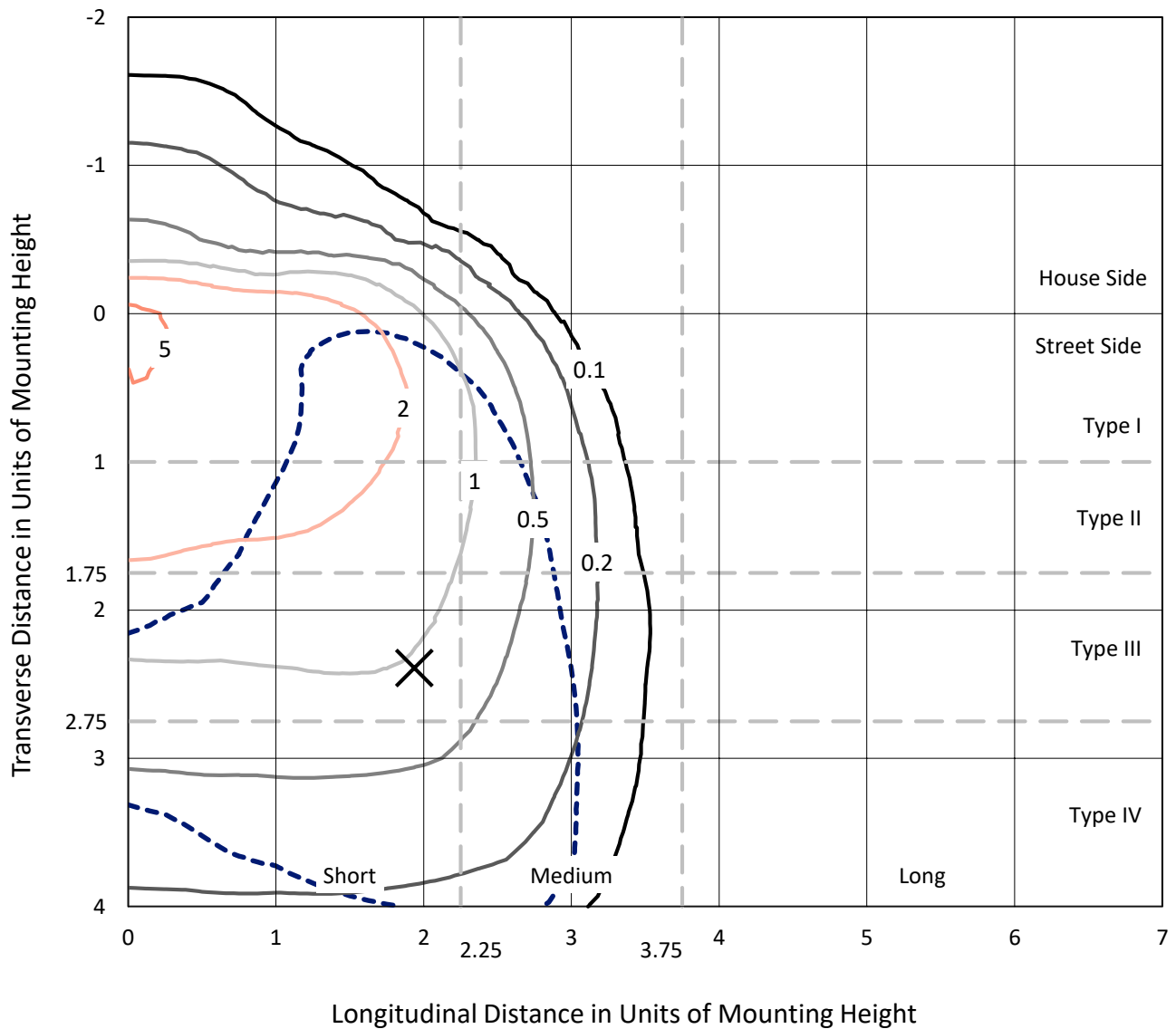
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

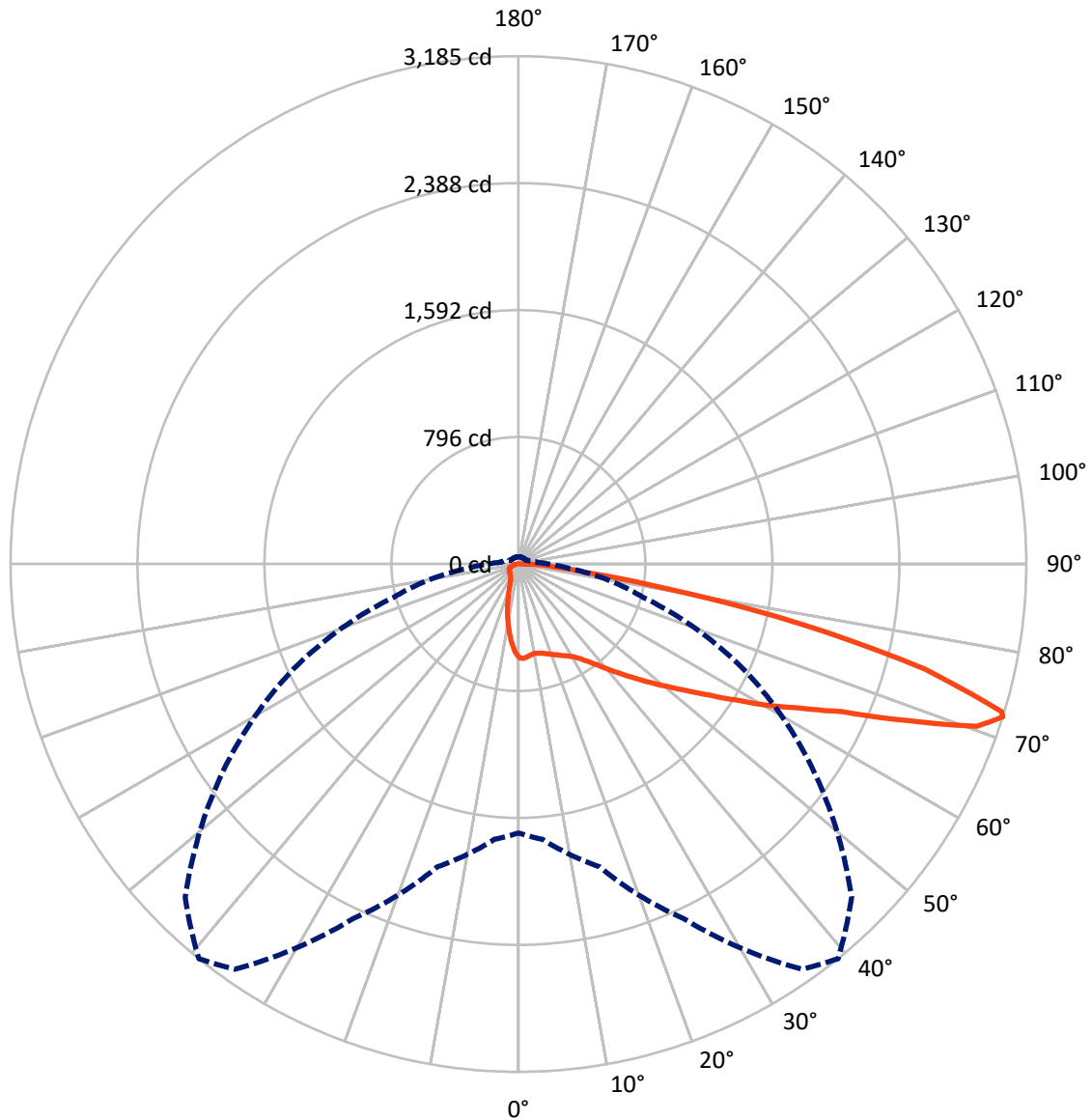
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 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	440.3	0.0	440.3
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	3399.7	0.0	3399.7
	% Fixture	88.5	0.0	88.5
Total	Lumens	3840.0	0.0	3840.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.4	1.3
10°-20°	126.6	3.3
20°-30°	197.3	5.1
30°-40°	303.9	7.9
40°-50°	495.3	12.9
50°-60°	769.7	20.0
60°-70°	1030.2	26.8
70°-80°	740.9	19.3
80°-90°	125.6	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°	3840.0	100.0
0°-180°	3840.0	100.0

Coefficient of Utilization



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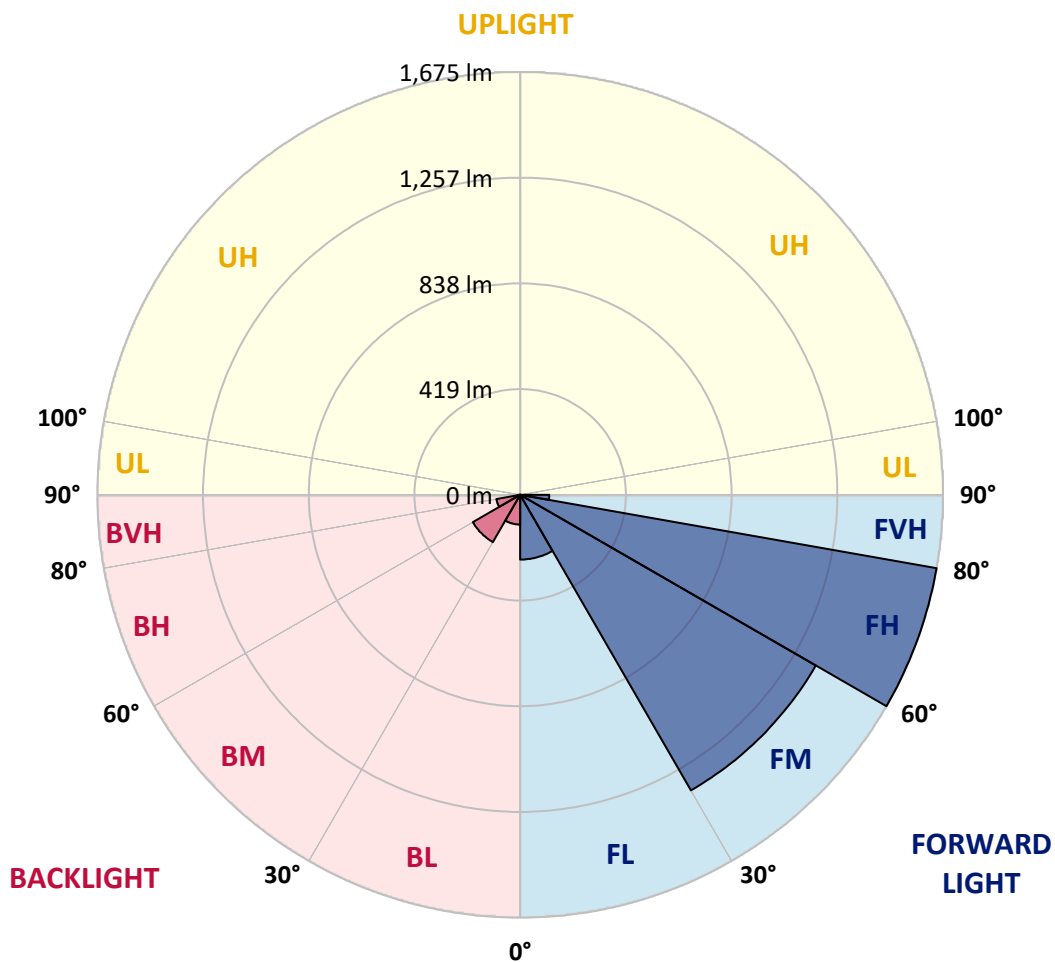
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	256.5	6.7			
FM	(30°-60°)	1352.5	35.2			
FH	(60°-80°)	1675.5	43.6			G1/1800
FVH	(80°-90°)	115.2	3.0			G2/225
BL	(0°-30°)	117.9	3.1	B1/500		
BM	(30°-60°)	216.4	5.6	B0/220		
BH	(60°-80°)	95.7	2.5	B0/110		G0/110
BVH	(80°-90°)	10.4	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°	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4
2.5°	599.1	599.3	598.6	596.2	594.2	593.1	591.3	588.2	584.1	581.3	579.0
5°	593.4	594.2	593.7	589.8	586.2	584.1	581.3	576.9	571.5	569.2	563.8
7.5°	589.0	589.5	588.0	583.6	576.6	574.1	568.9	563.2	558.3	555.0	548.5
10°	585.9	586.4	585.1	580.8	573.0	569.9	563.8	557.6	551.1	547.0	539.8
12.5°	581.5	582.6	582.6	580.5	575.4	573.3	567.1	560.4	554.5	550.1	541.1
15°	580.8	582.1	584.4	584.1	582.6	581.0	576.1	569.4	564.3	559.1	548.0
17.5°	587.2	590.0	594.7	596.2	595.2	591.9	586.2	580.0	574.3	569.4	555.8
20°	603.5	605.0	612.0	615.0	609.9	605.0	597.5	589.5	584.4	580.5	563.0
22.5°	627.9	630.0	635.7	635.9	625.1	619.2	609.6	599.8	594.9	593.4	572.8
25°	667.1	666.6	668.2	661.7	642.1	635.2	623.6	612.2	608.9	612.0	587.2
27.5°	714.0	712.7	707.8	691.1	661.4	652.4	638.5	628.5	628.5	635.7	606.8
30°	768.2	766.9	750.9	722.8	684.4	674.1	659.4	648.8	654.2	668.2	633.4
32.5°	825.4	820.8	798.3	760.7	717.1	705.8	691.6	680.8	691.1	714.8	671.5
35°	879.3	876.7	849.1	804.5	759.4	749.9	740.1	726.7	743.2	780.0	725.4
37.5°	934.9	932.9	899.1	851.7	811.0	804.5	796.3	787.0	813.5	862.0	798.3
40°	997.1	992.9	950.4	903.0	871.0	867.9	863.5	861.0	903.8	975.9	890.6
42.5°	1067.4	1059.5	1004.5	959.4	936.5	939.1	936.8	947.1	1012.5	1107.4	1000.4
45°	1147.9	1131.9	1058.4	1019.5	1008.9	1019.2	1024.1	1050.4	1141.2	1259.2	1123.1
47.5°	1223.1	1202.5	1117.5	1084.7	1090.6	1108.4	1122.4	1168.7	1282.2	1409.3	1248.4
50°	1292.5	1269.3	1180.6	1152.3	1181.1	1206.4	1235.3	1300.7	1432.2	1563.7	1363.4
52.5°	1343.8	1327.0	1243.8	1226.0	1285.0	1318.5	1364.7	1447.4	1583.8	1710.8	1466.0
55°	1383.5	1374.5	1305.4	1310.5	1402.6	1450.5	1506.4	1601.6	1744.1	1842.8	1548.5
57.5°	1429.4	1422.7	1375.7	1412.6	1548.5	1608.8	1674.8	1780.4	1896.7	1959.1	1613.2
60°	1477.8	1477.8	1454.1	1535.6	1731.0	1800.0	1865.8	1948.0	2048.8	2063.7	1639.4
62.5°	1514.4	1524.0	1532.5	1666.5	1904.2	1990.0	2062.2	2141.1	2206.3	2115.3	1577.6
65°	1567.5	1587.9	1635.8	1817.8	2118.6	2231.0	2328.5	2394.7	2333.9	2074.3	1375.7
67.5°	1658.8	1688.9	1791.0	2043.1	2447.1	2615.4	2710.0	2595.5	2308.9	1816.3	1053.8
70°	1741.0	1783.5	1958.1	2329.0	2873.9	3048.7	3005.1	2548.9	2010.9	1331.4	648.3
72°	1686.4	1732.8	1965.8	2453.5	3102.1	3184.5	2954.9	2258.9	1553.9	812.5	319.6
72.5°	1650.5	1698.7	1940.8	2450.4	3108.2	3167.3	2885.0	2143.7	1410.5	710.9	258.5
75°	1378.8	1420.1	1668.8	2171.8	2739.1	2630.8	2251.4	1387.3	648.3	229.7	133.0
77.5°	900.4	931.9	1150.7	1504.6	1918.6	1814.5	1370.3	649.6	243.1	139.5	100.0
80°	452.4	474.8	615.8	791.1	1035.5	952.7	632.6	314.2	162.7	100.8	78.6
82.5°	314.7	335.4	424.0	403.9	432.8	418.9	297.5	262.2	121.7	63.7	41.2
85°	264.0	285.4	350.8	287.9	235.6	214.7	213.2	247.7	80.4	31.4	34.8
87.5°	230.2	262.7	289.5	210.3	161.6	142.5	157.0	227.1	25.5	17.3	10.6
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°	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4
2.5°	575.1	574.3	570.5	564.5	560.1	557.3	551.9	551.6	552.2	547.5	549.3
5°	558.9	555.8	545.7	532.0	521.0	510.4	498.8	494.9	491.6	484.6	485.4
7.5°	541.8	536.4	518.9	496.5	475.1	455.5	436.2	426.6	419.4	410.4	410.4
10°	531.8	523.3	496.5	463.7	429.7	401.1	372.2	355.0	342.3	330.7	330.0
12.5°	531.3	518.4	481.0	435.9	389.2	349.0	309.6	283.0	264.2	250.6	249.3
15°	535.4	517.4	468.1	409.9	351.1	298.8	250.0	216.3	192.3	177.1	175.5
17.5°	539.0	516.1	454.2	382.5	314.0	250.3	196.2	161.1	138.4	126.1	124.8
20°	542.4	513.2	436.4	353.7	273.0	204.9	153.4	125.0	110.1	103.1	102.3
22.5°	547.3	510.7	417.9	321.2	232.8	166.8	126.6	106.2	98.2	94.9	94.3
25°	555.2	510.9	399.8	287.9	195.9	138.9	109.6	96.9	92.5	90.2	90.2
27.5°	566.8	514.0	382.0	254.2	164.7	119.9	99.5	92.0	89.2	87.4	86.9
30°	583.9	519.7	363.2	222.2	140.0	106.7	93.6	88.9	86.6	85.1	84.8
32.5°	608.6	529.7	343.4	193.1	121.2	97.4	89.2	86.4	84.6	83.3	83.0
35°	645.5	547.5	324.0	168.3	107.7	90.7	85.6	83.3	82.2	81.7	81.5
37.5°	699.6	576.1	305.7	149.0	99.0	86.4	82.0	80.7	80.2	80.2	80.2
40°	767.7	613.8	289.2	135.3	94.1	83.0	79.4	78.4	78.4	78.6	78.6
42.5°	850.4	660.9	275.0	126.1	91.3	80.7	77.6	77.1	76.8	76.8	77.1
45°	946.5	716.6	266.3	118.8	89.2	79.4	76.3	76.0	75.0	74.5	74.5
47.5°	1043.2	776.2	265.8	114.7	86.6	77.8	75.0	75.0	73.0	71.9	72.2
50°	1133.4	829.5	271.4	113.7	85.1	75.5	73.7	74.0	71.1	69.9	69.6
52.5°	1206.1	870.2	278.4	115.0	85.1	73.5	71.4	72.7	69.6	68.1	67.8
55°	1262.3	898.6	281.0	117.8	86.1	71.7	69.3	71.4	69.1	67.0	67.0
57.5°	1302.5	907.6	269.9	119.1	87.6	71.4	67.3	71.1	69.9	67.3	67.3
60°	1287.8	855.3	228.6	114.2	87.4	70.9	65.7	71.7	72.4	69.6	69.6
62.5°	1173.1	715.6	183.5	103.1	83.0	69.1	63.9	71.1	74.2	73.2	72.7
65°	955.1	524.8	142.3	90.0	75.5	65.2	60.1	66.5	70.1	71.1	71.4
67.5°	673.0	332.3	110.6	76.6	66.2	59.5	55.7	58.8	60.1	60.6	61.6
70°	368.1	179.9	87.9	64.4	56.7	53.9	51.0	51.3	50.8	50.3	50.8
72°	184.8	117.5	74.2	55.9	50.3	48.5	47.2	46.4	46.4	45.6	45.9
72.5°	159.0	109.3	71.7	53.9	48.7	47.2	46.1	45.4	45.1	44.6	44.9
75°	105.9	86.6	59.8	45.1	41.5	40.5	41.0	40.2	40.5	40.0	40.2
77.5°	85.6	74.5	50.8	38.2	35.6	34.0	35.1	35.3	35.8	35.3	35.1
80°	71.7	63.4	42.5	31.4	29.6	28.4	28.9	30.7	30.9	29.4	29.1
82.5°	46.4	51.0	33.5	24.5	22.7	22.2	23.5	25.3	25.8	23.7	23.2
85°	38.9	41.0	24.2	16.8	15.0	14.4	17.0	18.8	20.1	18.0	17.5
87.5°	10.8	20.1	11.9	8.0	6.7	6.7	8.2	9.8	11.6	11.9	11.9
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)