

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: P196789

Luminaire Tested: **NAV-AF-01-D-UNV-T3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196789
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5909.8 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - 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

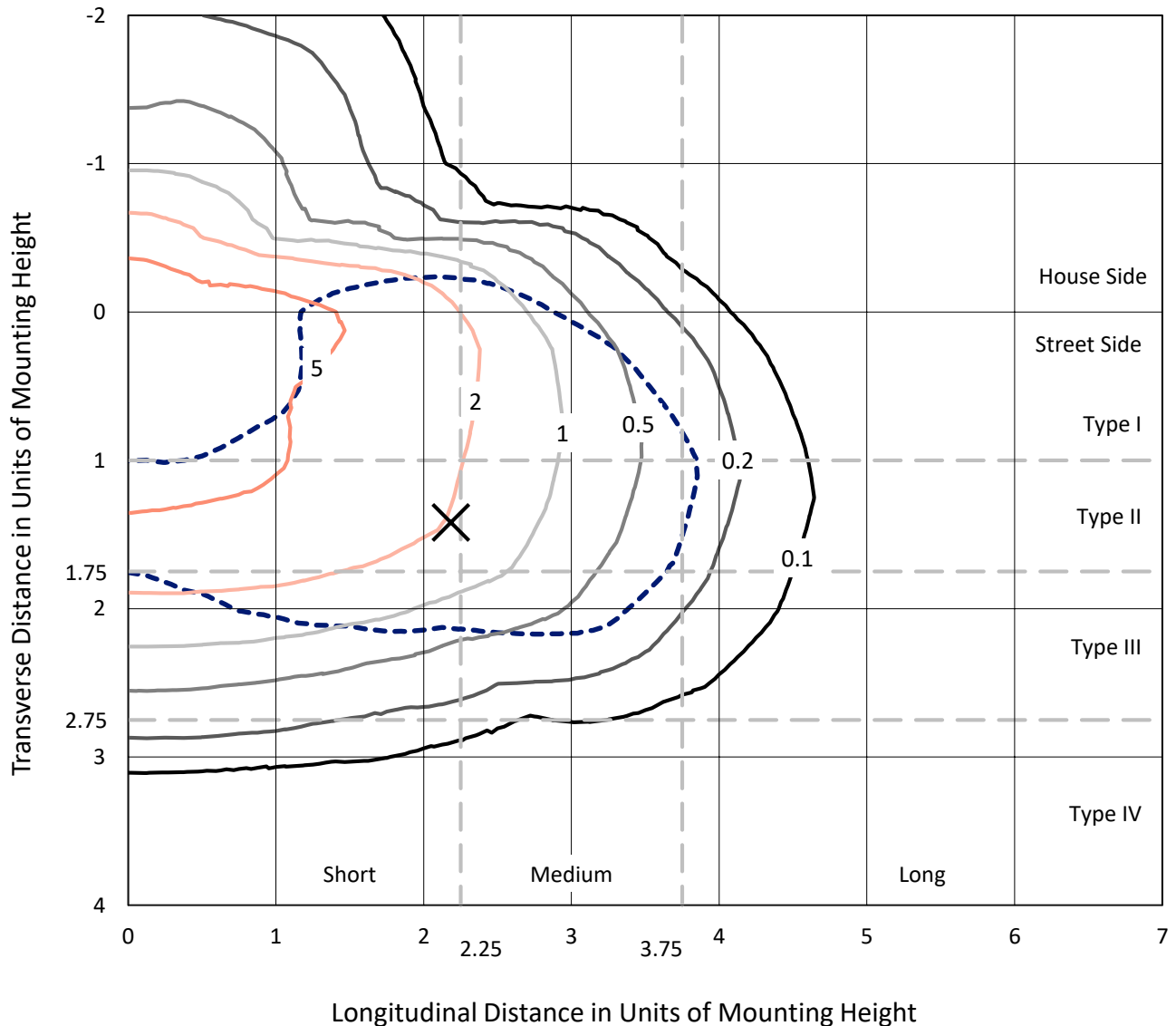


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Iso-Footcandle Lines of Horizontal Illumination

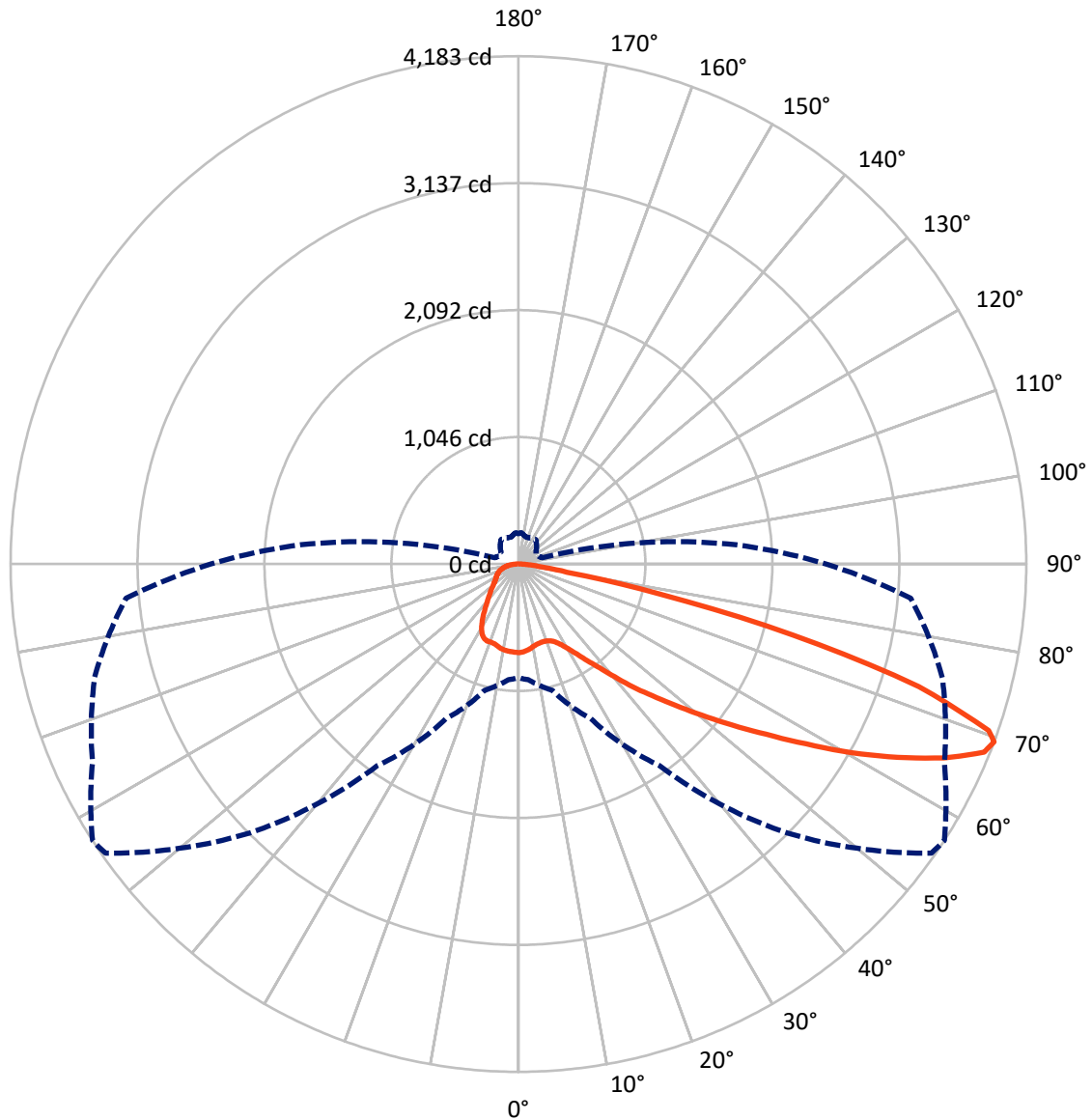
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.5 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1304.1	0.0	1304.1
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	4605.8	0.0	4605.8
	% Fixture	77.9	0.0	77.9
Total	Lumens	5909.8	0.0	5909.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.4	1.2
10°-20°	194.4	3.3
20°-30°	323.3	5.5
30°-40°	528.0	8.9
40°-50°	891.1	15.1
50°-60°	1386.2	23.5
60°-70°	1651.3	27.9
70°-80°	769.3	13.0
80°-90°	97.8	1.7
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°	5909.8	100.0
0°-180°	5909.8	100.0



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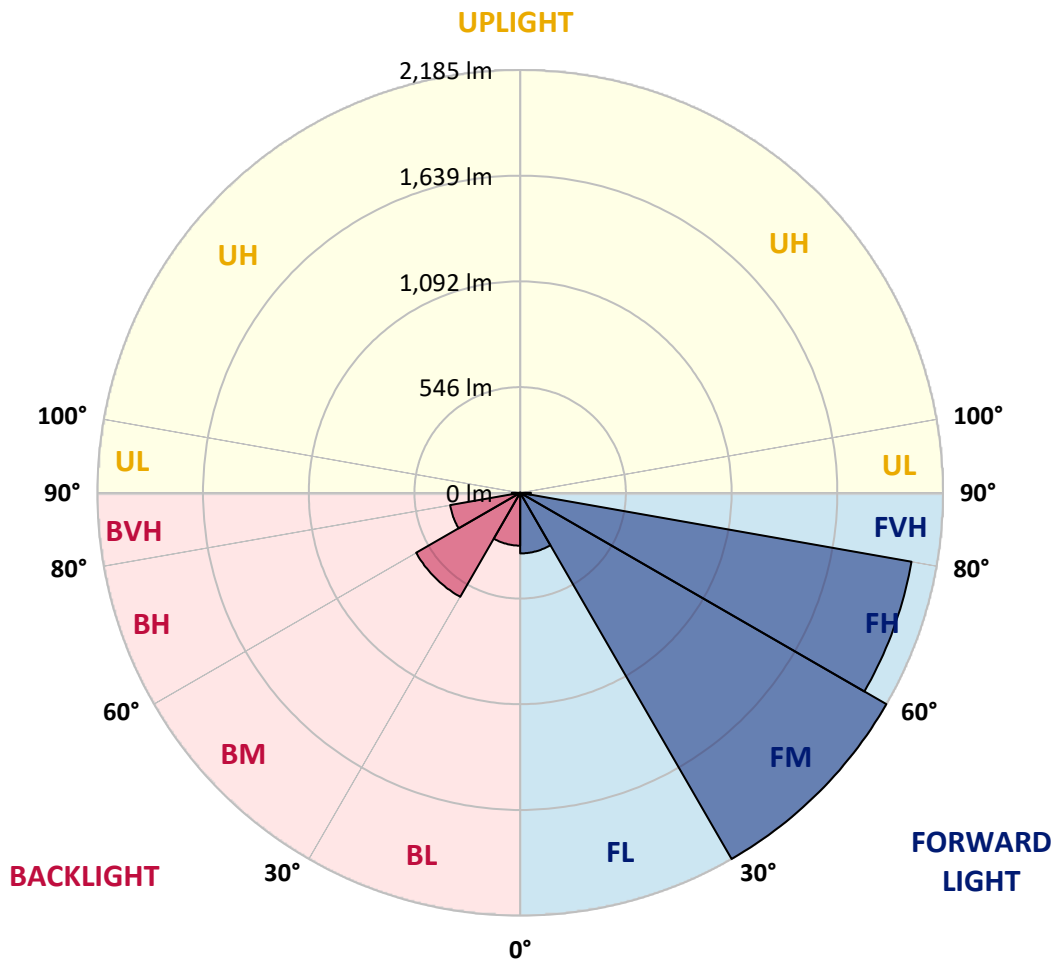
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	313.0	5.3			
FM	(30°-60°)	2184.7	37.0			
FH	(60°-80°)	2053.1	34.7			G2/5000
FVH	(80°-90°)	55.0	0.9			G1/100
BL	(0°-30°)	273.1	4.6	B1/500		
BM	(30°-60°)	620.7	10.5	B1/1000		
BH	(60°-80°)	367.5	6.2	B1/500		G1/500
BVH	(80°-90°)	42.8	0.7			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	730.2	730.2	730.2	730.2	730.2	730.2	730.2	730.2	730.2	730.2	730.2
2.5°	726.0	726.0	728.0	728.0	728.0	727.2	724.9	725.7	724.2	723.1	721.1
5°	711.3	712.1	714.3	715.1	716.2	716.6	716.6	716.2	716.6	716.6	715.4
7.5°	690.8	691.6	694.3	695.8	699.1	702.2	703.7	703.7	705.6	707.1	707.6
10°	678.4	678.4	679.9	679.9	682.6	684.1	689.0	688.6	693.9	698.8	701.1
12.5°	676.9	676.9	676.1	673.5	672.0	671.6	676.6	677.3	685.2	693.9	698.0
15°	681.8	681.8	679.5	674.2	668.5	665.9	670.9	672.4	681.0	691.3	697.7
17.5°	697.7	697.3	692.3	681.8	672.0	667.8	669.3	670.9	678.7	690.5	698.3
20°	732.9	732.9	722.3	703.0	685.9	676.1	673.8	675.0	680.6	691.6	701.9
22.5°	794.6	795.6	776.8	744.9	715.8	695.0	685.9	687.1	689.8	700.4	711.8
25°	885.3	882.3	855.5	810.3	765.1	729.5	710.9	712.1	712.1	721.8	733.6
27.5°	981.4	982.2	943.6	895.2	835.4	782.4	752.9	752.6	752.1	761.6	774.1
30°	1090.1	1090.4	1045.7	989.8	921.3	853.6	809.3	808.9	805.5	817.3	833.5
32.5°	1208.9	1208.4	1156.6	1093.4	1017.4	940.6	883.1	882.7	880.1	895.9	915.6
35°	1340.5	1340.5	1289.0	1211.1	1128.9	1043.5	976.9	976.6	978.1	999.6	1018.2
37.5°	1499.0	1502.5	1440.4	1345.7	1256.2	1164.9	1087.3	1085.2	1073.8	1110.1	1140.7
40°	1664.3	1673.9	1609.5	1499.0	1402.2	1308.0	1222.5	1221.0	1211.1	1249.7	1299.3
42.5°	1843.3	1864.9	1793.4	1680.6	1575.1	1473.3	1387.4	1383.2	1345.4	1405.6	1483.0
45°	2077.9	2091.9	1988.2	1886.1	1786.6	1670.5	1568.3	1545.9	1508.1	1585.3	1686.0
47.5°	2237.5	2230.7	2166.1	2097.6	2033.7	1922.4	1765.4	1737.0	1690.9	1793.1	1903.9
50°	2336.7	2341.7	2305.3	2301.9	2298.5	2220.9	1987.9	1953.8	1900.4	2021.6	2150.9
52.5°	2402.2	2379.7	2386.2	2463.5	2556.8	2519.8	2239.5	2201.6	2146.7	2267.7	2413.9
55°	2374.9	2345.4	2404.8	2556.8	2776.8	2785.0	2515.7	2476.7	2429.8	2529.7	2730.2
57.5°	2262.2	2277.0	2370.7	2582.3	2926.9	3022.6	2833.1	2793.3	2701.0	2802.5	3030.7
60°	2103.7	2133.5	2277.0	2542.1	3032.1	3207.7	3181.5	3155.1	2996.1	3068.0	3346.2
62.5°	1933.4	1962.9	2139.2	2473.6	2984.9	3371.5	3523.6	3507.3	3321.9	3323.7	3546.3
65°	1681.7	1693.8	1874.1	2286.8	2853.6	3519.5	3866.0	3851.6	3633.3	3542.0	3602.3
67.5°	1270.1	1285.2	1433.2	1805.1	2454.0	3439.3	4139.5	4137.3	3820.6	3623.0	3469.1
69°	937.9	956.4	1077.2	1401.4	2029.1	3133.5	4152.4	4183.1	3871.3	3614.8	3244.0
70°	686.3	707.6	819.1	1112.4	1690.1	2796.1	4042.3	4108.1	3852.1	3562.2	3068.4
72.5°	291.7	299.0	353.8	502.0	857.3	1686.0	3311.0	3449.5	3479.0	3191.8	2397.2
75°	182.8	184.9	206.6	257.7	381.5	697.3	2144.1	2332.9	2597.4	2476.4	1605.0
77.5°	137.6	139.7	152.1	177.4	236.9	260.2	994.7	1186.1	1487.7	1456.7	798.6
80°	105.6	106.7	115.0	129.0	166.8	163.1	322.8	405.6	620.9	547.8	282.7
82.5°	82.8	83.2	90.4	93.1	116.6	109.7	161.9	180.5	250.9	208.4	138.1
85°	73.4	74.6	81.7	68.1	74.6	66.2	88.9	96.4	133.2	125.6	52.2
87.5°	37.4	39.4	68.5	58.2	37.4	31.3	39.0	41.9	54.1	58.7	25.3
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°	730.2	730.2	730.2	730.2	730.2	730.2	730.2	730.2	730.2	730.2	730.2
2.5°	721.5	721.8	723.1	724.9	728.0	731.7	736.3	740.8	743.5	745.3	744.6
5°	715.4	715.8	718.2	721.5	725.3	731.0	738.6	744.2	748.4	751.0	750.6
7.5°	707.9	709.0	713.6	717.4	722.6	727.2	733.2	738.6	742.8	745.3	744.9
10°	702.2	703.3	709.0	713.9	718.5	719.3	718.2	716.6	716.2	718.2	717.4
12.5°	699.6	701.9	707.1	710.5	708.6	701.5	693.1	689.8	688.6	692.3	692.8
15°	700.4	702.2	706.8	704.5	694.3	682.3	677.6	680.2	682.6	684.8	685.2
17.5°	702.2	703.3	704.5	696.2	681.8	673.8	672.4	669.6	662.8	659.1	658.8
20°	705.6	707.1	705.3	692.0	679.1	668.5	650.4	634.1	618.6	610.3	606.8
22.5°	717.4	718.5	712.8	700.0	680.2	645.8	609.1	581.1	557.3	544.4	539.5
25°	740.4	742.3	734.3	718.2	666.7	606.5	554.7	516.8	487.0	471.5	467.3
27.5°	780.8	782.9	774.1	731.7	634.9	554.0	491.1	453.7	428.0	414.6	412.8
30°	841.4	844.1	836.2	731.4	586.4	487.0	429.1	407.1	392.3	383.3	382.9
32.5°	925.4	935.3	902.7	718.5	526.6	419.2	382.2	374.5	367.3	361.3	361.3
35°	1032.2	1055.2	968.6	691.6	460.8	373.0	356.0	348.9	339.8	333.3	332.5
37.5°	1159.7	1195.7	1015.4	644.0	404.0	350.7	340.2	328.5	314.0	301.5	298.5
40°	1334.8	1343.2	1038.6	566.4	361.7	338.6	325.4	310.7	292.5	278.5	277.0
42.5°	1510.7	1483.5	1034.0	483.2	337.5	327.7	310.3	294.0	277.7	265.9	265.9
45°	1710.9	1606.1	999.6	399.6	315.5	315.2	296.2	280.7	268.2	259.6	257.7
47.5°	1902.3	1716.3	940.1	337.8	292.9	302.6	287.2	274.7	263.4	255.0	253.5
50°	2134.7	1843.7	877.1	294.8	270.9	291.7	283.4	277.0	265.9	251.7	250.1
52.5°	2365.5	1992.8	828.1	262.2	251.7	283.0	285.6	286.4	276.2	248.2	246.3
55°	2613.3	2152.1	776.8	236.9	235.7	278.8	290.9	290.2	285.2	249.0	246.0
57.5°	2848.9	2312.2	700.0	219.1	223.2	274.7	292.0	280.0	271.3	252.7	247.8
60°	3044.2	2444.5	587.2	206.6	212.6	266.4	284.5	266.4	251.7	252.0	247.5
62.5°	3139.1	2481.6	449.0	192.2	203.9	252.7	273.5	256.1	242.5	253.5	250.9
65°	3066.9	2376.1	320.1	178.9	193.4	236.9	267.1	247.5	237.9	261.0	258.1
67.5°	2807.4	2088.5	232.2	167.2	183.1	220.6	255.0	239.5	233.5	266.7	259.9
69°	2531.5	1803.3	201.2	160.4	175.9	211.9	247.0	235.4	230.0	258.8	249.0
70°	2302.3	1583.3	185.7	156.2	169.9	206.9	241.0	232.7	226.6	249.3	237.6
72.5°	1650.8	1023.4	156.2	143.7	153.9	196.0	227.8	222.9	213.8	225.1	217.5
75°	997.3	534.3	132.8	130.9	137.3	180.9	212.3	206.2	197.1	198.3	194.5
77.5°	458.3	246.7	111.2	115.9	119.9	161.9	193.4	186.5	178.2	175.2	175.6
80°	200.9	144.1	93.1	98.8	101.1	145.7	172.9	165.3	156.2	172.5	160.1
82.5°	108.6	83.6	72.6	76.5	82.8	126.7	150.2	140.4	131.6	153.2	123.7
85°	43.9	42.7	49.1	53.0	57.5	91.2	125.6	115.4	104.8	93.9	91.6
87.5°	18.9	20.4	24.2	25.6	30.6	56.7	84.3	73.8	74.2	63.6	62.4
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)