

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: P197293

Luminaire Tested: **NAV-AF-01-D-UNV-T3R-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197293
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5071 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

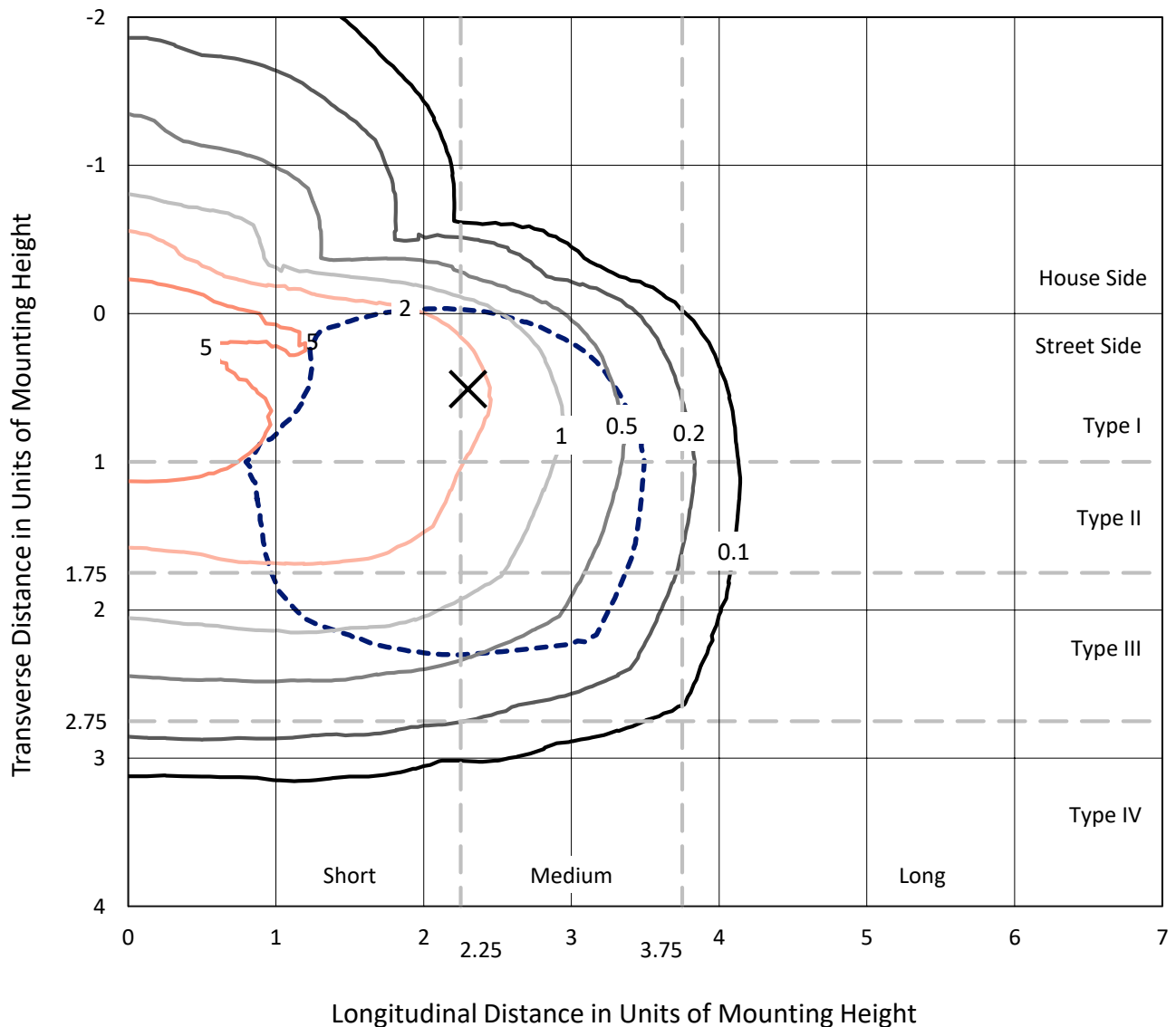
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

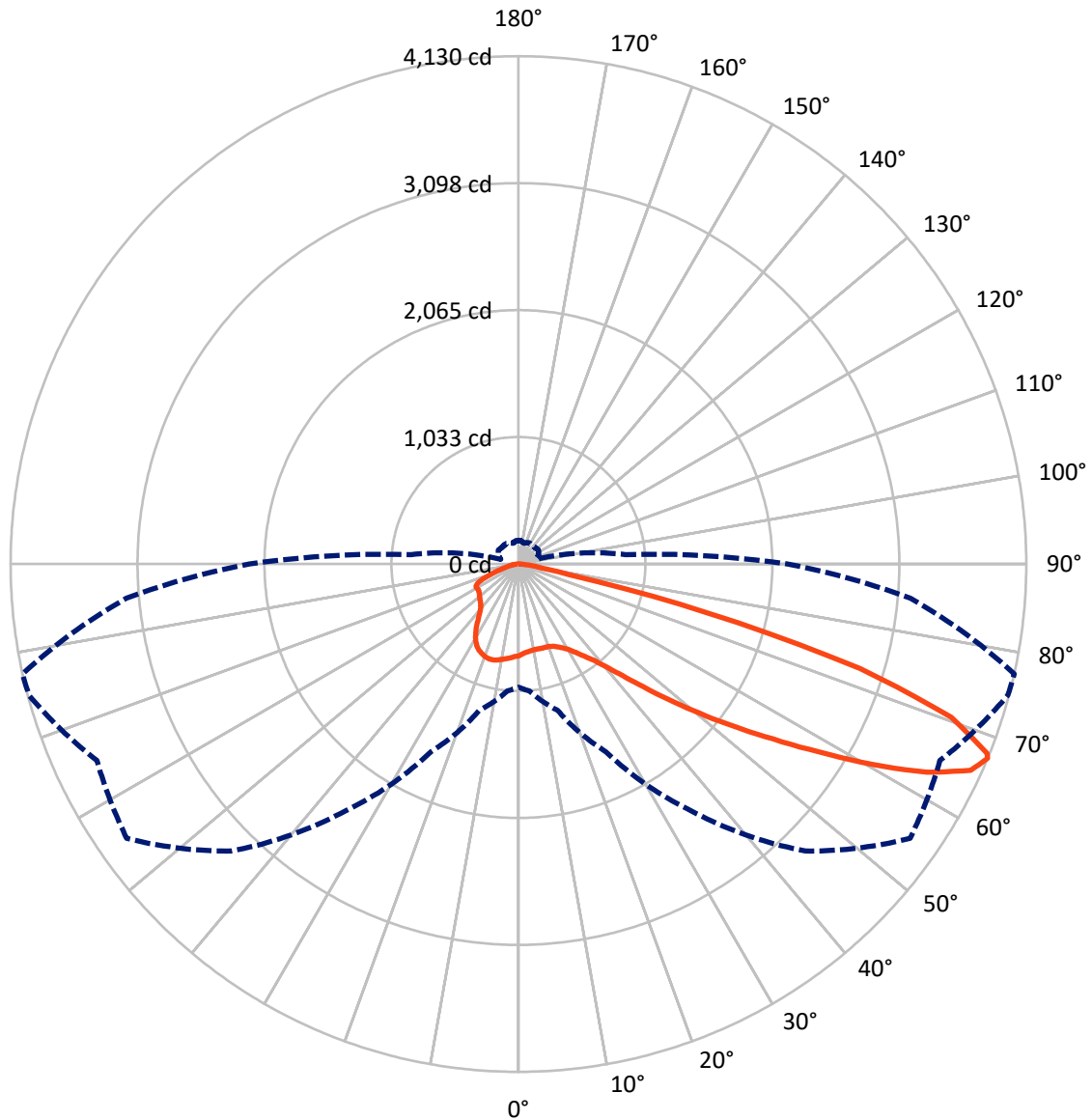
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	871.5	0.0	871.5
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	4199.6	0.0	4199.6
	% Fixture	82.8	0.0	82.8
Total	Lumens	5071.0	0.0	5071.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	1.3
10°-20°	184.1	3.6
20°-30°	312.8	6.2
30°-40°	500.4	9.9
40°-50°	770.3	15.2
50°-60°	1068.7	21.1
60°-70°	1425.6	28.1
70°-80°	678.4	13.4
80°-90°	64.2	1.3
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°	5071.0	100.0
0°-180°	5071.0	100.0



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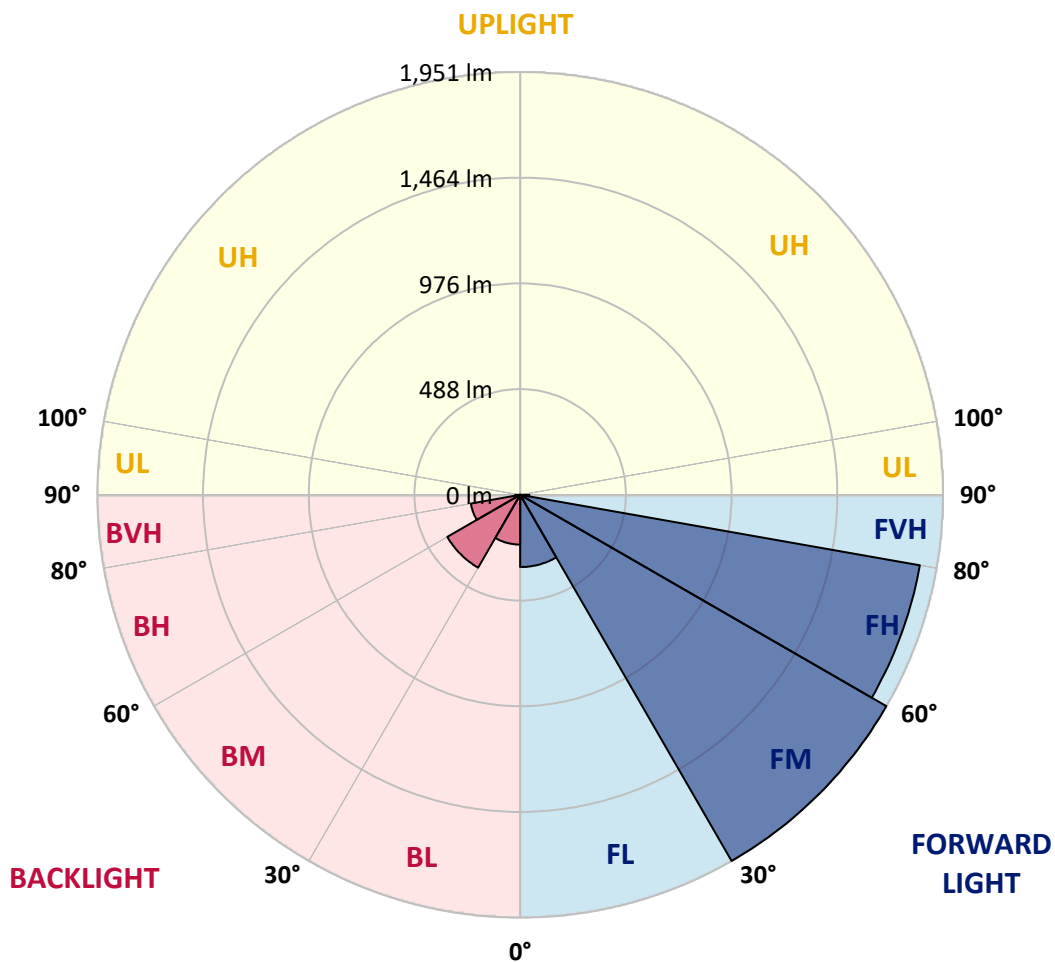
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	333.5	6.6			
FM	(30°-60°)	1951.4	38.5			
FH	(60°-80°)	1873.0	36.9			G2/5000
FVH	(80°-90°)	41.7	0.8			G1/100
BL	(0°-30°)	229.9	4.5	B1/500		
BM	(30°-60°)	388.0	7.7	B1/1000		
BH	(60°-80°)	231.1	4.6	B1/500		G1/500
BVH	(80°-90°)	22.5	0.4			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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	746.3	746.3	746.3	746.3	746.3	746.3	746.3	746.3	746.3	746.3	746.3
2.5°	669.2	672.3	672.7	681.7	685.8	696.2	707.5	717.5	726.3	729.4	735.0
5°	602.1	602.1	603.1	609.0	620.6	637.2	660.7	686.4	713.4	720.0	736.6
7.5°	567.0	567.7	568.3	574.2	583.3	598.1	621.6	656.7	701.5	712.5	741.6
10°	570.2	569.2	566.1	564.8	568.6	578.0	598.4	634.4	691.5	708.4	750.7
12.5°	619.4	617.5	607.1	592.1	578.3	574.9	589.0	623.1	686.8	708.4	766.1
15°	703.7	704.9	684.6	653.2	617.2	592.7	590.8	619.1	685.2	710.3	783.9
17.5°	813.4	814.0	785.8	740.4	680.5	630.0	603.7	619.1	685.2	712.2	801.2
20°	930.0	925.6	893.6	836.6	758.9	681.7	627.2	622.8	687.1	715.0	817.5
22.5°	1030.0	1025.9	992.4	932.5	843.5	742.9	658.9	635.4	697.4	726.6	840.4
25°	1117.4	1119.9	1087.3	1020.0	927.8	811.8	706.2	664.2	719.0	747.6	868.6
27.5°	1223.7	1219.0	1181.4	1117.1	1014.6	883.3	765.4	700.6	744.8	773.0	903.0
30°	1346.6	1344.4	1293.6	1227.5	1110.2	963.2	824.1	739.7	778.3	807.8	946.3
32.5°	1495.8	1495.5	1440.9	1359.7	1217.7	1053.5	893.3	793.3	827.2	857.0	1003.7
35°	1664.7	1664.4	1608.0	1500.8	1341.6	1153.5	974.8	858.5	887.7	919.0	1072.0
37.5°	1781.9	1780.1	1750.6	1646.5	1478.5	1269.8	1076.7	946.3	956.3	991.4	1154.4
40°	1804.5	1815.8	1841.2	1779.8	1628.0	1398.9	1178.9	1040.6	1050.0	1095.2	1258.2
42.5°	1780.1	1794.8	1879.1	1896.4	1777.6	1555.3	1306.8	1171.4	1183.3	1239.4	1380.1
45°	1758.8	1771.6	1877.2	1960.9	1925.2	1725.8	1466.3	1330.9	1353.5	1423.1	1519.3
47.5°	1722.4	1734.3	1840.2	1972.5	2009.5	1890.1	1658.4	1522.7	1561.6	1645.9	1677.9
50°	1720.5	1725.8	1789.8	1933.7	2038.7	2014.8	1871.3	1747.2	1806.7	1903.9	1853.4
52.5°	1672.9	1710.2	1768.2	1871.6	2039.3	2087.6	2081.0	1993.2	2085.1	2192.6	2045.9
55°	1381.4	1424.3	1696.1	1841.2	2035.5	2149.9	2272.5	2254.9	2398.5	2511.7	2261.5
57.5°	1289.8	1308.0	1487.9	1850.3	2066.9	2253.1	2464.0	2536.1	2757.1	2880.6	2520.1
60°	1264.8	1283.9	1446.2	1854.7	2151.8	2440.8	2723.9	2853.6	3178.7	3309.7	2813.8
62.5°	1236.9	1261.6	1449.4	1858.7	2301.0	2718.5	3068.6	3198.1	3611.5	3728.5	3089.0
65°	1155.4	1188.3	1391.4	1833.0	2464.3	3067.1	3524.4	3557.3	3969.2	4043.5	3255.1
67°	1000.8	1036.9	1232.2	1684.5	2449.3	3301.9	3888.9	3782.1	4121.2	4130.3	3201.2
67.5°	951.9	989.2	1178.2	1622.7	2406.3	3332.6	3953.5	3813.1	4120.0	4109.9	3151.1
70°	641.0	683.0	834.4	1191.4	1930.2	3101.6	3937.8	3717.5	3849.8	3734.7	2707.2
72.5°	318.1	319.4	416.3	652.6	1169.5	2224.5	3284.9	3180.2	3120.7	2903.5	1986.6
75°	153.3	156.1	196.5	288.4	493.1	1148.5	2240.2	2145.9	1827.1	1582.0	994.3
77.5°	116.9	119.7	152.6	187.8	205.6	374.6	1109.6	896.8	529.4	422.8	280.2
80°	90.3	95.6	128.8	144.2	136.0	150.1	348.9	274.6	205.9	189.0	138.9
82.5°	70.5	73.7	109.4	109.4	94.0	100.6	162.4	158.6	127.9	115.3	74.6
85°	49.8	56.1	88.1	81.5	61.7	62.4	97.2	93.1	65.8	53.0	29.2
87.5°	22.3	28.5	62.7	53.3	32.9	25.4	39.8	34.2	26.0	20.1	13.5
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°	746.3	746.3	746.3	746.3	746.3	746.3	746.3	746.3	746.3	746.3	746.3
2.5°	741.3	746.3	754.2	758.9	765.1	767.6	770.1	774.5	778.0	777.0	775.5
5°	748.2	756.7	766.4	769.5	769.5	766.4	764.5	764.8	763.9	763.2	761.4
7.5°	758.2	769.8	776.7	773.6	763.9	751.6	740.0	733.2	726.6	722.5	723.7
10°	772.3	785.2	785.5	771.7	748.5	721.9	699.0	684.3	670.2	663.9	665.8
12.5°	792.7	805.6	794.6	764.8	724.1	682.4	640.4	610.0	582.7	576.1	574.2
15°	814.6	824.7	800.2	750.1	689.0	620.3	549.8	504.3	473.9	468.6	466.7
17.5°	833.8	839.4	797.4	723.7	633.5	525.3	443.2	412.5	406.2	409.4	409.4
20°	850.7	848.8	785.2	683.0	546.0	420.0	372.4	372.1	380.5	388.4	389.0
22.5°	872.0	857.3	765.8	622.5	441.6	350.4	342.3	350.4	359.8	368.6	369.6
25°	897.4	866.7	739.7	536.3	355.1	318.1	321.6	328.5	334.4	341.3	341.7
27.5°	922.8	873.9	703.1	435.1	308.1	297.5	301.2	304.0	305.6	310.0	310.0
30°	952.3	879.5	650.1	348.6	286.5	279.3	277.1	275.8	277.1	283.0	283.4
32.5°	989.2	889.6	577.7	299.0	276.5	266.4	255.1	248.9	253.3	263.9	265.8
35°	1031.2	901.5	490.9	279.3	273.0	260.2	239.5	229.8	231.3	241.0	242.6
37.5°	1083.9	916.8	405.3	274.6	276.5	259.5	232.3	218.5	211.6	211.9	211.6
40°	1151.3	932.2	337.6	275.8	284.0	261.1	228.8	207.2	192.8	193.4	194.7
42.5°	1221.8	942.2	294.6	279.6	293.1	263.3	227.6	196.2	183.7	194.3	204.1
45°	1304.3	939.4	272.4	283.0	300.0	264.2	222.9	195.0	184.6	216.6	234.8
47.5°	1398.9	927.2	259.8	284.6	301.8	263.9	219.4	199.0	192.5	247.9	268.6
50°	1501.7	908.1	249.8	282.1	300.9	262.7	223.2	204.1	195.6	254.8	270.8
52.5°	1614.3	890.5	239.5	276.5	296.2	258.9	227.9	201.9	186.8	234.8	247.0
55°	1747.5	886.4	227.9	266.7	288.4	254.8	225.4	195.0	177.1	208.1	215.7
57.5°	1899.8	911.8	212.8	254.8	277.7	246.7	219.4	191.2	173.6	189.3	193.4
60°	2093.2	967.9	196.8	242.3	264.5	234.5	214.1	192.1	174.6	186.5	187.4
62.5°	2244.3	1018.4	182.4	226.9	247.0	219.7	208.4	193.1	177.4	190.3	188.7
65°	2299.1	993.6	164.6	204.1	222.2	203.4	200.6	193.7	177.4	192.5	189.0
67°	2186.6	875.5	147.6	181.2	198.7	189.0	193.1	191.2	174.3	192.1	186.2
67.5°	2133.0	833.8	143.2	177.4	192.5	184.6	191.2	189.9	173.3	191.5	184.6
70°	1759.1	598.1	121.0	148.9	161.1	162.7	179.6	181.8	165.8	179.9	167.4
72.5°	1251.6	374.3	104.4	115.3	130.1	139.2	163.9	170.8	155.8	156.4	146.1
75°	619.4	200.9	93.1	89.0	101.2	116.0	142.9	155.8	141.1	130.4	126.9
77.5°	209.1	113.8	78.7	71.8	78.7	93.1	118.5	136.0	124.4	110.3	108.1
80°	108.1	82.8	61.4	57.7	62.1	72.1	92.8	113.2	106.3	106.9	88.1
82.5°	67.4	50.5	44.2	43.9	47.0	55.2	68.3	91.8	91.2	78.0	56.7
85°	31.3	29.2	28.2	29.2	30.1	31.3	44.5	65.5	69.3	42.0	37.3
87.5°	13.2	12.9	11.3	12.2	13.5	13.2	17.9	27.9	38.9	26.3	24.1
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)