

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: P197309

Luminaire Tested: **NAV-AF-05-D-UNV-T4FT-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197309
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-05-D-UNV-T4FT-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16294 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

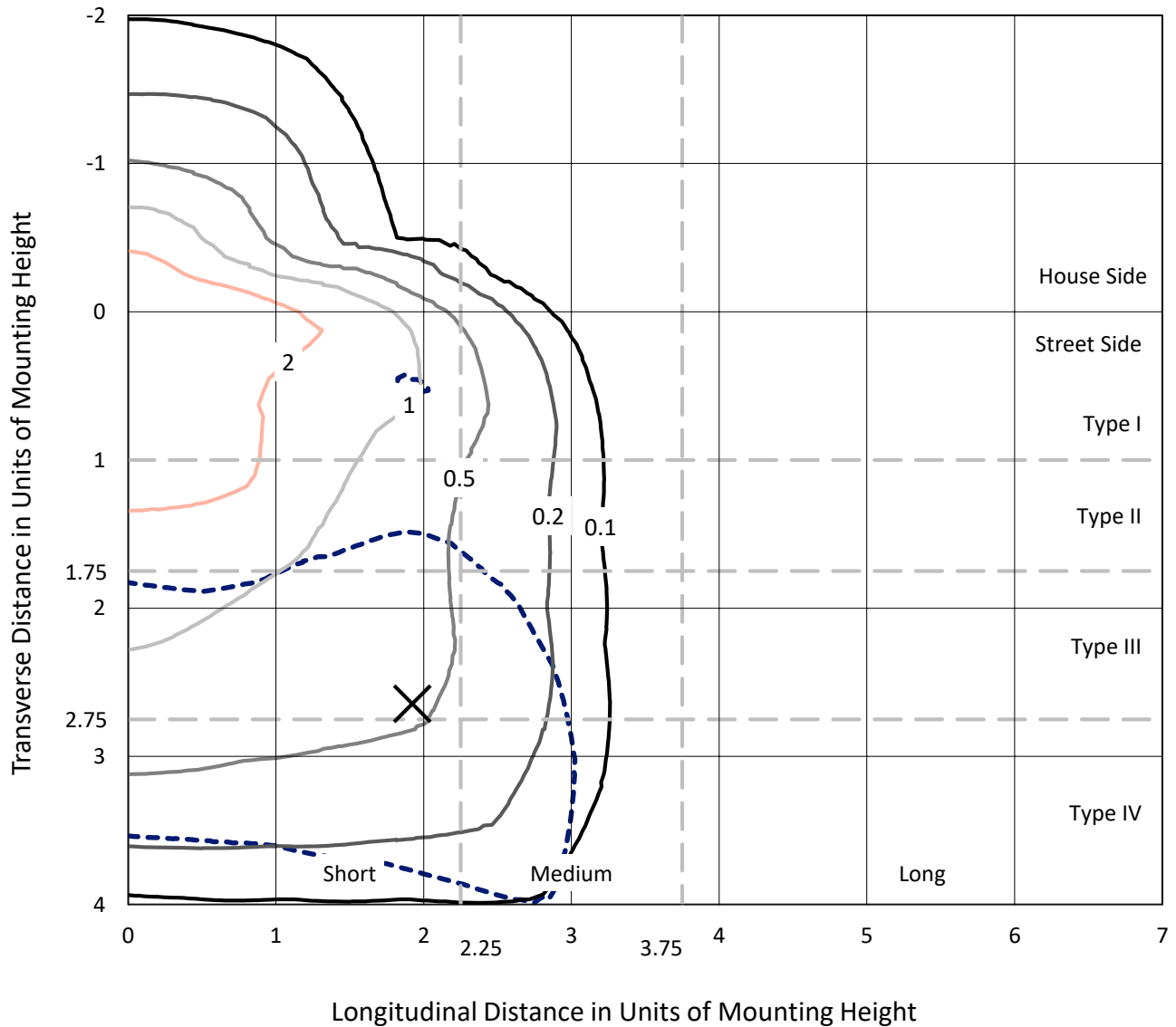
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197309
 CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-8030-600

Iso-Footcandle Lines of Horizontal Illumination

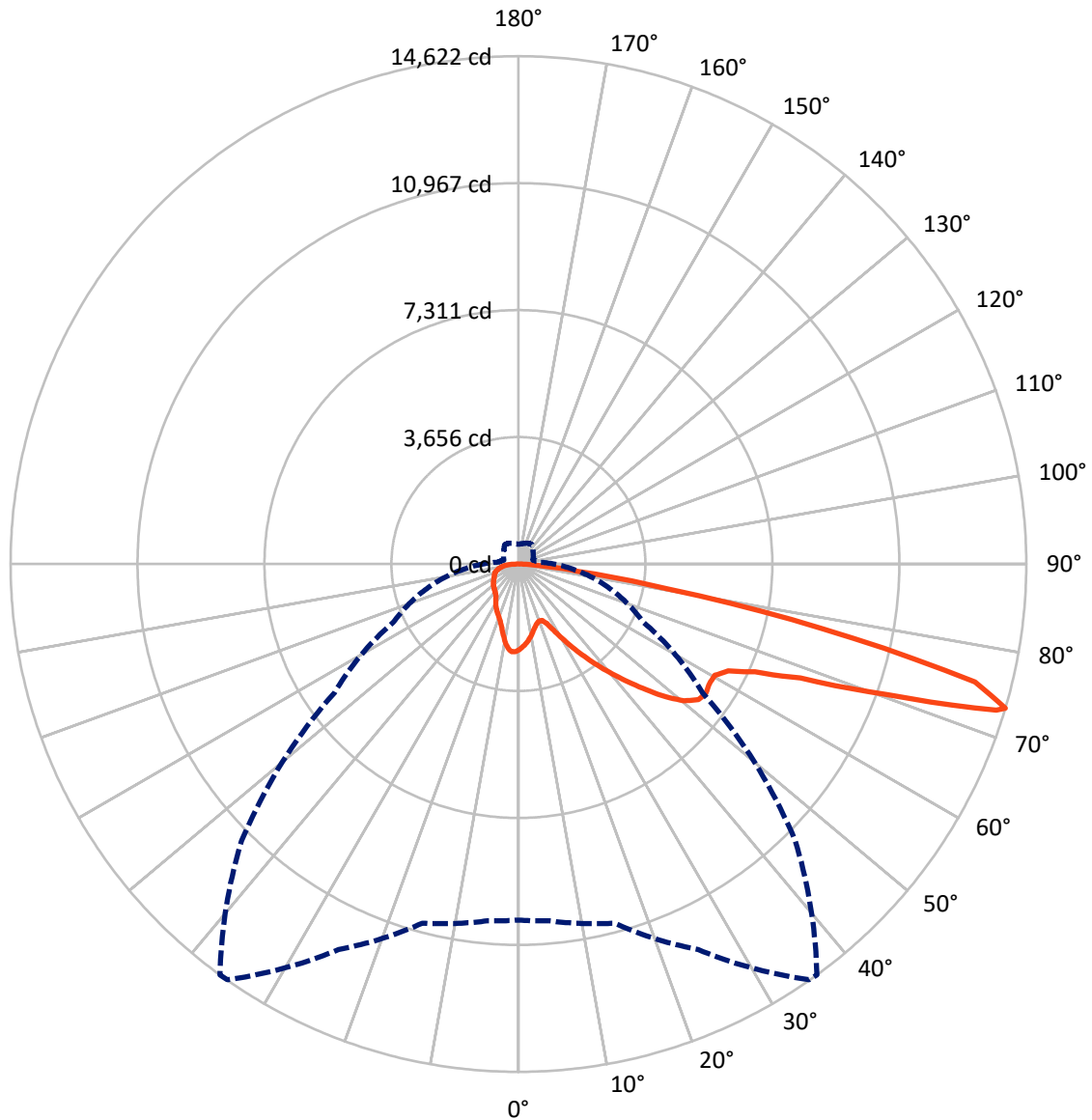
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197309
CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-8030-600

Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

REPORT NUMBER: P197309

CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-8030-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3142.0	0.0	3142.0
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	13152.0	0.0	13152.0
	% Fixture	80.7	0.0	80.7
Total	Lumens	16294.0	0.0	16294.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.2	1.4
10°-20°	563.0	3.5
20°-30°	902.7	5.5
30°-40°	1493.1	9.2
40°-50°	2310.4	14.2
50°-60°	3092.9	19.0
60°-70°	4040.3	24.8
70°-80°	3300.2	20.3
80°-90°	367.3	2.3
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°	16294.0	100.0
0°-180°	16294.0	100.0

Coefficient of Utilization



REPORT NUMBER: P197309

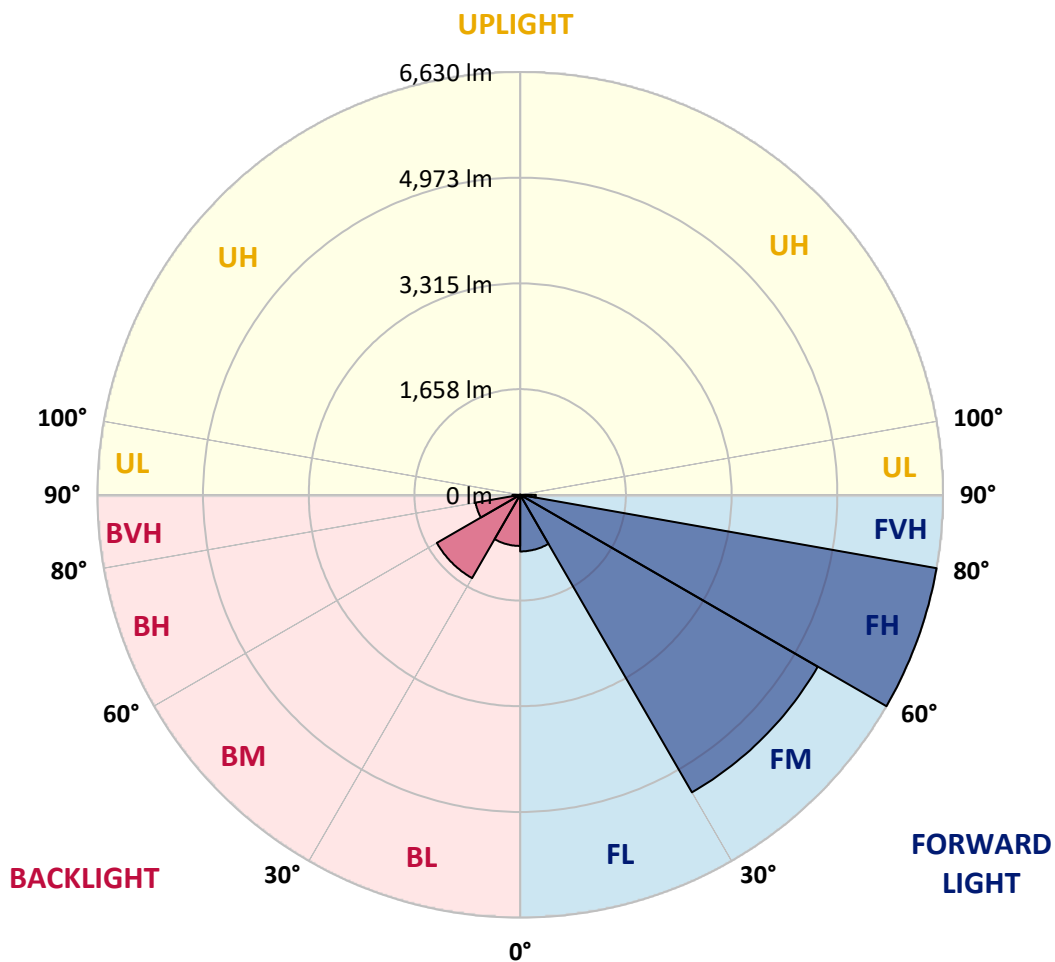
CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-8030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	887.8	5.4			
FM (30°-60°)	5387.4	33.1			
FH (60°-80°)	6630.5	40.7			G3/7500
FVH (80°-90°)	246.4	1.5			G3/500
BL (0°-30°)	802.0	4.9	B2/1000		
BM (30°-60°)	1509.0	9.3	B2/2500		
BH (60°-80°)	710.0	4.4	B2/1000		G2/1000
BVH (80°-90°)	121.0	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





REPORT NUMBER: P197309

CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-8030-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1
2.5°	2373.9	2380.1	2381.1	2388.4	2388.4	2387.3	2390.4	2402.8	2409.1	2423.6	2436.0
5°	2256.9	2264.1	2267.2	2279.6	2295.2	2296.2	2307.6	2331.4	2354.2	2386.3	2413.2
7.5°	2125.4	2133.7	2142.0	2167.8	2190.6	2192.7	2214.4	2252.7	2282.8	2322.1	2370.8
10°	1998.1	2000.1	2008.4	2041.5	2071.6	2074.7	2105.7	2149.2	2189.6	2244.5	2299.3
12.5°	1893.5	1899.7	1897.6	1922.5	1948.4	1950.4	1991.8	2046.7	2105.7	2167.8	2233.1
15°	1857.3	1856.2	1834.5	1833.5	1844.8	1846.9	1887.3	1951.5	2017.7	2094.3	2178.2
17.5°	1882.1	1873.8	1816.9	1781.7	1774.4	1776.5	1806.5	1876.9	1947.3	2035.3	2135.7
20°	2018.8	1986.7	1853.1	1768.2	1744.4	1744.4	1762.0	1819.0	1896.6	1999.1	2125.4
22.5°	2342.8	2293.1	2008.4	1857.3	1773.4	1765.1	1751.7	1795.1	1881.1	2004.3	2167.8
25°	2750.7	2726.9	2293.1	2094.3	1921.4	1894.5	1805.5	1821.0	1913.2	2060.2	2283.8
27.5°	3128.6	3087.2	2666.8	2439.1	2194.8	2153.3	1964.9	1901.8	1989.8	2163.7	2451.5
30°	3349.1	3321.1	3050.9	2833.5	2542.6	2489.8	2219.6	2061.2	2126.4	2334.5	2689.6
32.5°	3589.3	3572.7	3436.0	3238.3	2919.4	2858.4	2548.8	2321.1	2335.6	2561.2	2976.4
35°	3822.2	3843.9	3766.3	3621.4	3325.3	3268.3	2990.9	2660.6	2593.3	2815.9	3282.8
37.5°	4101.7	4106.9	4058.2	3964.0	3751.8	3705.2	3476.4	3023.0	2873.9	3087.2	3578.9
40°	4659.7	4577.9	4387.4	4312.9	4186.6	4157.6	3896.7	3355.3	3134.8	3365.6	3858.4
42.5°	5263.3	5135.9	4837.8	4715.6	4664.9	4638.0	4246.6	3576.8	3379.1	3644.1	4132.8
45°	5749.9	5646.3	5354.4	5203.2	5209.4	5166.0	4552.1	3774.6	3644.1	3923.6	4439.2
47.5°	6229.2	6056.3	5729.1	5707.4	5779.9	5715.7	4844.0	3972.3	3920.5	4228.0	4745.6
50°	6260.2	6102.9	5970.4	6144.3	6268.5	6188.8	5109.0	4231.1	4207.3	4596.6	5141.1
52.5°	5882.4	5859.6	6061.5	6354.4	6560.5	6489.0	5325.4	4497.2	4500.3	5057.3	5622.5
55°	5744.7	5715.7	5957.9	6318.2	6596.7	6554.3	5486.9	4797.4	4825.4	5616.3	6139.1
57.5°	5976.6	5904.1	5951.7	6249.9	6511.8	6487.0	5654.6	5130.8	5181.5	6260.2	6616.4
60°	6696.1	6548.0	6295.4	6351.3	6514.9	6500.4	5894.8	5502.4	5587.3	6931.1	6918.7
62.5°	7773.8	7606.1	7091.6	6843.1	6806.9	6778.9	6291.3	5959.0	6001.4	7415.6	6742.7
65°	8956.1	8775.9	8164.1	7757.2	7544.0	7483.9	6931.1	6509.7	6243.7	7414.6	6057.3
67.5°	10283.3	10092.8	9483.0	9094.8	8863.9	8761.4	7969.5	6954.9	6165.0	6787.2	4847.1
70°	11642.6	11461.4	11181.9	11317.5	11419.0	11262.6	9605.2	7102.9	5599.7	5321.3	3254.9
72.5°	10921.0	10906.5	11118.7	12404.5	14360.1	14391.2	11238.8	6684.7	4326.4	3162.7	1735.1
73°	10251.2	10312.3	10705.7	12244.1	14611.7	14622.1	11270.9	6468.3	3972.3	2724.8	1523.9
75°	5310.9	5725.0	7184.7	9928.2	13529.9	13578.5	9935.4	4896.8	2367.6	1513.6	1027.0
77.5°	1422.5	1403.8	2314.8	4836.7	9020.2	8956.1	6277.8	2370.8	1134.6	949.3	720.5
80°	487.6	493.8	787.8	1769.3	4210.4	4360.5	2724.8	1034.2	746.4	661.5	510.4
82.5°	248.5	256.7	412.0	752.6	1761.0	1723.7	876.9	608.7	500.0	401.7	285.7
85°	132.5	136.7	226.7	390.3	646.0	653.3	308.5	325.1	317.8	227.8	140.8
87.5°	65.2	67.3	108.7	171.9	239.1	230.9	107.7	140.8	156.3	128.4	77.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P197309

CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-8030-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1	2468.1
2.5°	2451.5	2451.5	2465.0	2487.7	2504.3	2519.8	2530.2	2546.7	2556.1	2555.0	2554.0
5°	2434.9	2445.3	2472.2	2500.2	2518.8	2531.2	2531.2	2538.5	2538.5	2535.4	2531.2
7.5°	2396.6	2414.2	2453.6	2478.4	2483.6	2470.1	2443.2	2422.5	2396.6	2383.2	2378.0
10°	2335.6	2358.3	2408.0	2419.4	2392.5	2344.9	2279.6	2223.7	2174.1	2151.3	2144.0
12.5°	2275.5	2305.5	2352.1	2334.5	2270.3	2177.2	2076.7	2000.1	1944.2	1922.5	1915.2
15°	2225.8	2262.0	2298.3	2243.4	2131.6	2002.2	1891.4	1820.0	1777.5	1761.0	1756.8
17.5°	2192.7	2235.1	2247.6	2145.1	1989.8	1844.8	1746.5	1699.9	1681.3	1674.0	1671.9
20°	2194.8	2242.4	2212.4	2049.8	1853.1	1707.1	1641.9	1628.5	1628.5	1628.5	1627.4
22.5°	2251.7	2293.1	2197.9	1960.8	1721.6	1591.2	1563.2	1574.6	1582.9	1582.9	1581.9
25°	2369.7	2392.5	2208.2	1874.9	1598.4	1490.8	1491.8	1513.6	1520.8	1520.8	1518.7
27.5°	2549.9	2531.2	2226.9	1779.6	1477.3	1399.7	1414.2	1433.8	1439.0	1435.9	1434.9
30°	2775.5	2701.0	2242.4	1667.8	1363.4	1314.8	1327.2	1338.6	1334.5	1327.2	1326.2
32.5°	3028.1	2873.9	2233.1	1542.5	1263.0	1226.8	1234.0	1240.2	1234.0	1216.4	1216.4
35°	3278.7	3030.2	2182.3	1405.9	1183.3	1141.9	1140.9	1160.5	1159.5	1138.8	1139.8
37.5°	3498.2	3153.4	2084.0	1280.6	1115.0	1079.8	1083.9	1096.3	1102.6	1074.6	1071.5
40°	3689.7	3238.3	1945.3	1174.0	1060.1	1062.2	1050.8	1031.1	1023.9	1011.5	1009.4
42.5°	3869.8	3297.3	1798.3	1085.0	1032.2	1056.0	1017.7	971.1	951.4	962.8	970.0
45°	4046.8	3363.6	1656.4	1011.5	997.0	1037.3	984.5	932.8	910.0	915.2	922.4
47.5°	4263.2	3455.7	1485.6	932.8	943.1	1003.2	963.8	907.9	873.8	853.1	846.8
50°	4547.9	3589.3	1264.1	847.9	886.2	965.9	946.2	871.7	834.4	793.0	782.7
52.5°	4904.0	3715.6	1040.4	779.6	839.6	933.8	917.2	840.6	795.1	745.4	737.1
55°	5259.1	3733.2	847.9	720.5	786.8	890.3	882.0	815.8	751.6	711.2	702.9
57.5°	5507.6	3566.5	718.5	670.9	736.1	836.5	850.0	785.8	715.4	684.3	679.1
60°	5511.7	3167.9	639.8	637.7	697.8	789.9	816.8	750.6	692.6	671.9	667.7
62.5°	5073.8	2553.0	589.1	612.9	669.8	751.6	792.0	730.9	687.4	679.1	675.0
65°	4252.9	1886.2	548.7	590.1	643.9	719.5	771.3	724.7	685.3	682.2	679.1
67.5°	3140.0	1293.0	514.5	561.1	614.9	686.4	751.6	715.4	672.9	685.3	681.2
70°	1975.3	863.4	482.4	528.0	576.6	648.1	725.7	698.8	657.4	650.1	636.7
72.5°	1115.0	624.3	444.1	485.5	526.9	597.3	690.5	670.9	622.2	593.2	579.7
73°	1007.3	591.1	434.8	475.2	515.6	587.0	682.2	662.6	611.8	579.7	567.3
75°	737.1	483.5	392.4	432.7	467.9	539.4	642.9	621.2	566.3	528.0	519.7
77.5°	534.2	372.7	337.5	373.7	404.8	473.1	583.9	559.0	505.2	484.5	476.2
80°	385.1	282.6	279.5	314.7	341.6	411.0	520.7	494.9	443.1	504.2	490.7
82.5°	229.8	181.2	205.0	244.3	272.3	344.7	452.4	422.4	372.7	376.8	320.9
85°	109.7	102.5	127.3	160.5	180.1	236.0	376.8	353.0	298.2	244.3	239.1
87.5°	48.7	46.6	61.1	71.4	96.3	141.8	257.8	228.8	216.4	129.4	101.5
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)