

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: P270551

Luminaire Tested: **NAV-AF-04-D-UNV-T3R-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270551  
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-04-D-UNV-T3R-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17418.3 lumens  
Efficiency: N/A  
Efficacy: 101.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 171  
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

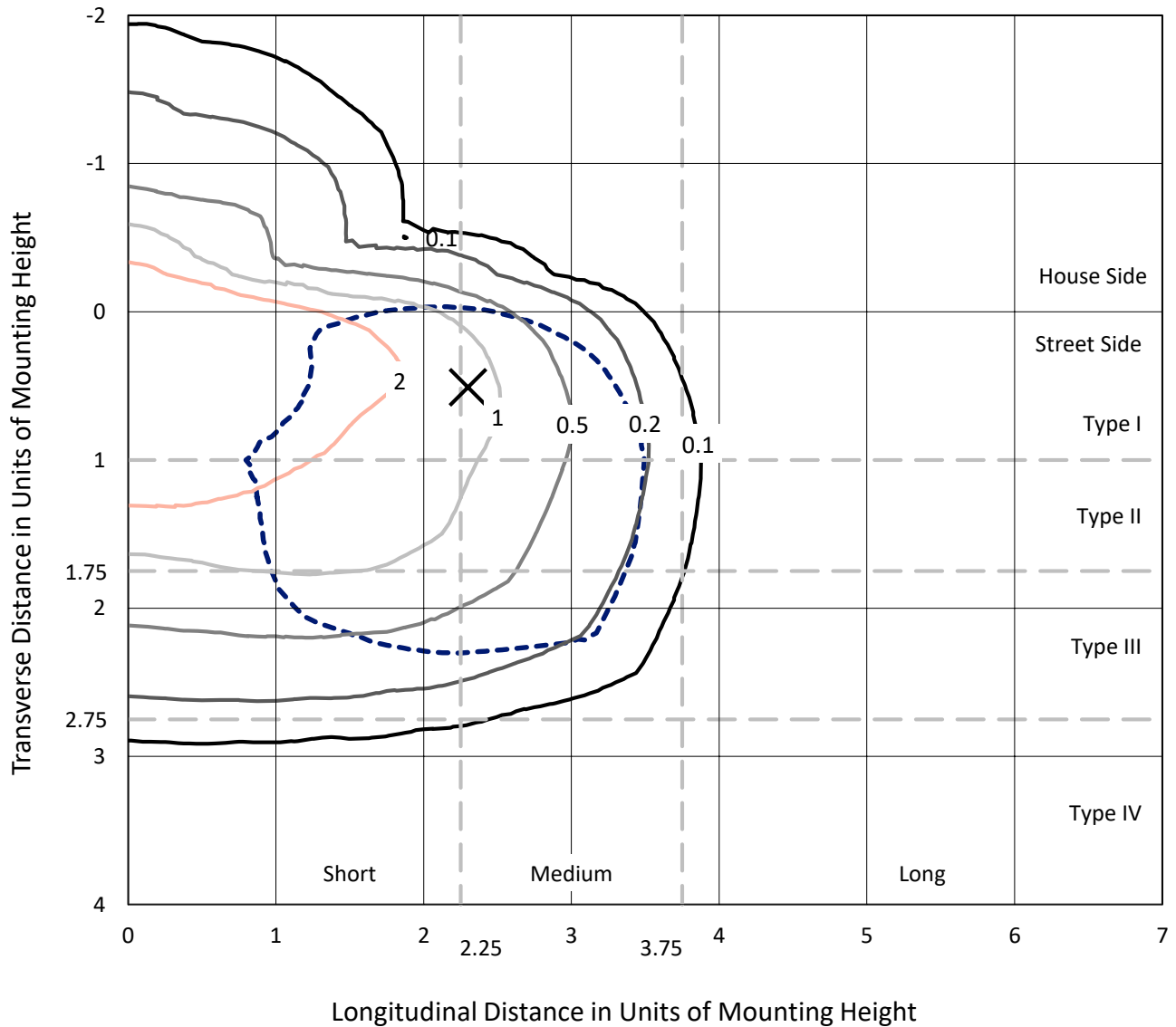


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

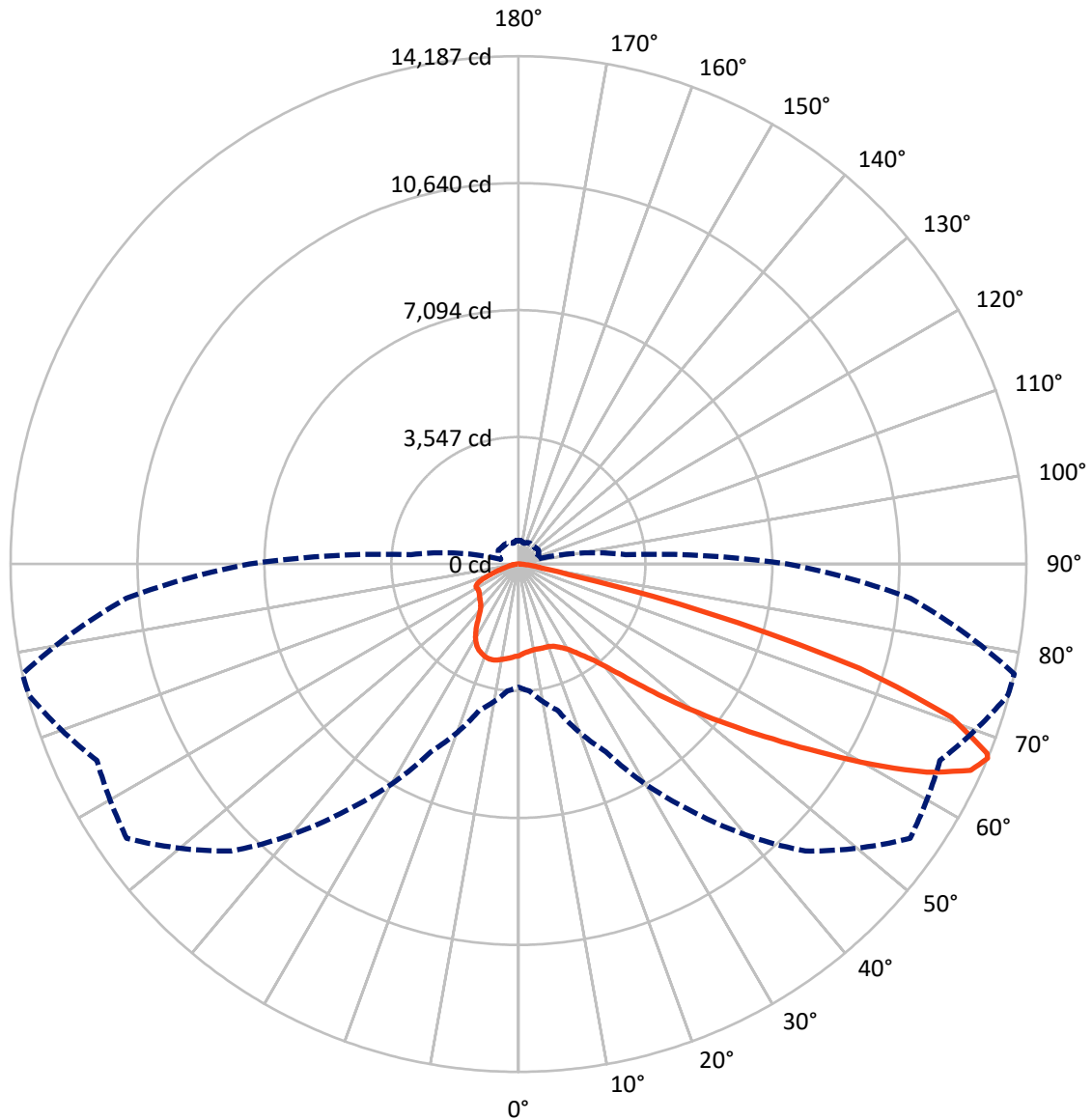


Based on 25 foot mounting height. Maximum calculated value = 4.9 fc  
 Type III - Medium - Full Cutoff

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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
<b>House Side</b>	Lumens	2993.3	0.0	2993.3
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	14425.0	0.0	14425.0
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	17418.3	0.0	17418.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	228.3	1.3
10°-20°	632.3	3.6
20°-30°	1074.3	6.2
30°-40°	1718.7	9.9
40°-50°	2645.9	15.2
50°-60°	3671.0	21.1
60°-70°	4896.8	28.1
70°-80°	2330.4	13.4
80°-90°	220.7	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°	17418.3	100.0
0°-180°	17418.3	100.0

**Coefficient of Utilization**



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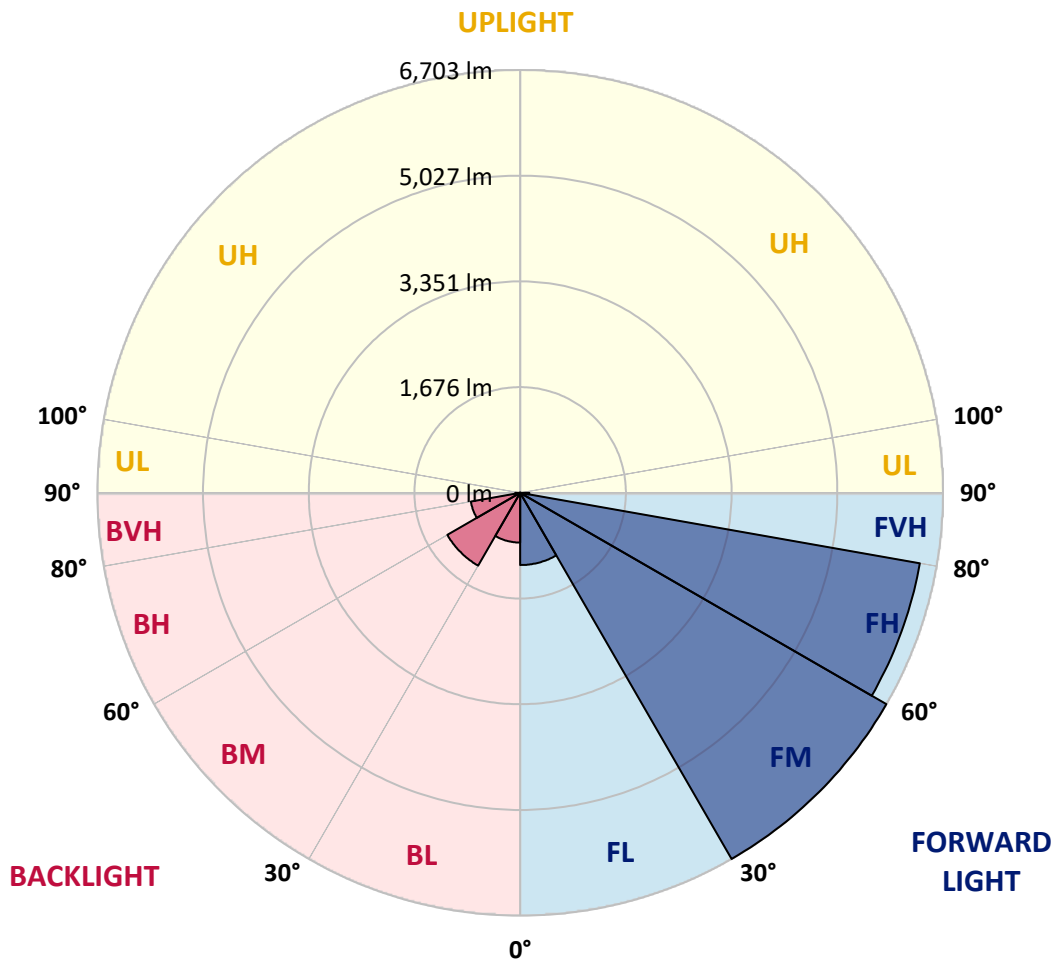
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1145.4	6.6			
FM	(30°-60°)	6702.8	38.5			
FH	(60°-80°)	6433.5	36.9			G3/7500
FVH	(80°-90°)	143.3	0.8			G2/225
BL	(0°-30°)	789.5	4.5	B2/1000		
BM	(30°-60°)	1332.8	7.7	B2/2500		
BH	(60°-80°)	793.7	4.6	B2/1000		G2/1000
BVH	(80°-90°)	77.3	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6
2.5°	2298.7	2309.5	2310.5	2341.7	2355.7	2391.3	2430.1	2464.5	2494.7	2505.5	2524.7
5°	2068.3	2068.3	2071.5	2092.0	2131.8	2188.8	2269.6	2358.0	2450.4	2473.0	2530.2
7.5°	1947.6	1949.9	1951.9	1972.5	2003.7	2054.2	2135.0	2255.6	2409.6	2447.3	2547.4
10°	1958.5	1955.3	1944.4	1940.1	1953.1	1985.3	2055.3	2179.2	2375.1	2433.2	2578.6
12.5°	2127.5	2121.0	2085.4	2033.9	1986.4	1974.6	2023.1	2140.4	2358.9	2433.2	2631.3
15°	2417.1	2421.4	2351.5	2243.7	2119.9	2036.0	2029.5	2126.4	2353.6	2439.6	2692.7
17.5°	2793.9	2796.1	2699.1	2543.0	2337.4	2164.0	2073.6	2126.4	2353.6	2446.2	2752.0
20°	3194.5	3179.5	3069.6	2873.6	2606.6	2341.7	2154.3	2139.4	2360.0	2455.8	2807.9
22.5°	3538.0	3524.0	3408.7	3203.0	2897.4	2551.6	2263.1	2182.4	2395.6	2495.8	2886.6
25°	3838.3	3846.9	3735.0	3503.4	3186.8	2788.6	2425.8	2281.4	2469.9	2567.8	2983.5
27.5°	4203.3	4187.1	4058.0	3837.2	3485.2	3034.0	2629.2	2406.3	2558.2	2655.0	3101.8
30°	4625.4	4617.7	4443.3	4216.1	3813.6	3308.5	2830.5	2540.9	2673.4	2774.5	3250.4
32.5°	5137.9	5136.8	4949.4	4670.6	4182.8	3618.6	3068.5	2725.0	2841.2	2943.6	3447.4
35°	5718.2	5717.1	5523.3	5155.1	4608.0	3962.2	3348.4	2949.0	3049.0	3156.7	3682.2
37.5°	6120.8	6114.4	6013.2	5655.6	5078.6	4361.5	3698.3	3250.4	3284.9	3405.5	3965.4
40°	6198.3	6237.1	6324.2	6113.2	5592.2	4805.2	4049.3	3574.4	3606.9	3761.8	4321.7
42.5°	6114.4	6165.0	6454.6	6513.8	6105.7	5342.4	4488.7	4023.5	4064.4	4257.1	4740.5
45°	6041.1	6085.3	6448.2	6735.6	6612.9	5928.1	5036.5	4571.5	4649.0	4888.0	5218.6
47.5°	5916.2	5957.2	6321.1	6775.3	6902.4	6492.2	5696.6	5230.4	5363.9	5653.6	5763.3
50°	5909.8	5928.1	6147.7	6641.9	7002.6	6920.7	6427.6	6001.2	6205.9	6539.7	6366.3
52.5°	5746.1	5874.2	6073.4	6428.7	7004.8	7170.5	7148.0	6846.4	7161.9	7531.2	7027.4
55°	4744.8	4892.3	5825.8	6324.2	6991.8	7384.7	7805.8	7745.5	8238.5	8627.2	7768.2
57.5°	4430.4	4493.0	5110.8	6355.5	7099.5	7739.0	8463.7	8711.3	9470.3	9894.6	8656.3
60°	4344.4	4410.0	4967.6	6370.6	7391.3	8383.9	9356.1	9801.9	10918.4	11368.4	9665.1
62.5°	4248.5	4333.6	4978.4	6384.6	7903.7	9337.8	10540.5	10985.2	12405.2	12806.9	10610.5
65°	3968.5	4081.5	4779.3	6296.3	8464.6	10535.1	12106.0	12218.9	13633.8	13888.9	11181.2
67°	3437.8	3561.6	4232.4	5786.0	8412.9	11341.6	13358.1	12991.0	14155.9	14187.1	10996.0
67.5°	3269.8	3397.8	4047.1	5573.9	8265.6	11447.0	13579.9	13097.6	14151.5	14117.1	10823.7
70°	2201.7	2346.1	2866.0	4092.4	6630.1	10653.4	13526.0	12769.1	13223.5	12828.3	9299.2
72.5°	1092.8	1097.1	1429.8	2241.6	4017.0	7641.1	11283.4	10923.7	10719.3	9973.2	6823.9
75°	526.4	536.2	675.0	990.6	1693.6	3944.8	7694.9	7370.9	6275.9	5433.8	3415.1
77.5°	401.6	411.2	524.3	645.0	706.2	1286.6	3811.4	3080.3	1818.4	1452.4	962.5
80°	310.1	328.4	442.5	495.2	467.3	515.6	1198.2	943.1	707.3	649.3	477.0
82.5°	242.3	253.1	375.8	375.8	323.0	345.6	557.7	544.8	439.4	396.2	256.2
85°	171.1	192.7	302.5	279.9	212.1	214.2	333.8	319.7	226.2	181.9	100.2
87.5°	76.4	97.9	215.4	183.1	113.0	87.2	136.7	117.4	89.3	68.9	46.4
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°	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6	2563.6
2.5°	2546.2	2563.6	2590.4	2606.6	2628.1	2636.7	2645.4	2660.4	2672.3	2669.0	2663.7
5°	2570.1	2599.1	2632.5	2643.3	2643.3	2632.5	2625.9	2627.1	2623.8	2621.7	2615.1
7.5°	2604.5	2644.3	2668.0	2657.1	2623.8	2581.8	2542.1	2518.3	2495.8	2481.7	2486.0
10°	2652.9	2697.0	2698.1	2650.7	2571.0	2479.5	2400.9	2350.3	2301.8	2280.3	2286.8
12.5°	2722.9	2767.0	2729.3	2627.1	2487.0	2343.9	2199.6	2095.1	2001.6	1978.8	1972.5
15°	2798.2	2832.6	2748.8	2576.5	2366.4	2130.7	1888.4	1732.3	1627.9	1609.7	1603.1
17.5°	2863.8	2883.3	2739.0	2486.0	2176.0	1804.4	1522.4	1416.8	1395.3	1406.0	1406.0
20°	2922.0	2915.5	2697.0	2346.1	1875.5	1442.7	1279.0	1278.0	1307.0	1334.0	1336.0
22.5°	2995.3	2944.6	2630.2	2138.2	1517.0	1203.6	1175.7	1203.6	1236.0	1266.2	1269.3
25°	3082.4	2977.0	2540.9	1842.2	1219.9	1092.8	1104.6	1128.4	1148.8	1172.5	1173.5
27.5°	3169.7	3001.7	2415.0	1494.4	1058.4	1021.7	1034.7	1044.4	1049.7	1064.9	1064.9
30°	3270.9	3021.1	2232.9	1197.3	984.1	959.3	951.8	947.4	951.8	972.2	973.4
32.5°	3397.8	3055.6	1984.3	1027.1	949.6	915.2	876.3	854.8	870.0	906.6	912.9
35°	3542.1	3096.5	1686.1	959.3	937.8	893.6	822.6	789.3	794.6	828.0	833.4
37.5°	3723.0	3149.2	1392.2	943.1	949.6	891.5	797.9	750.4	726.8	727.8	726.8
40°	3954.6	3202.0	1159.5	947.4	975.5	896.9	785.9	711.6	662.1	664.2	668.6
42.5°	4196.8	3236.5	1012.1	960.4	1006.7	904.5	781.6	674.0	630.9	667.5	700.9
45°	4479.9	3226.7	935.7	972.2	1030.4	907.6	765.4	669.6	634.2	743.9	806.4
47.5°	4805.2	3184.8	892.6	977.6	1036.9	906.6	753.7	683.7	661.1	851.7	922.6
50°	5158.2	3119.1	858.2	969.0	1033.6	902.3	766.6	700.9	671.8	875.3	930.3
52.5°	5544.8	3058.8	822.6	949.6	1017.4	889.3	782.8	693.4	641.7	806.4	848.4
55°	6002.4	3044.7	782.8	916.2	990.6	875.3	774.1	669.6	608.3	715.0	740.7
57.5°	6525.6	3132.0	731.0	875.3	953.9	847.3	753.7	656.8	596.5	650.4	664.2
60°	7189.9	3324.7	676.2	832.3	908.6	805.3	735.4	660.0	599.7	640.6	643.8
62.5°	7708.9	3498.1	626.6	779.5	848.4	754.8	715.9	663.2	609.4	653.5	648.1
65°	7897.3	3413.0	565.3	700.9	763.4	698.7	689.1	665.4	609.4	661.1	649.3
67°	7510.8	3007.0	507.2	622.3	682.6	649.3	663.2	656.8	598.6	660.0	639.6
67.5°	7326.7	2863.8	492.0	609.4	661.1	634.2	656.8	652.4	595.3	657.9	634.2
70°	6042.2	2054.2	415.6	511.5	553.4	558.7	617.0	624.4	569.5	618.0	574.9
72.5°	4299.1	1285.6	358.6	396.2	446.7	478.1	563.1	586.9	535.1	537.2	501.8
75°	2127.5	690.2	319.7	305.8	347.7	398.4	491.0	535.1	484.5	447.9	436.0
77.5°	718.1	390.9	270.2	246.6	270.2	319.7	407.0	467.3	427.5	378.9	371.4
80°	371.4	284.3	211.0	198.0	213.2	247.7	318.7	388.6	365.0	367.1	302.5
82.5°	231.5	173.4	151.9	150.7	161.4	189.5	234.6	315.5	313.2	268.1	194.9
85°	107.6	100.2	96.8	100.2	103.3	107.6	152.9	225.0	238.0	144.3	128.1
87.5°	45.3	44.1	38.7	42.0	46.4	45.3	61.4	95.8	133.5	90.4	83.0
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)