

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: P197229

Luminaire Tested: **NAV-AF-03-D-UNV-T2-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197229
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-T2-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15871 lumens
Efficiency: N/A
Efficacy: 83.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 191
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

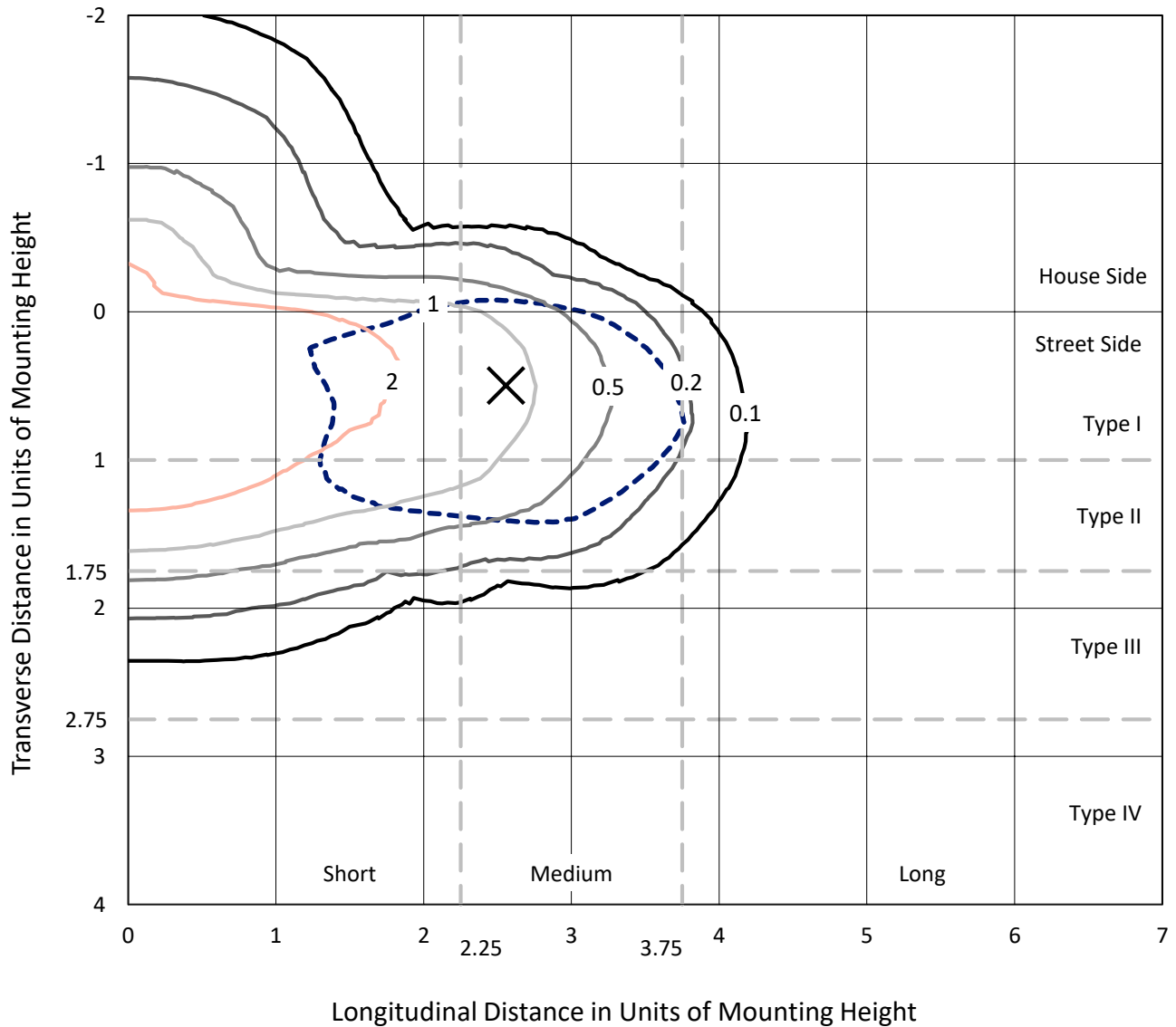


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Iso-Footcandle Lines of Horizontal Illumination

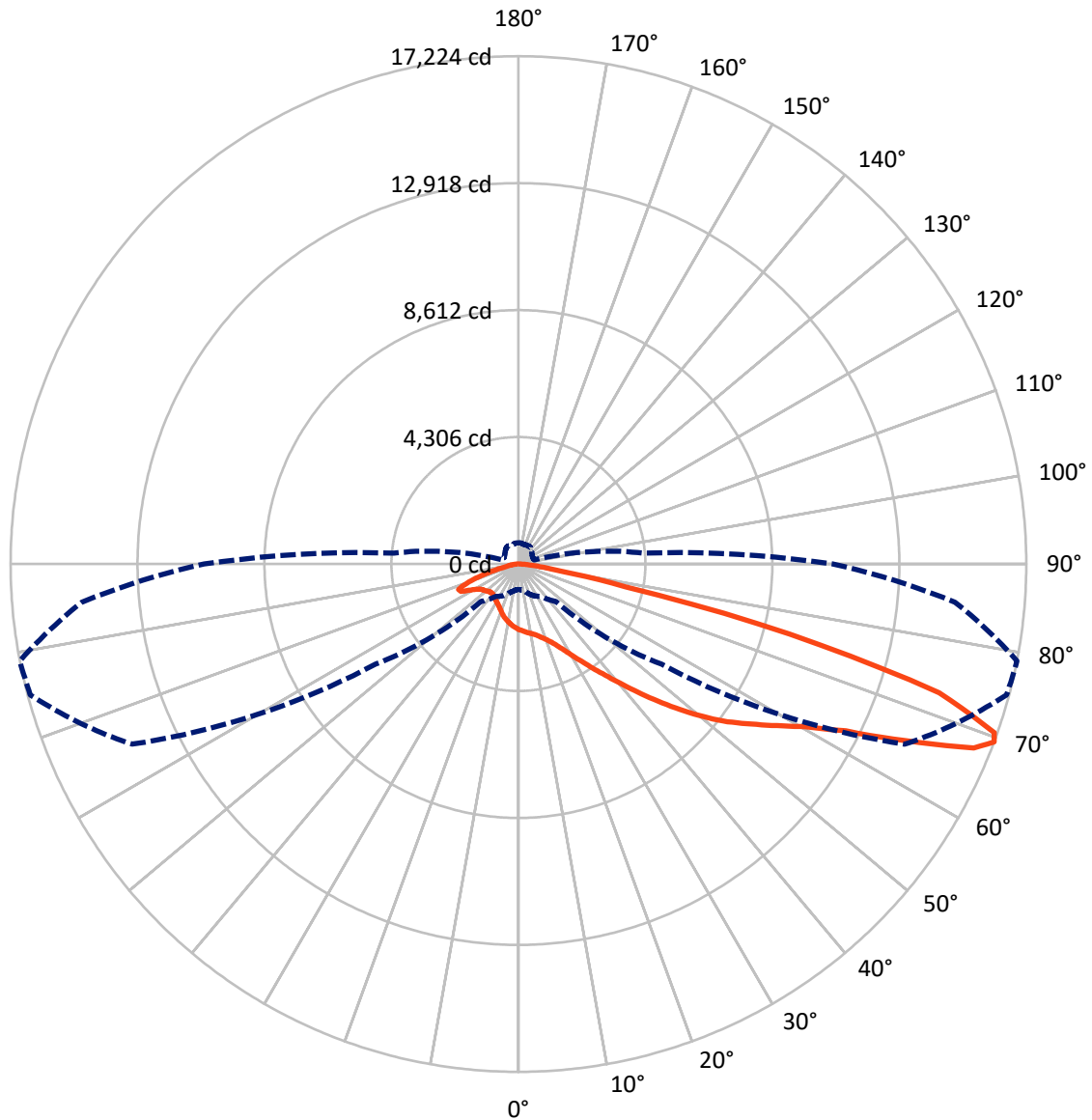
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2985.6	0.0	2985.6
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	12885.4	0.0	12885.4
	% Fixture	81.2	0.0	81.2
Total	Lumens	15871.0	0.0	15871.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.5	1.3
10°-20°	592.0	3.7
20°-30°	978.1	6.2
30°-40°	1583.9	10.0
40°-50°	2530.2	15.9
50°-60°	3623.6	22.8
60°-70°	4037.2	25.4
70°-80°	2019.8	12.7
80°-90°	299.7	1.9
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°	15871.0	100.0
0°-180°	15871.0	100.0

Coefficient of Utilization



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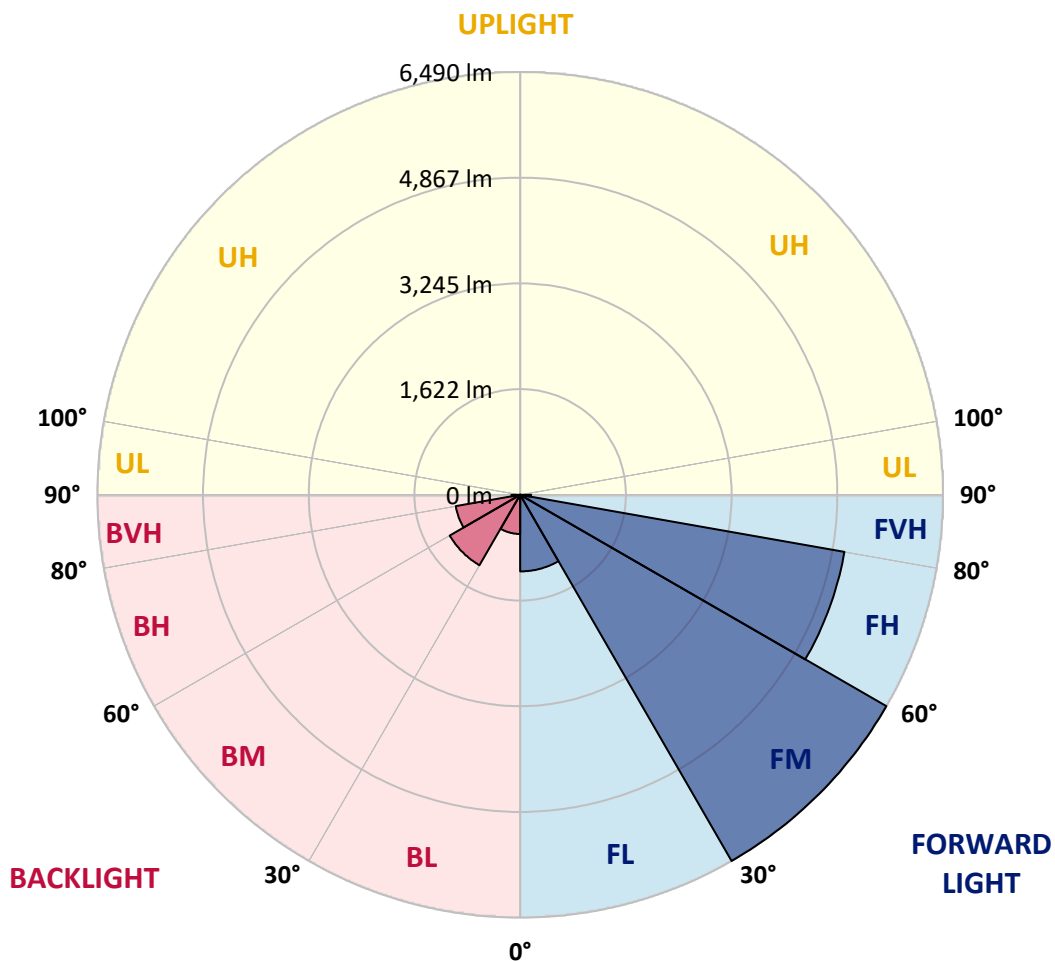
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1175.1	7.4			
FM (30°-60°)	6489.7	40.9			
FH (60°-80°)	5053.1	31.8			G3/7500
FVH (80°-90°)	167.5	1.1			G2/225
BL (0°-30°)	601.5	3.8	B2/1000		
BM (30°-60°)	1248.0	7.9	B2/2500		
BH (60°-80°)	1003.9	6.3	B3/2500		G3/2500
BVH (80°-90°)	132.2	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2
2.5°	2445.3	2440.1	2439.0	2423.4	2415.1	2397.5	2356.0	2313.4	2273.9	2253.2	2231.4
5°	2649.8	2639.4	2634.2	2608.3	2585.4	2546.0	2480.6	2413.1	2342.5	2306.1	2262.5
7.5°	2773.4	2774.4	2774.4	2753.6	2730.8	2683.0	2600.0	2507.6	2402.7	2354.9	2286.4
10°	2783.7	2784.8	2800.4	2805.5	2810.7	2785.8	2709.0	2592.7	2457.7	2395.4	2306.1
12.5°	2681.0	2688.2	2714.2	2751.6	2804.5	2831.5	2798.3	2684.1	2528.3	2452.5	2343.5
15°	2542.9	2550.1	2583.3	2640.5	2725.6	2815.9	2862.7	2788.9	2620.7	2531.4	2398.5
17.5°	2475.4	2483.7	2506.5	2552.2	2635.3	2756.7	2896.9	2901.1	2729.8	2627.0	2463.9
20°	2443.2	2449.4	2478.5	2515.9	2579.2	2695.5	2900.0	3019.4	2859.5	2740.1	2543.9
22.5°	2516.9	2519.0	2533.5	2554.3	2596.8	2686.1	2898.0	3142.0	3021.5	2882.4	2646.7
25°	2732.9	2719.4	2709.0	2683.0	2693.4	2756.7	2931.2	3272.8	3229.2	3069.3	2783.7
27.5°	2988.3	2986.2	2959.2	2899.0	2860.6	2901.1	3025.7	3419.2	3483.6	3307.1	2963.4
30°	3272.8	3273.8	3245.8	3172.1	3094.2	3098.4	3176.2	3588.4	3787.8	3593.6	3184.5
32.5°	3570.8	3589.5	3537.6	3463.8	3369.4	3339.2	3392.2	3793.0	4139.8	3932.1	3441.0
35°	3926.9	3930.1	3872.9	3765.0	3670.5	3622.7	3671.5	4048.4	4545.8	4329.8	3753.5
37.5°	4296.6	4298.7	4239.5	4101.4	3982.0	3950.8	4004.8	4358.9	4975.6	4782.5	4121.1
40°	4598.7	4620.5	4573.8	4444.0	4323.6	4304.9	4382.8	4730.6	5524.9	5318.3	4558.2
42.5°	4941.4	4966.3	4910.2	4775.2	4679.7	4673.5	4795.0	5154.2	6071.1	5938.2	5053.5
45°	5327.6	5362.9	5285.1	5133.5	5052.5	5189.5	5196.8	5623.6	6700.3	6631.8	5611.1
47.5°	5749.2	5778.3	5714.9	5551.9	5463.7	5662.0	5590.3	6131.3	7380.4	7375.2	6214.4
50°	6074.2	6106.4	6112.6	6041.0	5948.6	5973.5	6022.3	6665.0	8058.4	8139.4	6838.4
52.5°	6015.0	6046.2	6186.3	6374.3	6522.7	6458.4	6517.6	7231.9	8713.6	8884.9	7431.3
55°	5537.4	5554.0	5816.7	6263.2	6895.5	7202.8	7207.0	7848.7	9336.6	9576.5	7994.0
57.5°	4676.6	4678.7	5020.3	5678.6	6678.5	7685.7	8295.2	8623.3	9986.6	10340.7	8691.8
60°	3309.1	3317.4	3715.1	4575.9	5900.8	7627.5	9465.4	10009.4	10739.4	11199.4	9591.0
62.5°	1964.5	1983.2	2283.3	2973.8	4382.8	6879.9	10156.9	12475.5	11848.3	12458.8	11030.1
65°	1278.2	1293.8	1473.4	1820.2	2589.6	5005.8	9929.5	14863.6	13946.8	14440.0	13098.4
67.5°	984.3	996.8	1138.0	1347.7	1588.6	2705.9	7939.0	15364.1	16501.0	16654.7	14843.9
69°	864.9	875.3	979.1	1180.6	1337.4	1791.1	5916.4	14455.5	17139.6	17223.7	14865.7
70°	801.6	809.9	907.5	1081.9	1228.3	1429.8	4528.1	13400.6	16906.0	17120.9	14436.8
72.5°	660.4	667.6	737.2	871.2	1004.1	1018.6	2006.0	9785.2	14235.4	14922.8	12216.9
75°	551.3	555.5	601.2	698.8	813.0	810.9	1024.8	5542.6	8686.6	9505.8	7543.4
77.5°	460.0	463.1	493.2	553.4	641.7	638.6	721.6	2392.3	3835.6	3700.6	2596.8
80°	406.0	408.1	423.6	439.2	495.3	492.2	534.7	1098.5	1560.6	1442.2	982.3
82.5°	308.4	312.5	391.4	398.7	384.2	370.7	372.8	639.6	799.5	727.9	527.5
85°	174.4	175.5	251.3	293.8	334.3	251.3	241.9	330.2	394.6	345.8	230.5
87.5°	77.9	81.0	120.4	139.1	180.7	147.4	138.1	140.2	170.3	141.2	91.4
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°	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2	2227.2
2.5°	2210.6	2192.9	2151.4	2108.8	2066.3	2039.3	2011.2	1985.3	1974.9	1973.9	1954.1
5°	2219.9	2178.4	2083.9	1980.1	1881.4	1804.6	1740.2	1698.7	1658.2	1650.9	1633.3
7.5°	2223.0	2155.6	2001.9	1835.8	1685.2	1579.3	1514.9	1486.9	1467.2	1462.0	1455.7
10°	2222.0	2126.5	1910.5	1683.1	1511.8	1431.8	1408.0	1414.2	1422.5	1426.7	1426.7
12.5°	2238.6	2113.0	1819.1	1539.8	1399.7	1361.2	1379.9	1412.1	1437.0	1447.4	1449.5
15°	2268.7	2104.7	1718.4	1415.2	1320.7	1330.1	1375.8	1422.5	1457.8	1473.4	1477.5
17.5°	2306.1	2093.3	1602.1	1312.4	1275.1	1307.2	1366.4	1425.6	1468.2	1487.9	1491.0
20°	2347.6	2076.6	1481.7	1235.6	1234.6	1275.1	1334.2	1400.7	1446.4	1468.2	1467.2
22.5°	2403.7	2061.1	1369.5	1179.5	1189.9	1227.3	1276.1	1336.3	1378.9	1398.6	1394.5
25°	2478.5	2046.5	1268.8	1129.7	1139.0	1164.0	1198.2	1243.9	1274.0	1284.4	1277.1
27.5°	2579.2	2035.1	1189.9	1084.0	1083.0	1094.4	1115.2	1140.1	1154.6	1151.5	1140.1
30°	2702.8	2023.7	1131.8	1043.5	1029.0	1027.9	1037.3	1051.8	1061.2	1042.5	1033.1
32.5°	2840.9	2004.0	1079.9	1008.2	982.3	972.9	977.1	996.8	1035.2	1016.5	1009.2
35°	3003.9	1981.1	1027.9	969.8	950.1	932.4	935.5	978.1	1094.4	1080.9	1073.6
37.5°	3200.1	1960.4	980.2	928.3	927.2	905.4	903.3	954.2	1110.0	1080.9	1074.7
40°	3435.8	1956.2	937.6	882.6	899.2	890.9	883.6	914.8	1023.8	964.6	953.2
42.5°	3720.3	1974.9	906.5	839.0	867.0	886.7	873.2	880.5	925.1	872.2	862.8
45°	4052.6	2025.8	883.6	800.5	832.7	883.6	868.0	861.8	869.1	840.0	833.8
47.5°	4439.9	2116.1	868.0	768.4	800.5	875.3	866.0	853.5	850.4	833.8	829.6
50°	4854.2	2237.6	857.7	739.3	771.5	860.8	864.9	847.3	842.1	834.8	832.7
52.5°	5265.3	2369.5	845.2	714.4	747.6	843.1	866.0	841.0	833.8	829.6	827.5
55°	5674.4	2506.5	822.4	692.6	729.9	822.4	864.9	832.7	824.4	824.4	824.4
57.5°	6205.0	2715.2	792.2	674.9	707.1	795.4	851.4	823.4	812.0	813.0	814.0
60°	6971.3	3065.1	759.0	655.2	677.0	764.2	830.7	806.8	793.3	797.4	798.5
62.5°	8251.6	3676.7	713.3	627.1	645.8	731.0	803.7	783.9	771.5	778.7	779.8
65°	9958.6	4417.0	653.1	591.8	613.6	693.6	769.4	756.9	743.4	761.1	760.1
67.5°	11000.0	4634.0	589.8	554.5	582.5	654.1	726.8	721.6	712.3	743.4	741.4
69°	10658.4	4241.5	553.4	530.6	560.7	627.1	699.8	697.8	690.5	720.6	718.5
70°	10127.8	3875.0	530.6	515.0	549.3	610.5	682.2	682.2	674.9	700.9	695.7
72.5°	8135.3	2874.1	477.6	475.6	509.8	564.8	634.4	639.6	635.5	644.8	639.6
75°	4776.3	1731.9	425.7	431.9	462.1	516.0	581.5	585.6	581.5	580.4	581.5
77.5°	1656.1	776.7	375.9	385.2	411.2	466.2	523.3	531.6	525.4	518.1	520.2
80°	647.9	451.7	321.9	335.4	357.2	410.1	465.2	470.4	461.0	460.0	451.7
82.5°	389.4	275.2	250.2	272.0	299.0	356.1	401.8	399.8	392.5	435.1	381.1
85°	169.2	152.6	182.7	204.5	218.0	266.8	339.5	330.2	312.5	275.2	268.9
87.5°	68.5	78.9	100.7	121.5	130.8	172.4	232.6	224.3	227.4	186.9	185.9
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)