

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: P270459

Luminaire Tested: **NAV-AF-03-D-UNV-T2-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270459
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-T2-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12445.2 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B2 - U0 - G2

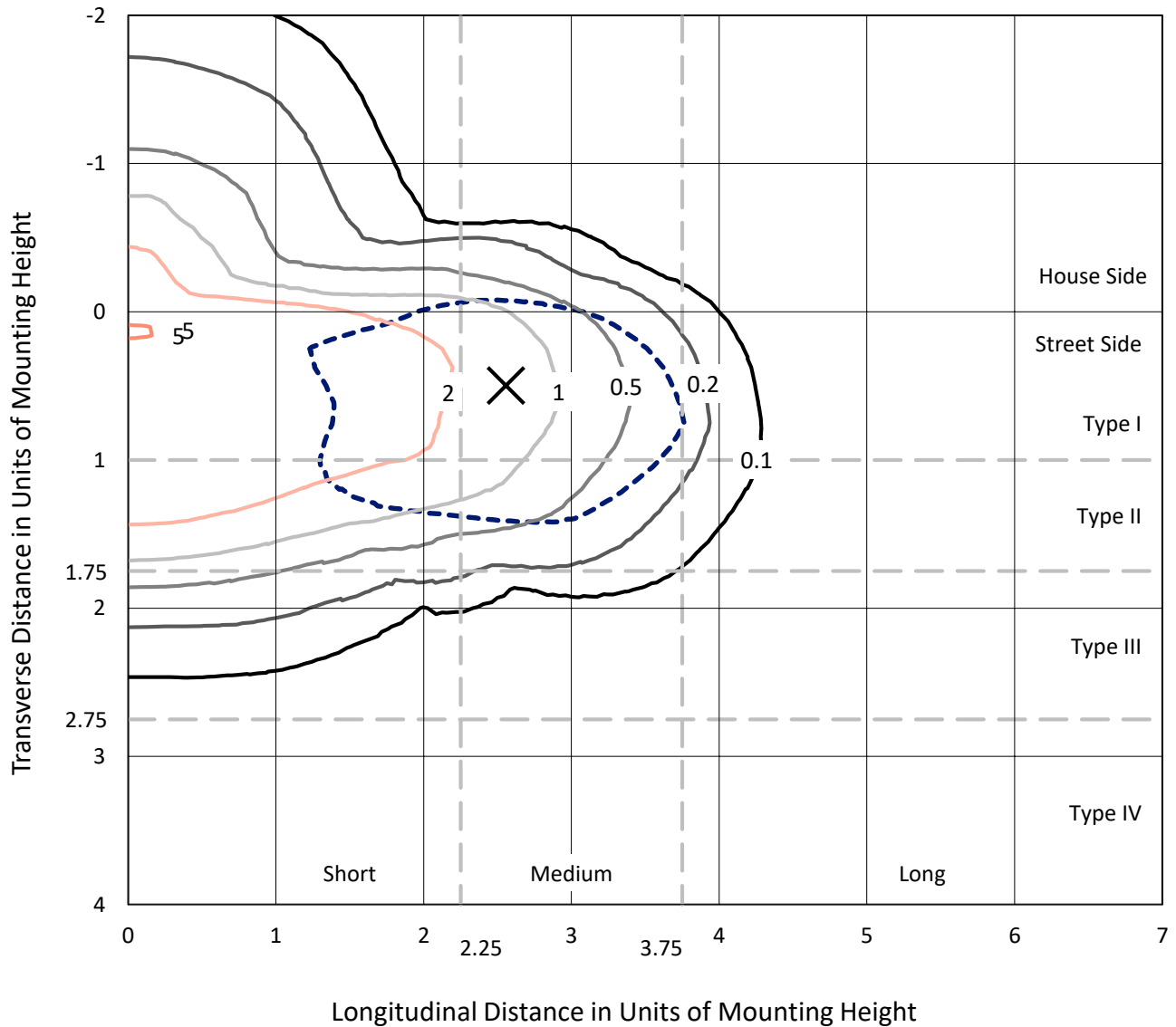
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

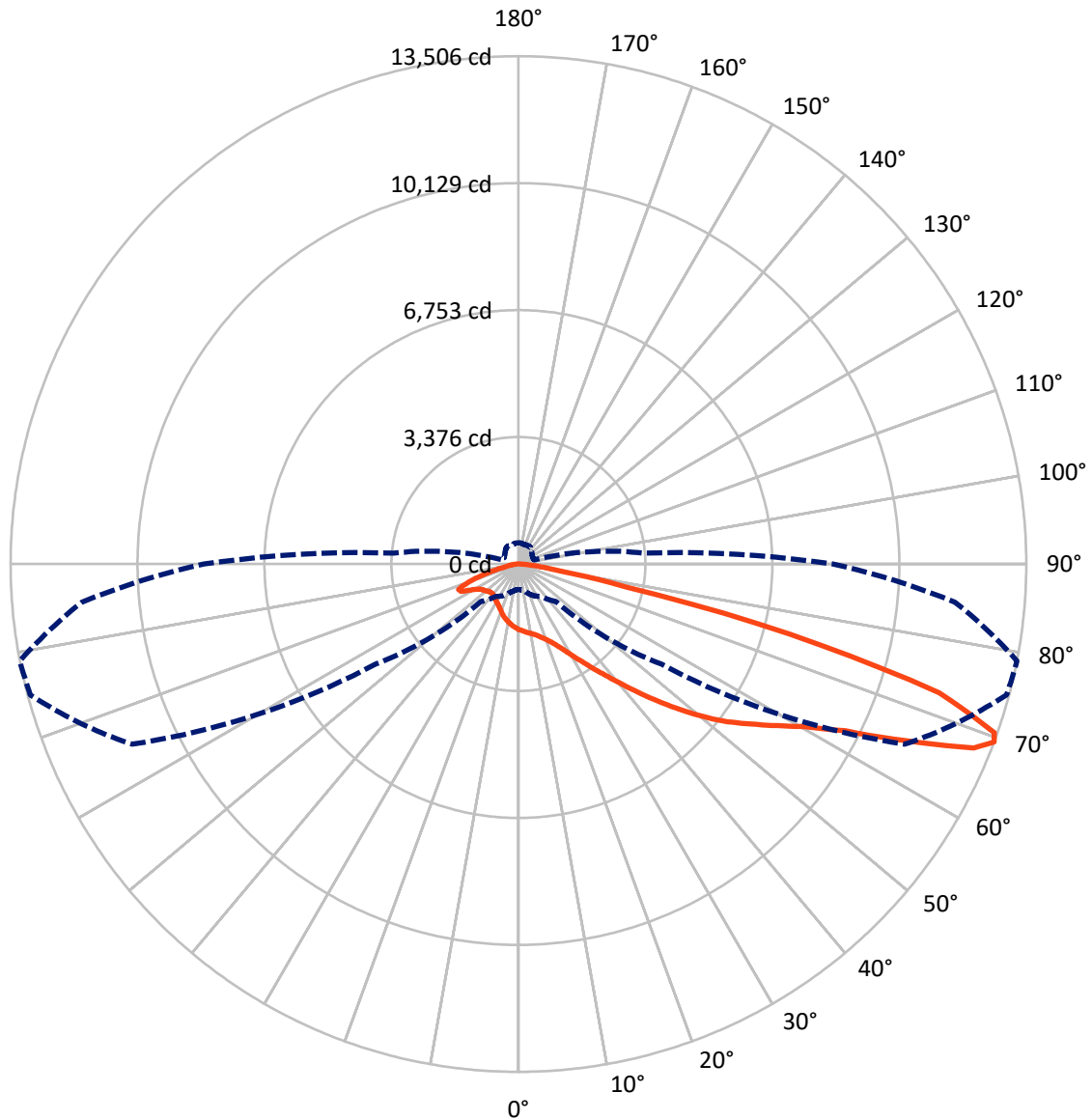
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.3 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	2341.2	0.0	2341.2
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	10104.0	0.0	10104.0
	% Fixture	81.2	0.0	81.2
Total	Lumens	12445.2	0.0	12445.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.9	1.3
10°-20°	464.2	3.7
20°-30°	767.0	6.2
30°-40°	1242.0	10.0
40°-50°	1984.1	15.9
50°-60°	2841.4	22.8
60°-70°	3165.8	25.4
70°-80°	1583.8	12.7
80°-90°	235.0	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°	12445.2	100.0
0°-180°	12445.2	100.0

Coefficient of Utilization



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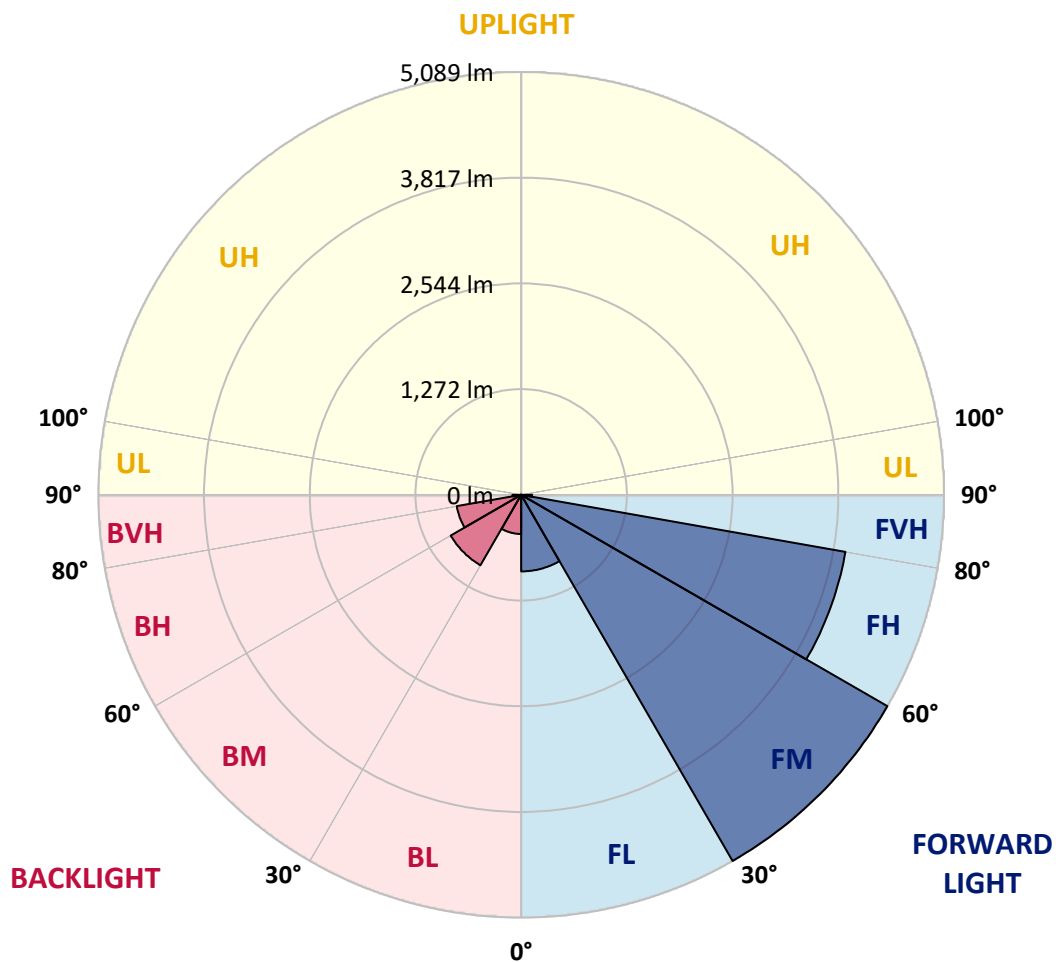
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	921.5	7.4			
FM	(30°-60°)	5088.8	40.9			
FH	(60°-80°)	3962.4	31.8			G2/5000
FVH	(80°-90°)	131.3	1.1			G2/225
BL	(0°-30°)	471.6	3.8	B1/500		
BM	(30°-60°)	978.6	7.9	B1/1000		
BH	(60°-80°)	787.2	6.3	B2/1000		G2/1000
BVH	(80°-90°)	103.7	0.8			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5
2.5°	1917.4	1913.4	1912.5	1900.4	1893.8	1880.1	1847.5	1814.0	1783.0	1766.7	1749.7
5°	2077.8	2069.7	2065.7	2045.4	2027.4	1996.5	1945.1	1892.2	1836.9	1808.4	1774.2
7.5°	2174.7	2175.5	2175.5	2159.3	2141.3	2103.9	2038.8	1966.3	1884.0	1846.6	1792.8
10°	2182.8	2183.7	2195.8	2199.9	2204.0	2184.5	2124.2	2033.0	1927.3	1878.4	1808.4
12.5°	2102.3	2108.0	2128.4	2157.5	2199.1	2220.3	2194.3	2104.6	1982.6	1923.1	1837.7
15°	1994.0	1999.6	2025.7	2070.6	2137.2	2208.2	2244.8	2187.0	2055.1	1985.1	1880.8
17.5°	1941.1	1947.5	1965.5	2001.3	2066.5	2161.7	2271.6	2274.9	2140.5	2060.0	1932.1
20°	1915.8	1920.7	1943.6	1972.8	2022.4	2113.6	2274.1	2367.8	2242.3	2148.7	1994.7
22.5°	1973.7	1975.3	1986.6	2003.0	2036.3	2106.3	2272.4	2463.7	2369.3	2260.2	2075.4
25°	2142.9	2132.3	2124.2	2103.9	2112.1	2161.7	2298.5	2566.4	2532.1	2406.7	2182.8
27.5°	2343.3	2341.6	2320.4	2273.3	2243.1	2274.9	2372.6	2681.1	2731.7	2593.1	2323.7
30°	2566.4	2567.1	2545.2	2487.3	2426.3	2429.6	2490.6	2813.9	2970.2	2818.0	2497.2
32.5°	2800.0	2814.7	2774.0	2716.1	2642.1	2618.5	2660.1	2974.3	3246.2	3083.3	2698.2
35°	3079.3	3081.7	3037.0	2952.3	2878.2	2840.7	2879.0	3174.6	3564.6	3395.2	2943.3
37.5°	3369.2	3370.8	3324.4	3216.1	3122.5	3098.1	3140.4	3418.1	3901.6	3750.2	3231.6
40°	3606.1	3623.1	3586.6	3484.7	3390.4	3375.7	3436.7	3709.6	4332.3	4170.3	3574.4
42.5°	3874.7	3894.3	3850.3	3744.4	3669.5	3664.6	3759.9	4041.7	4760.6	4656.4	3962.8
45°	4177.7	4205.3	4144.3	4025.3	3961.9	4069.3	4075.0	4409.7	5253.9	5200.3	4399.9
47.5°	4508.2	4531.1	4481.4	4353.5	4284.2	4439.9	4383.5	4807.8	5787.3	5783.3	4872.9
50°	4763.1	4788.2	4793.1	4737.0	4664.4	4684.1	4722.3	5226.2	6318.9	6382.5	5362.3
52.5°	4716.6	4741.1	4850.9	4998.3	5114.8	5064.4	5110.6	5670.9	6832.8	6967.1	5827.2
55°	4342.0	4355.2	4561.1	4911.3	5407.1	5648.2	5651.3	6154.5	7321.2	7509.3	6268.6
57.5°	3667.2	3668.8	3936.6	4452.9	5236.8	6026.6	6504.5	6761.9	7831.0	8108.6	6815.6
60°	2594.8	2601.3	2913.3	3588.2	4627.1	5981.1	7422.2	7848.9	8421.3	8781.9	7520.7
62.5°	1540.5	1555.1	1790.4	2331.9	3436.7	5395.0	7964.5	9782.6	9290.8	9769.5	8649.2
65°	1002.2	1014.5	1155.3	1427.2	2030.6	3925.2	7786.1	11655.1	10936.2	11323.0	10271.1
67.5°	771.9	781.6	892.3	1056.9	1245.7	2121.7	6225.3	12047.7	12939.2	13059.6	11639.8
69°	678.2	686.3	767.8	925.8	1048.7	1404.5	4639.2	11335.3	13439.9	13505.8	11656.9
70°	628.5	635.1	711.5	848.4	963.3	1121.2	3550.7	10508.1	13256.7	13425.3	11320.6
72.5°	517.9	523.5	578.1	683.2	787.4	798.8	1573.0	7673.1	11162.7	11701.6	9579.9
75°	432.4	435.6	471.4	548.0	637.4	635.9	803.7	4346.2	6811.6	7454.0	5915.1
77.5°	360.7	363.2	386.7	434.1	503.2	500.7	565.8	1875.9	3007.6	2901.7	2036.3
80°	318.4	319.9	332.3	344.4	388.3	385.9	419.2	861.5	1223.8	1131.0	770.2
82.5°	241.9	245.1	307.0	312.7	301.2	290.7	292.3	501.6	626.9	570.8	413.6
85°	136.8	137.6	197.1	230.4	262.1	197.1	189.7	258.9	309.3	271.1	180.7
87.5°	61.1	63.5	94.4	109.1	141.7	115.6	108.2	110.0	133.5	110.8	71.7
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°	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5	1746.5
2.5°	1733.4	1719.5	1686.9	1653.6	1620.3	1599.2	1577.2	1556.8	1548.6	1547.8	1532.2
5°	1740.7	1708.1	1634.0	1552.7	1475.3	1415.1	1364.5	1332.0	1300.2	1294.5	1280.8
7.5°	1743.3	1690.3	1569.8	1439.5	1321.4	1238.5	1187.9	1165.9	1150.5	1146.3	1141.4
10°	1742.4	1667.4	1498.2	1319.8	1185.5	1122.8	1104.0	1109.0	1115.4	1118.7	1118.7
12.5°	1755.4	1657.0	1426.5	1207.4	1097.5	1067.5	1082.1	1107.3	1126.8	1135.0	1136.6
15°	1779.1	1650.4	1347.5	1109.8	1035.7	1043.0	1078.9	1115.4	1143.2	1155.3	1158.6
17.5°	1808.4	1641.5	1256.3	1029.2	999.9	1025.1	1071.5	1117.9	1151.3	1166.8	1169.1
20°	1840.8	1628.4	1161.9	968.9	968.1	999.9	1046.3	1098.4	1134.2	1151.3	1150.5
22.5°	1884.9	1616.2	1074.0	925.0	933.1	962.4	1000.6	1047.9	1081.3	1096.7	1093.4
25°	1943.6	1604.8	995.0	885.9	893.2	912.7	939.5	975.4	999.0	1007.2	1001.5
27.5°	2022.4	1595.7	933.1	850.1	849.2	858.2	874.4	894.1	905.4	902.9	894.1
30°	2119.3	1586.9	887.4	818.3	806.9	806.0	813.3	824.7	832.1	817.5	810.1
32.5°	2227.6	1571.3	846.7	790.6	770.2	762.9	766.2	781.6	811.8	797.1	791.3
35°	2355.4	1553.4	806.0	760.4	745.0	731.1	733.6	767.0	858.2	847.6	841.9
37.5°	2509.3	1537.2	768.6	727.8	727.1	710.0	708.4	748.3	870.4	847.6	842.7
40°	2694.1	1533.9	735.3	692.1	705.1	698.6	693.0	717.2	802.7	756.5	747.4
42.5°	2917.2	1548.6	710.7	657.9	679.8	695.3	684.8	690.4	725.4	683.9	676.7
45°	3177.8	1588.6	693.0	627.7	653.0	693.0	680.6	675.7	681.5	658.6	653.7
47.5°	3481.6	1659.3	680.6	602.6	627.7	686.3	679.1	669.2	666.8	653.7	650.6
50°	3806.4	1754.6	672.6	579.6	605.0	674.9	678.2	664.3	660.3	654.7	653.0
52.5°	4128.8	1858.1	662.8	560.2	586.2	661.2	679.1	659.4	653.7	650.6	648.9
55°	4449.6	1965.5	644.9	543.0	572.4	644.9	678.2	653.0	646.5	646.5	646.5
57.5°	4865.6	2129.2	621.3	529.2	554.4	623.7	667.6	645.6	636.7	637.4	638.3
60°	5466.5	2403.5	595.1	513.8	530.9	599.3	651.4	632.6	622.0	625.3	626.1
62.5°	6470.4	2883.1	559.4	491.8	506.5	573.2	630.3	614.7	605.0	610.7	611.4
65°	7809.0	3463.5	512.2	464.1	481.2	543.8	603.3	593.5	583.0	596.8	595.9
67.5°	8625.6	3633.7	462.4	434.8	456.8	512.9	570.0	565.8	558.6	583.0	581.4
69°	8357.7	3326.0	434.1	416.1	439.7	491.8	548.8	547.2	541.5	565.0	563.4
70°	7941.6	3038.5	416.1	403.9	430.6	478.7	534.9	534.9	529.2	549.7	545.5
72.5°	6379.3	2253.7	374.6	372.8	399.7	443.0	497.5	501.6	498.3	505.7	501.6
75°	3745.4	1358.1	333.8	338.8	362.3	404.6	456.0	459.3	456.0	455.1	456.0
77.5°	1298.6	609.1	294.7	302.1	322.4	365.6	410.3	416.9	412.1	406.4	407.9
80°	508.0	354.2	252.5	262.9	280.1	321.7	364.7	368.8	361.5	360.7	354.2
82.5°	305.3	215.8	196.2	213.3	234.5	279.3	315.0	313.5	307.8	341.1	298.7
85°	132.7	119.7	143.3	160.3	170.9	209.2	266.3	258.9	245.1	215.8	210.9
87.5°	53.8	61.9	79.1	95.3	102.5	135.1	182.4	175.9	178.4	146.6	145.7
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)