

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: P196778

Luminaire Tested: **NAV-AF-02-D-UNV-T3-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196778
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-T3-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7764 lumens
Efficiency: N/A
Efficacy: 117.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

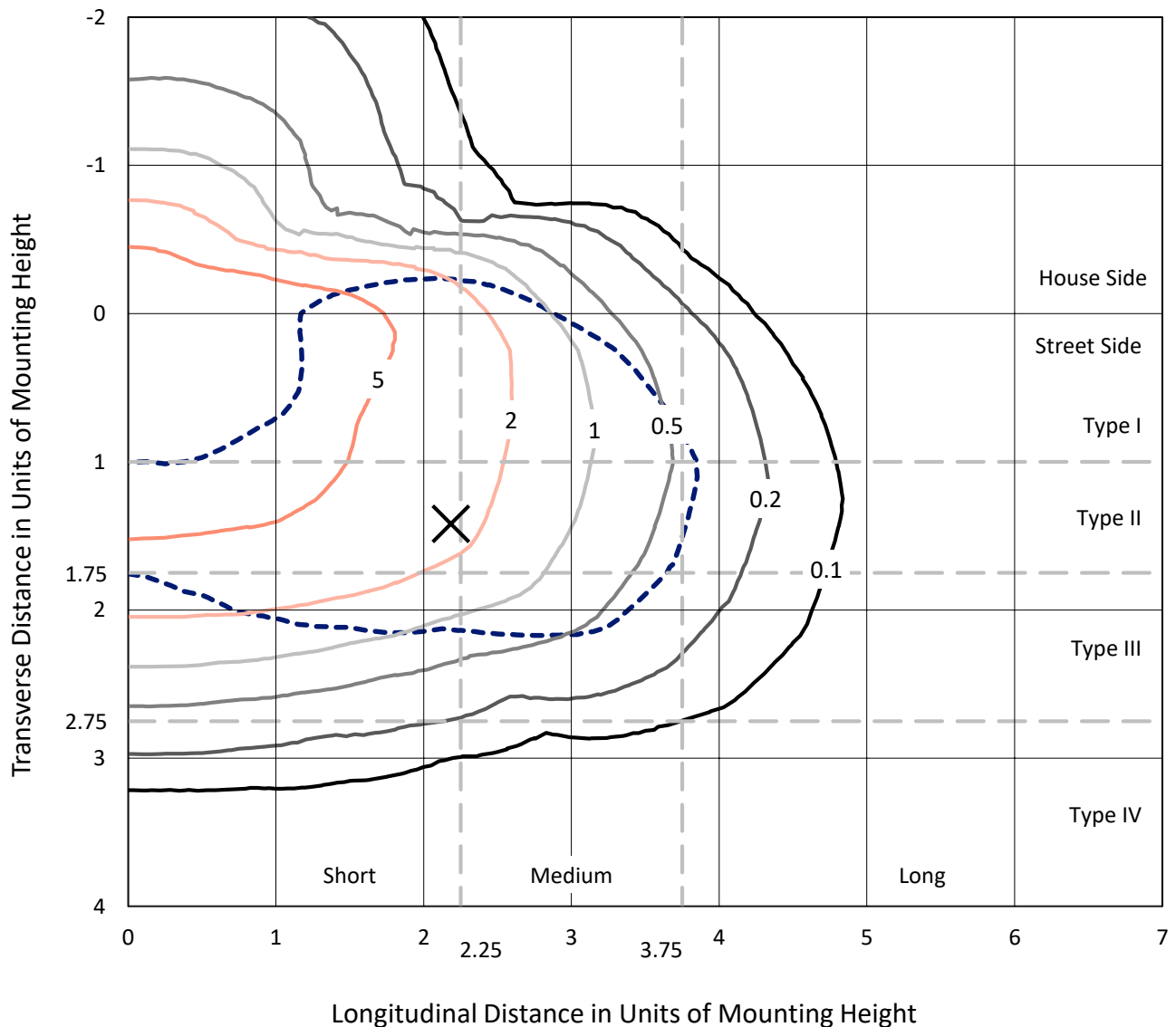
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

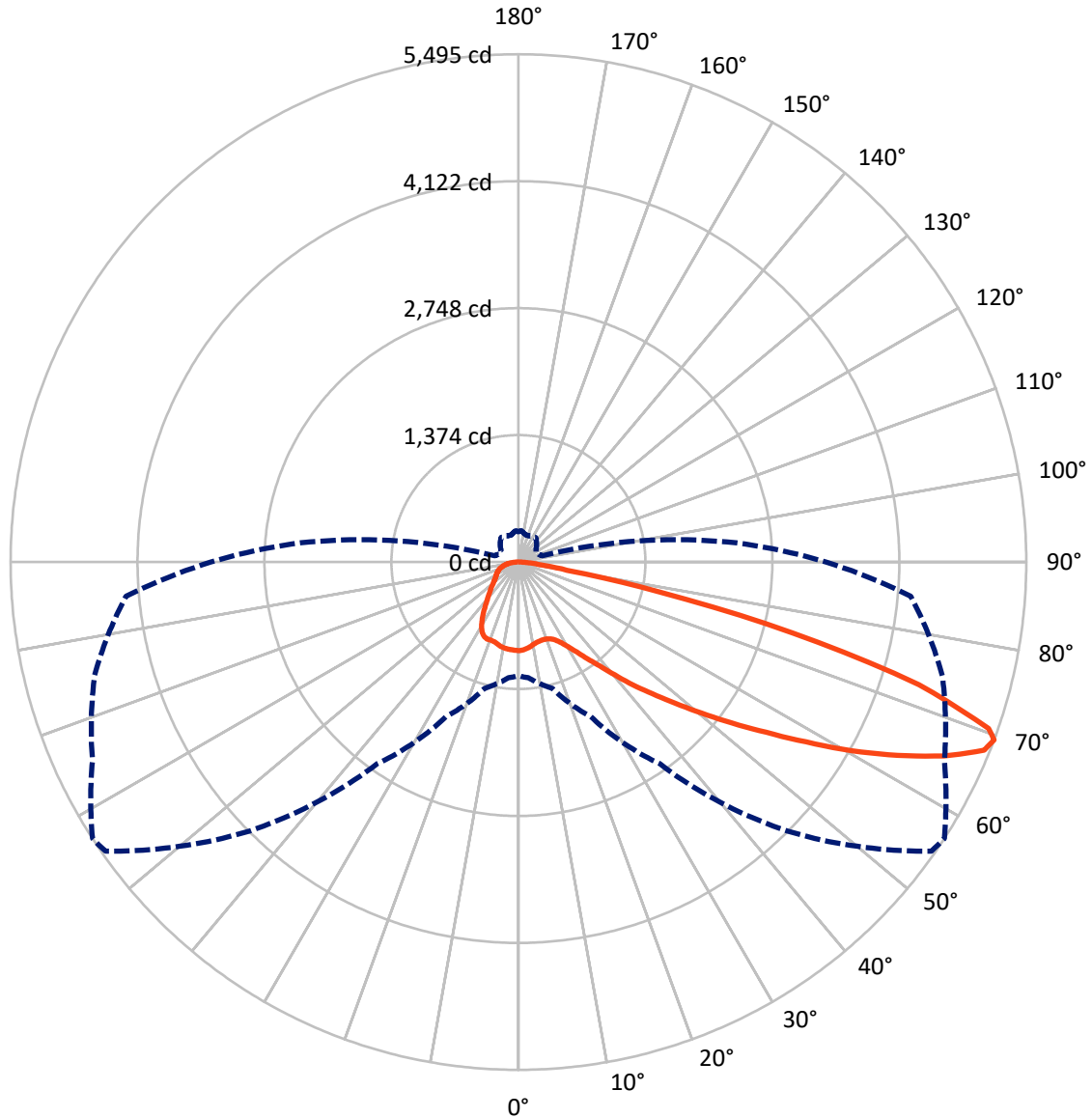
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.8 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1713.2	0.0	1713.2
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	6050.7	0.0	6050.7
	% Fixture	77.9	0.0	77.9
Total	Lumens	7764.0	0.0	7764.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.8	1.2
10°-20°	255.4	3.3
20°-30°	424.8	5.5
30°-40°	693.6	8.9
40°-50°	1170.7	15.1
50°-60°	1821.1	23.5
60°-70°	2169.4	27.9
70°-80°	1010.6	13.0
80°-90°	128.5	1.7
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°	7764.0	100.0
0°-180°	7764.0	100.0



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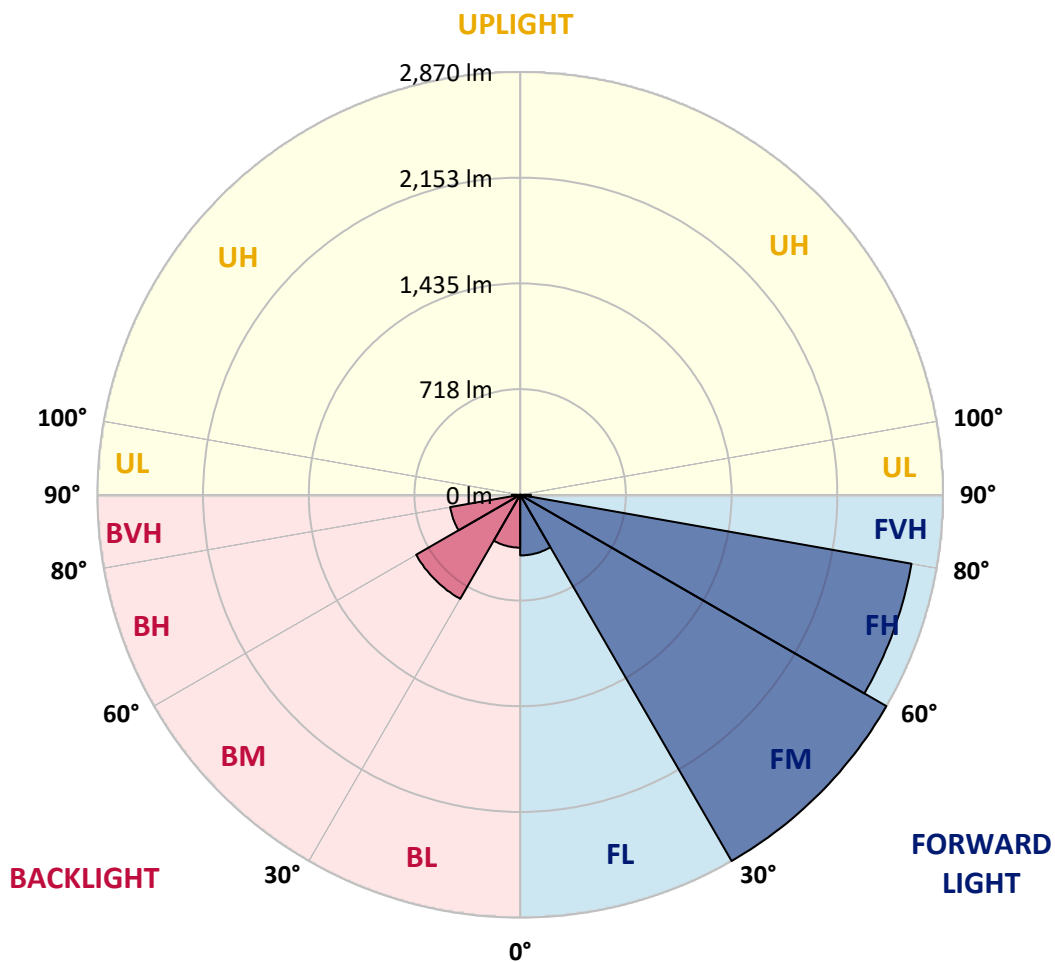
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	411.2	5.3			
FM	(30°-60°)	2870.1	37.0			
FH	(60°-80°)	2697.2	34.7			G2/5000
FVH	(80°-90°)	72.3	0.9			G1/100
BL	(0°-30°)	358.8	4.6	B1/500		
BM	(30°-60°)	815.4	10.5	B1/1000		
BH	(60°-80°)	482.8	6.2	B1/500		G1/500
BVH	(80°-90°)	56.3	0.7			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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	953.9	953.9	956.3	956.3	956.3	955.4	952.3	953.4	951.3	949.9	947.4
5°	934.5	935.5	938.4	939.4	940.9	941.4	941.4	940.9	941.4	941.4	939.9
7.5°	907.6	908.6	912.1	914.1	918.6	922.5	924.6	924.6	926.9	929.0	929.5
10°	891.2	891.2	893.2	893.2	896.7	898.6	905.1	904.6	911.6	918.1	921.0
12.5°	889.3	889.3	888.3	884.8	882.9	882.3	888.8	889.7	900.2	911.6	917.0
15°	895.7	895.7	892.7	885.8	878.3	874.8	881.2	883.3	894.8	908.2	916.5
17.5°	916.5	916.0	909.6	895.7	882.9	877.4	879.3	881.2	891.7	907.1	917.6
20°	962.8	962.8	948.9	923.6	901.2	888.3	885.2	886.7	894.2	908.6	922.0
22.5°	1043.9	1045.3	1020.5	978.8	940.4	913.1	901.2	902.7	906.1	920.1	934.9
25°	1163.1	1159.1	1123.8	1064.7	1005.0	958.3	933.9	935.5	935.5	948.4	963.7
27.5°	1289.4	1290.4	1239.6	1176.0	1097.5	1027.9	989.2	988.7	988.1	1000.6	1016.9
30°	1432.1	1432.5	1373.8	1300.3	1210.4	1121.3	1063.2	1062.6	1058.1	1073.6	1095.0
32.5°	1588.1	1587.5	1519.5	1436.4	1336.6	1235.7	1160.2	1159.7	1156.2	1177.0	1202.8
35°	1761.0	1761.0	1693.4	1591.1	1483.2	1370.8	1283.4	1282.9	1284.9	1313.2	1337.6
37.5°	1969.3	1973.8	1892.3	1768.1	1650.3	1530.4	1428.6	1425.5	1410.6	1458.4	1498.6
40°	2186.5	2199.0	2114.5	1969.3	1842.1	1718.3	1606.0	1604.0	1591.1	1641.7	1706.8
42.5°	2421.6	2450.0	2356.0	2207.9	2069.3	1935.5	1822.7	1817.2	1767.5	1846.6	1948.4
45°	2729.9	2748.2	2612.1	2477.8	2347.1	2194.5	2060.3	2030.9	1981.3	2082.7	2214.9
47.5°	2939.6	2930.7	2845.6	2755.6	2671.7	2525.5	2319.2	2282.0	2221.3	2355.5	2501.2
50°	3069.7	3076.3	3028.5	3024.1	3019.6	2917.7	2611.6	2566.8	2496.7	2655.8	2825.8
52.5°	3155.9	3126.5	3134.8	3236.4	3359.0	3310.3	2942.1	2892.3	2820.3	2979.4	3171.2
55°	3120.0	3081.2	3159.2	3359.0	3647.8	3658.8	3304.9	3253.7	3192.1	3323.3	3586.8
57.5°	2971.9	2991.3	3114.6	3392.4	3845.2	3970.9	3721.9	3669.8	3548.4	3681.7	3981.4
60°	2763.6	2802.9	2991.3	3339.7	3983.4	4214.0	4179.7	4145.0	3936.2	4030.6	4395.9
62.5°	2540.0	2578.7	2810.3	3249.7	3921.2	4429.3	4629.1	4607.7	4364.2	4366.6	4659.0
65°	2209.4	2225.3	2461.9	3004.2	3748.8	4623.7	5078.9	5060.1	4773.2	4653.5	4732.4
67.5°	1668.6	1688.5	1882.9	2371.5	3223.9	4518.2	5438.3	5435.3	5019.3	4759.8	4557.5
69°	1232.2	1256.6	1415.1	1841.1	2665.7	4116.6	5455.2	5495.4	5085.8	4748.9	4261.7
70°	901.6	929.5	1076.1	1461.4	2220.3	3673.2	5310.5	5397.0	5060.5	4679.8	4031.1
72.5°	383.3	392.7	464.8	659.6	1126.4	2214.9	4349.7	4531.6	4570.5	4193.2	3149.3
75°	240.1	243.1	271.4	338.4	501.1	916.0	2816.8	3064.8	3412.2	3253.2	2108.4
77.5°	181.0	183.4	199.8	233.2	311.2	342.0	1306.7	1558.2	1954.4	1913.6	1049.3
80°	138.6	140.2	151.1	169.5	219.2	214.2	424.0	532.8	815.6	719.7	371.3
82.5°	108.8	109.4	118.8	122.3	153.1	144.1	212.7	237.1	329.5	273.9	181.4
85°	96.4	97.9	107.4	89.5	97.9	87.0	116.8	126.7	175.0	165.0	68.7
87.5°	49.1	51.7	89.9	76.6	49.1	41.3	51.3	55.1	71.1	77.0	33.4
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°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	948.0	948.4	949.9	952.3	956.3	961.3	967.3	973.3	976.7	979.2	978.2
5°	939.9	940.4	943.5	948.0	952.8	960.3	970.2	977.7	983.3	986.6	986.2
7.5°	930.1	931.4	937.5	942.4	949.4	955.4	963.3	970.2	975.6	979.2	978.8
10°	922.5	924.0	931.4	938.0	943.9	944.9	943.5	941.4	940.9	943.5	942.4
12.5°	919.1	922.0	929.0	933.5	931.0	921.5	910.5	906.1	904.6	909.6	910.1
15°	920.1	922.5	928.4	925.5	912.1	896.2	890.3	893.7	896.7	899.6	900.2
17.5°	922.5	924.0	925.5	914.6	895.7	885.2	883.3	879.7	870.8	865.9	865.4
20°	926.9	929.0	926.5	909.1	892.2	878.3	854.4	833.1	812.7	801.8	797.3
22.5°	942.4	943.9	936.5	919.5	893.7	848.5	800.3	763.5	732.1	715.2	708.8
25°	972.7	975.2	964.8	943.5	875.8	796.8	728.6	678.9	639.7	619.3	613.8
27.5°	1026.0	1028.4	1016.9	961.3	834.0	727.6	645.1	596.0	562.1	544.7	542.3
30°	1105.4	1108.9	1098.5	960.8	770.4	639.7	563.7	534.9	515.4	503.4	503.0
32.5°	1215.8	1228.7	1186.0	943.9	691.9	550.7	502.0	492.1	482.6	474.7	474.7
35°	1356.0	1386.3	1272.5	908.6	605.4	490.1	467.7	458.3	446.4	437.9	436.9
37.5°	1523.5	1570.7	1334.0	846.0	530.9	460.7	446.9	431.5	412.6	396.2	392.1
40°	1753.6	1764.5	1364.4	744.0	475.2	444.9	427.4	408.1	384.3	365.8	363.9
42.5°	1984.7	1948.9	1358.4	634.7	443.4	430.5	407.5	386.2	364.8	349.4	349.4
45°	2247.7	2110.1	1313.2	524.9	414.5	414.1	389.2	368.9	352.4	341.0	338.4
47.5°	2499.2	2254.7	1235.1	443.9	384.7	397.6	377.3	360.9	346.0	335.0	333.0
50°	2804.3	2422.2	1152.1	387.3	355.8	383.3	372.2	363.9	349.4	330.5	328.6
52.5°	3107.6	2618.0	1088.0	344.5	330.5	371.8	375.3	376.3	362.8	326.0	323.6
55°	3433.2	2827.2	1020.5	311.2	309.6	366.3	382.2	381.2	374.8	327.0	323.1
57.5°	3742.7	3037.5	919.5	287.8	293.3	360.9	383.7	367.7	356.4	332.0	325.6
60°	3999.3	3211.4	771.5	271.4	279.3	349.9	373.7	349.9	330.5	331.0	325.0
62.5°	4124.1	3260.2	590.0	252.5	267.9	332.0	359.4	336.5	318.6	333.0	329.5
65°	4029.2	3121.5	420.5	235.1	254.0	311.2	350.9	325.0	312.7	343.0	339.0
67.5°	3688.1	2743.7	305.2	219.7	240.6	289.7	335.0	314.6	306.7	350.4	341.4
69°	3325.8	2369.0	264.4	210.8	231.1	278.4	324.6	309.2	302.2	340.1	327.0
70°	3024.7	2080.2	244.0	205.3	223.2	271.8	316.7	305.7	297.7	327.6	312.2
72.5°	2168.7	1344.6	205.3	188.9	202.3	257.6	299.3	292.9	280.8	295.8	285.8
75°	1310.2	701.9	174.5	172.0	180.4	237.6	278.8	270.9	259.0	260.5	255.4
77.5°	601.9	324.1	146.1	152.1	157.6	212.7	254.0	245.1	234.2	230.1	230.6
80°	264.0	189.3	122.3	129.7	132.8	191.3	227.2	217.2	205.3	226.6	210.3
82.5°	142.7	109.8	95.4	100.4	108.8	166.5	197.3	184.4	172.9	201.2	162.6
85°	57.7	56.2	64.6	69.6	75.5	119.7	165.0	151.7	137.6	123.3	120.3
87.5°	24.8	26.9	31.8	33.8	40.2	74.6	110.8	96.9	97.5	83.5	82.1
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)