

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: P270390

Luminaire Tested: **NAV-AF-02-D-UNV-T3R-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270390
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-02-D-UNV-T3R-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7092.2 lumens
Efficiency: N/A
Efficacy: 107.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Full 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

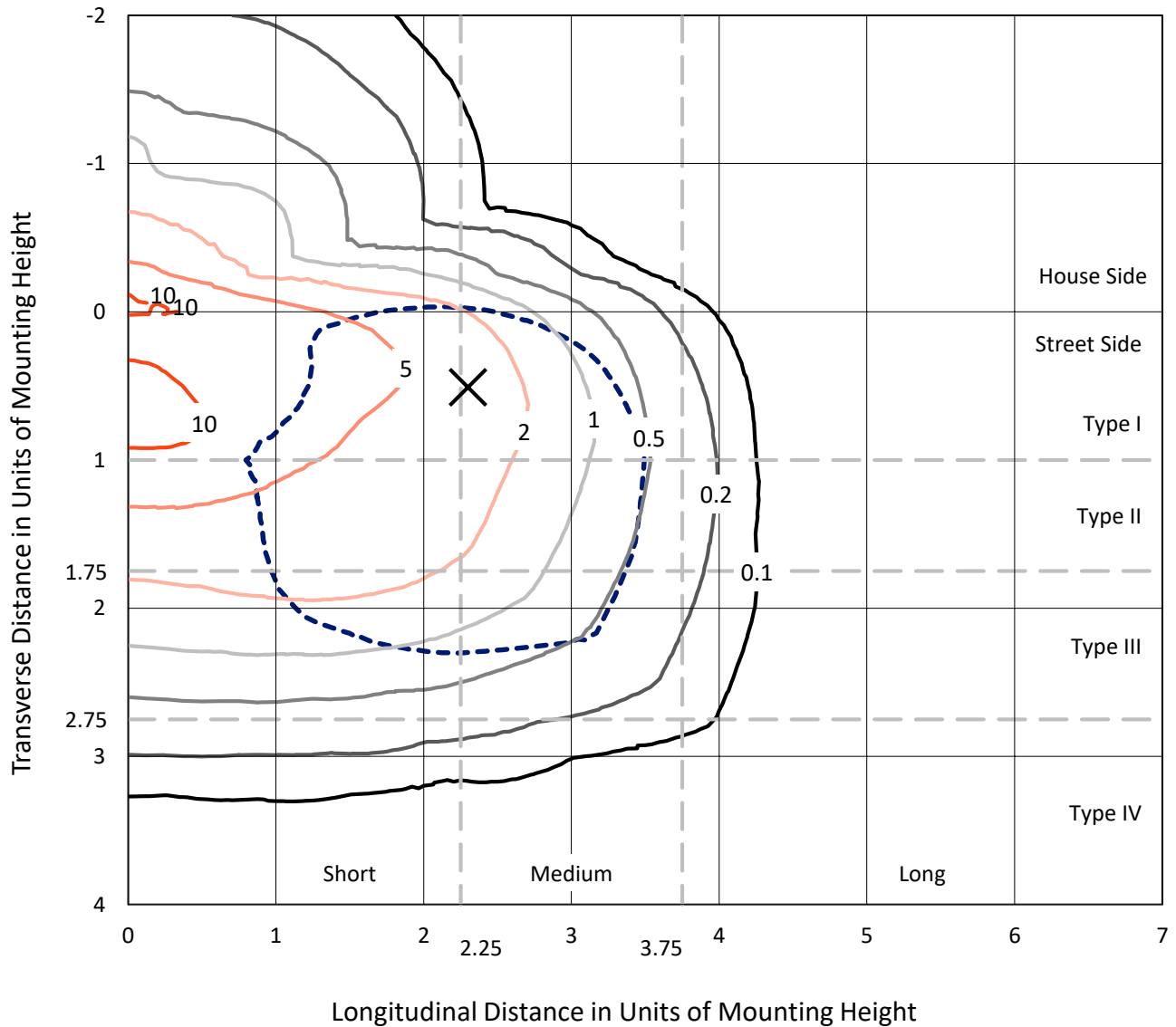


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Iso-Footcandle Lines of Horizontal Illumination

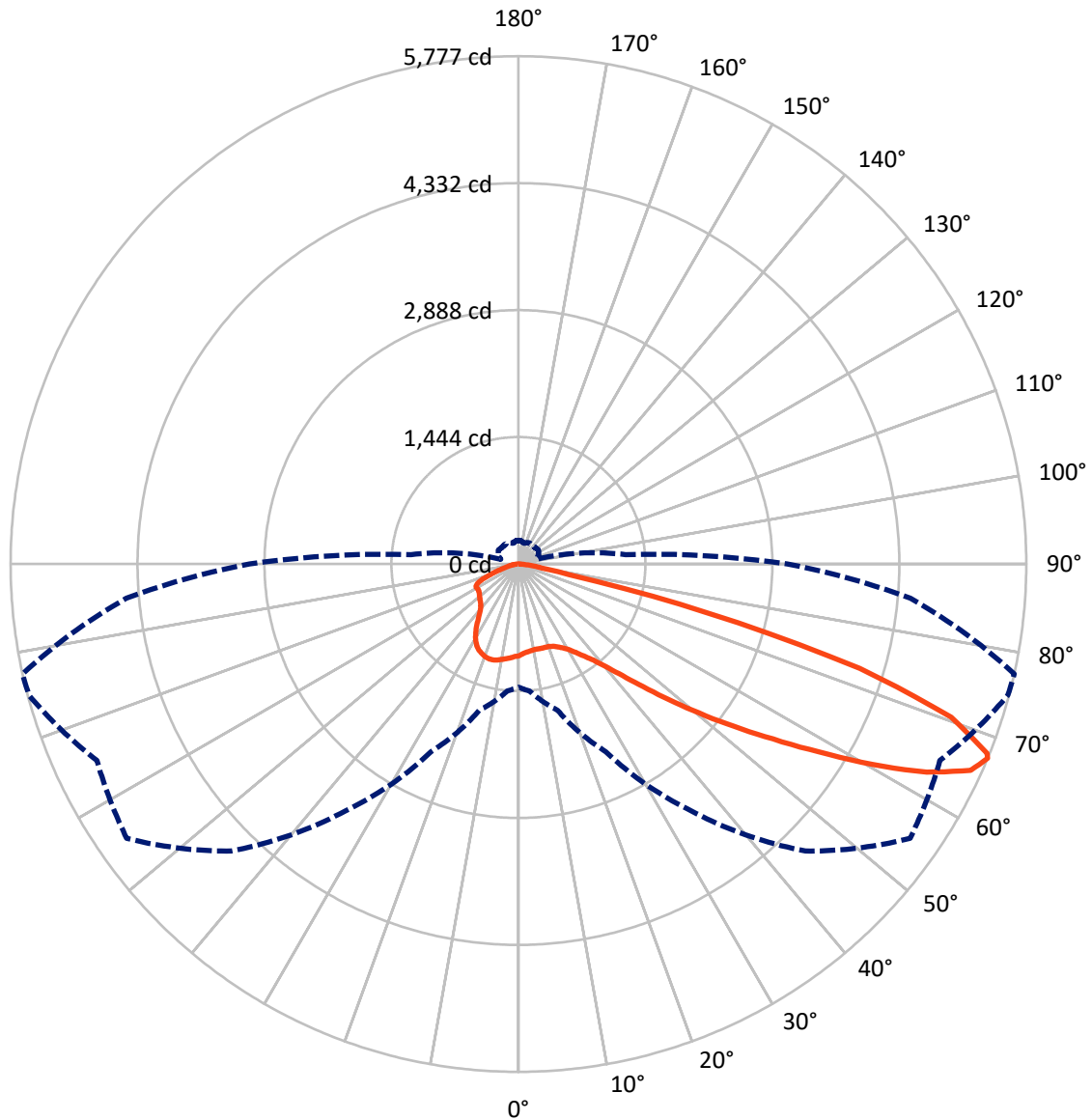
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.5 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
House Side	Lumens	1218.8	0.0	1218.8
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	5873.4	0.0	5873.4
	% Fixture	82.8	0.0	82.8
Total	Lumens	7092.2	0.0	7092.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.0	1.3
10°-20°	257.5	3.6
20°-30°	437.4	6.2
30°-40°	699.8	9.9
40°-50°	1077.3	15.2
50°-60°	1494.7	21.1
60°-70°	1993.8	28.1
70°-80°	948.8	13.4
80°-90°	89.8	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°	7092.2	100.0
0°-180°	7092.2	100.0



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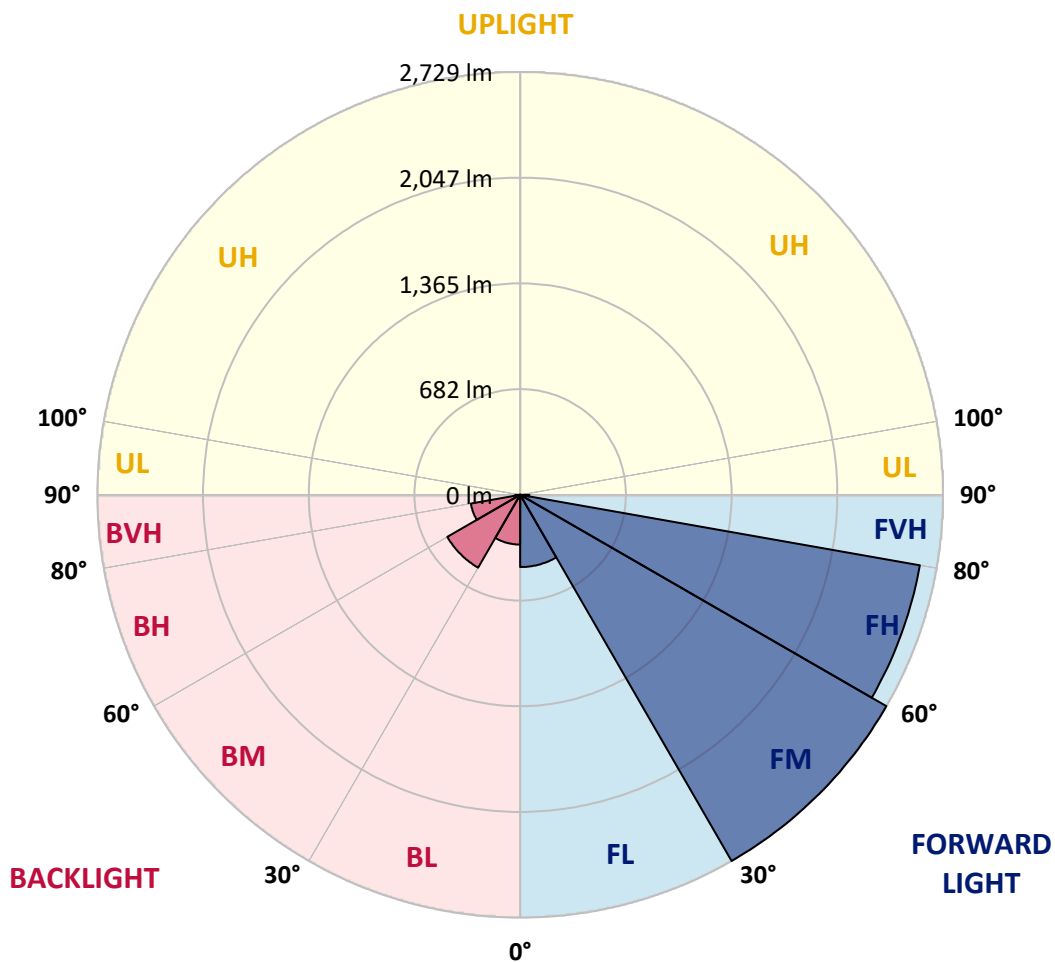
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	466.4	6.6			
FM	(30°-60°)	2729.1	38.5			
FH	(60°-80°)	2619.5	36.9			G2/5000
FVH	(80°-90°)	58.4	0.8			G1/100
BL	(0°-30°)	321.5	4.5	B1/500		
BM	(30°-60°)	542.7	7.7	B1/1000		
BH	(60°-80°)	323.2	4.6	B1/500		G1/500
BVH	(80°-90°)	31.5	0.4			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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8
2.5°	935.9	940.3	940.7	953.6	959.2	973.7	989.5	1003.4	1015.8	1020.1	1028.0
5°	842.2	842.2	843.5	851.8	868.0	891.2	924.0	960.1	997.7	1007.0	1030.1
7.5°	793.1	793.9	794.8	803.2	815.8	836.4	869.3	918.3	981.0	996.4	1037.3
10°	797.4	796.1	791.8	790.0	795.2	808.4	837.0	887.3	967.0	990.7	1049.8
12.5°	866.2	863.6	849.2	828.1	808.8	804.1	823.7	871.4	960.5	990.7	1071.4
15°	984.2	985.9	957.5	913.5	863.2	829.0	826.4	865.7	958.3	993.3	1096.4
17.5°	1137.7	1138.5	1099.0	1035.4	951.8	881.1	844.3	865.7	958.3	996.0	1120.5
20°	1300.7	1294.5	1249.8	1170.0	1061.3	953.6	877.1	871.0	960.9	1000.0	1143.4
22.5°	1440.5	1434.9	1387.9	1304.2	1179.7	1039.0	921.5	888.7	975.4	1016.2	1175.3
25°	1562.8	1566.4	1520.7	1426.5	1297.6	1135.4	987.6	928.9	1005.7	1045.5	1214.8
27.5°	1711.5	1704.9	1652.3	1562.4	1419.1	1235.3	1070.5	979.8	1041.6	1081.0	1262.9
30°	1883.2	1880.2	1809.1	1716.8	1552.7	1347.2	1152.4	1034.6	1088.4	1129.7	1323.5
32.5°	2092.0	2091.6	2015.3	1901.7	1703.0	1473.4	1249.5	1109.5	1156.8	1198.5	1403.7
35°	2328.2	2327.8	2248.8	2099.0	1876.3	1613.3	1363.4	1200.8	1241.5	1285.4	1499.2
37.5°	2492.2	2489.6	2448.3	2302.8	2067.9	1775.9	1505.7	1323.5	1337.4	1386.7	1614.6
40°	2523.8	2539.6	2575.0	2489.2	2276.9	1956.5	1648.7	1455.4	1468.5	1531.7	1759.7
42.5°	2489.6	2510.1	2628.1	2652.2	2486.1	2175.2	1827.6	1638.1	1654.9	1733.4	1930.2
45°	2459.7	2477.7	2625.4	2742.5	2692.5	2413.7	2050.7	1861.4	1892.9	1990.3	2124.9
47.5°	2409.0	2425.6	2573.7	2758.8	2810.4	2643.4	2319.5	2129.6	2184.0	2301.9	2346.6
50°	2406.3	2413.7	2503.1	2704.3	2851.2	2818.0	2617.1	2443.5	2526.8	2662.8	2592.1
52.5°	2339.6	2391.7	2472.9	2617.7	2852.1	2919.6	2910.4	2787.7	2916.1	3066.5	2861.3
55°	1932.0	1992.0	2372.1	2575.0	2846.9	3006.8	3178.3	3153.7	3354.5	3512.7	3162.9
57.5°	1803.9	1829.4	2081.1	2587.7	2890.7	3151.1	3446.1	3547.0	3856.0	4028.7	3524.6
60°	1768.9	1795.6	2022.8	2593.9	3009.5	3413.6	3809.5	3991.0	4445.6	4628.8	3935.4
62.5°	1729.9	1764.5	2027.0	2599.5	3218.2	3802.0	4291.7	4472.8	5051.0	5214.5	4320.3
65°	1616.0	1662.0	1946.0	2563.7	3446.5	4289.5	4929.2	4975.2	5551.2	5655.1	4552.6
67°	1399.7	1450.1	1723.3	2355.8	3425.4	4617.8	5439.0	5289.5	5763.9	5776.6	4477.2
67.5°	1331.4	1383.5	1647.9	2269.5	3365.4	4660.9	5529.2	5332.9	5762.1	5748.1	4407.1
70°	896.5	955.3	1167.0	1666.3	2699.5	4337.7	5507.4	5199.2	5384.3	5223.4	3786.3
72.5°	445.0	446.6	582.2	912.7	1635.6	3111.2	4594.2	4447.8	4364.5	4060.7	2778.5
75°	214.3	218.3	274.9	403.2	689.5	1606.2	3133.1	3001.1	2555.3	2212.5	1390.5
77.5°	163.5	167.4	213.4	262.6	287.5	523.8	1551.8	1254.3	740.5	591.4	391.9
80°	126.2	133.7	180.2	201.7	190.3	209.9	487.9	384.0	288.0	264.3	194.3
82.5°	98.6	103.0	153.0	153.0	131.5	140.8	227.1	221.8	178.9	161.3	104.4
85°	69.7	78.5	123.2	113.9	86.3	87.2	136.0	130.3	92.0	74.1	40.8
87.5°	31.1	39.9	87.7	74.5	46.1	35.6	55.7	47.8	36.4	28.0	18.9
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°	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8	1043.8
2.5°	1036.7	1043.8	1054.7	1061.3	1070.2	1073.6	1077.1	1083.3	1088.0	1086.7	1084.6
5°	1046.4	1058.3	1071.9	1076.2	1076.2	1071.9	1069.3	1069.6	1068.4	1067.5	1064.9
7.5°	1060.4	1076.7	1086.3	1081.9	1068.4	1051.2	1034.9	1025.3	1016.2	1010.5	1012.2
10°	1080.1	1098.2	1098.5	1079.4	1046.9	1009.5	977.5	957.0	937.2	928.5	931.2
12.5°	1108.7	1126.7	1111.4	1069.6	1012.7	954.4	895.6	853.1	814.9	805.7	803.2
15°	1139.3	1153.3	1119.2	1049.0	963.5	867.6	768.9	705.3	662.8	655.4	652.8
17.5°	1166.1	1173.9	1115.2	1012.2	886.0	734.8	619.9	576.9	568.2	572.5	572.5
20°	1189.7	1187.1	1098.2	955.3	763.6	587.4	520.7	520.4	532.2	543.1	544.1
22.5°	1219.5	1199.0	1071.0	870.5	617.7	490.1	478.6	490.1	503.3	515.5	516.9
25°	1255.1	1212.2	1034.6	750.1	496.8	445.0	449.8	459.5	467.7	477.4	477.9
27.5°	1290.5	1222.2	983.3	608.5	430.9	416.1	421.2	425.3	427.5	433.5	433.5
30°	1331.7	1230.0	909.3	487.5	400.6	390.7	387.4	385.8	387.4	395.9	396.3
32.5°	1383.5	1244.2	807.9	418.3	386.6	372.6	356.8	348.1	354.2	369.2	371.8
35°	1442.3	1260.9	686.6	390.7	381.8	363.9	334.9	321.4	323.5	337.1	339.3
37.5°	1515.9	1282.3	566.8	384.0	386.6	362.9	324.8	305.6	295.9	296.4	295.9
40°	1610.2	1303.7	472.1	385.8	397.2	365.3	320.1	289.8	269.6	270.5	272.2
42.5°	1708.8	1317.8	412.1	391.0	409.8	368.2	318.3	274.4	256.8	271.7	285.4
45°	1824.1	1313.9	380.9	395.9	419.5	369.6	311.7	272.6	258.3	302.9	328.3
47.5°	1956.5	1296.8	363.5	398.0	422.2	369.2	307.0	278.4	269.1	346.7	375.8
50°	2100.2	1269.9	349.4	394.5	420.9	367.3	312.2	285.4	273.5	356.4	378.7
52.5°	2257.7	1245.4	334.9	386.6	414.3	362.0	318.7	282.2	261.2	328.3	345.5
55°	2444.0	1239.8	318.7	373.1	403.2	356.4	315.1	272.6	247.8	291.1	301.7
57.5°	2657.0	1275.2	297.7	356.4	388.3	344.9	307.0	267.4	242.8	264.8	270.5
60°	2927.4	1353.7	275.3	338.9	370.0	327.9	299.4	268.8	244.2	260.9	262.1
62.5°	3138.8	1424.4	255.2	317.5	345.5	307.3	291.5	270.0	248.1	266.1	263.9
65°	3215.6	1389.7	230.1	285.4	310.9	284.6	280.6	270.8	248.1	269.1	264.3
67°	3058.1	1224.4	206.5	253.4	277.9	264.3	270.0	267.4	243.7	268.8	260.4
67.5°	2983.2	1166.1	200.3	248.1	269.1	258.3	267.4	265.7	242.5	267.9	258.3
70°	2460.2	836.4	169.2	208.2	225.4	227.5	251.2	254.3	231.9	251.6	234.1
72.5°	1750.4	523.4	146.0	161.3	181.9	194.7	229.2	238.9	217.8	218.7	204.3
75°	866.2	281.0	130.3	124.4	141.7	162.2	200.0	217.8	197.3	182.4	177.5
77.5°	292.4	159.1	110.0	100.4	110.0	130.3	165.6	190.3	174.0	154.2	151.3
80°	151.3	115.7	85.9	80.7	86.7	100.8	129.7	158.2	148.6	149.5	123.2
82.5°	94.2	70.5	61.9	61.4	65.8	77.2	95.6	128.5	127.6	109.1	79.3
85°	43.8	40.8	39.4	40.8	42.1	43.8	62.3	91.6	96.8	58.7	52.2
87.5°	18.4	18.0	15.8	17.1	18.9	18.4	25.1	39.0	54.3	36.8	33.7
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)