

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: P196837

Luminaire Tested: **NAV-AF-01-D-UNV-T4FT-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196837
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-T4FT-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5954.6 lumens
Efficiency: N/A
Efficacy: 100.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

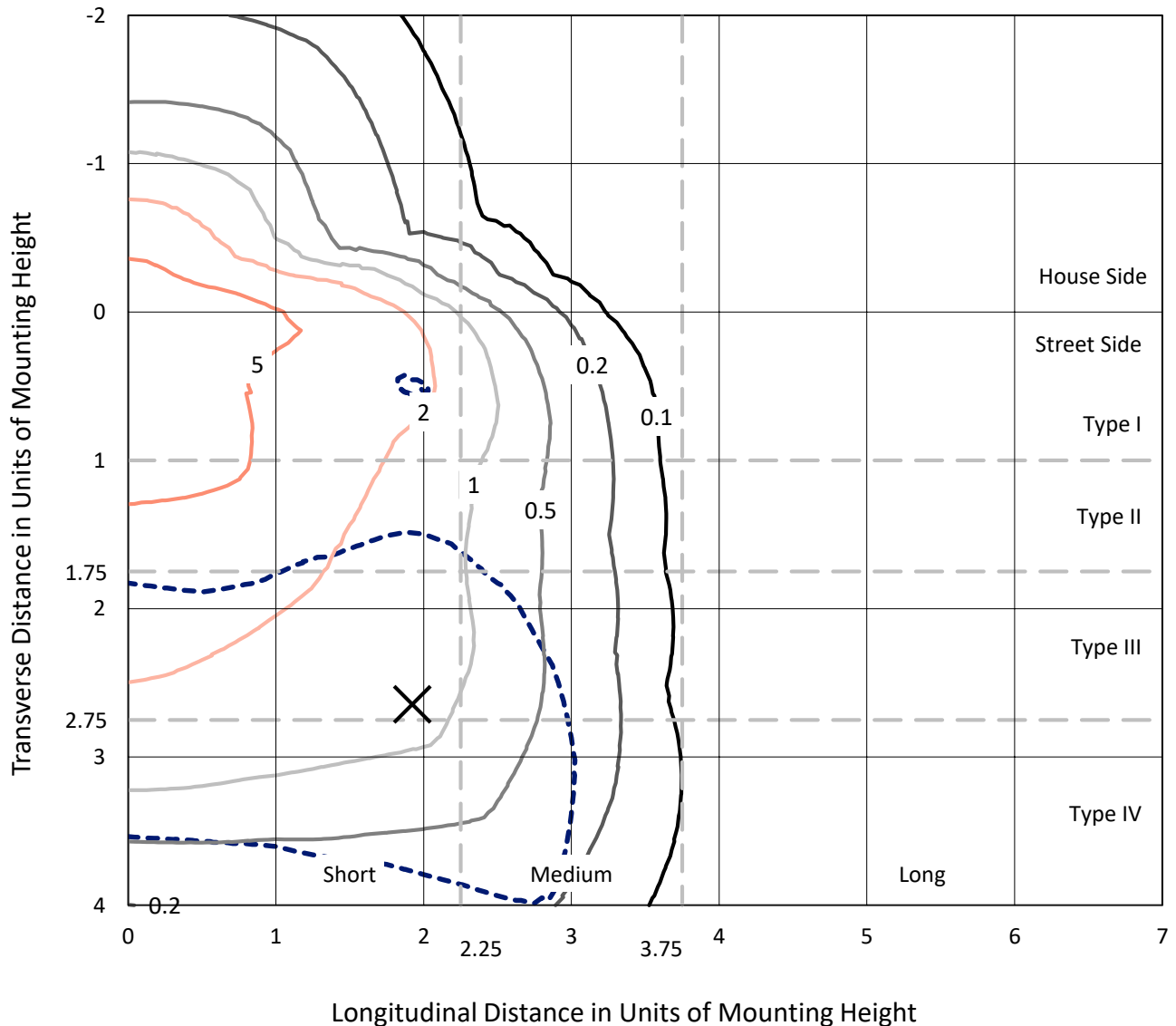
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

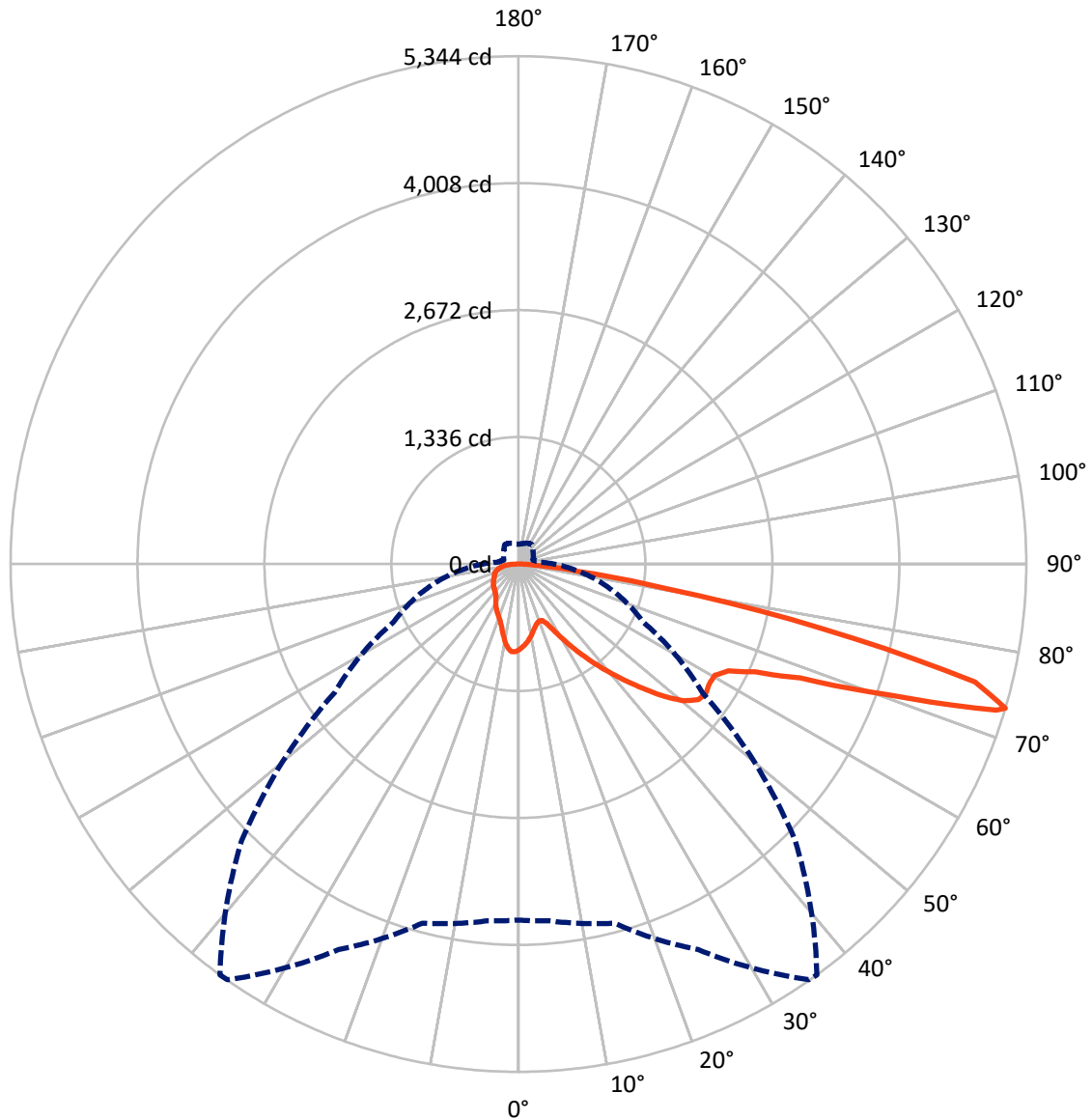
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1148.2	0.0	1148.2
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	4806.4	0.0	4806.4
	% Fixture	80.7	0.0	80.7
Total	Lumens	5954.6	0.0	5954.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.9	1.4
10°-20°	205.8	3.5
20°-30°	329.9	5.5
30°-40°	545.6	9.2
40°-50°	844.3	14.2
50°-60°	1130.3	19.0
60°-70°	1476.5	24.8
70°-80°	1206.1	20.3
80°-90°	134.2	2.3
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°	5954.6	100.0
0°-180°	5954.6	100.0



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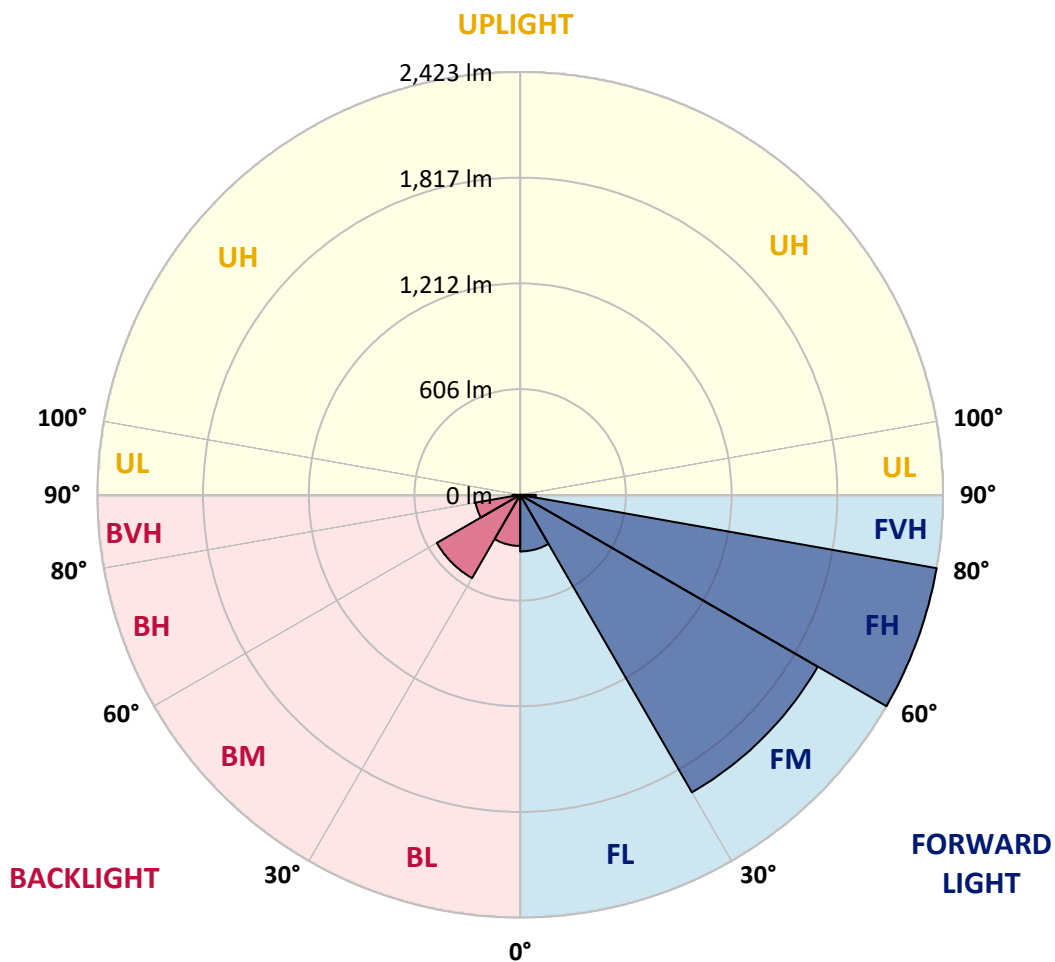
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	324.5	5.4			
FM (30°-60°)	1968.8	33.1			
FH (60°-80°)	2423.1	40.7			G2/5000
FVH (80°-90°)	90.0	1.5			G1/100
BL (0°-30°)	293.1	4.9	B1/500		
BM (30°-60°)	551.4	9.3	B1/1000		
BH (60°-80°)	259.5	4.4	B1/500		G1/500
BVH (80°-90°)	44.2	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	901.9	901.9	901.9	901.9	901.9	901.9	901.9	901.9	901.9	901.9	901.9
2.5°	867.5	869.8	870.1	872.9	872.9	872.4	873.5	878.1	880.4	885.6	890.3
5°	824.8	827.4	828.5	833.1	838.8	839.1	843.3	852.0	860.3	872.1	881.9
7.5°	776.8	779.8	782.8	792.2	800.6	801.3	809.3	823.3	834.2	848.6	866.4
10°	730.2	731.0	734.0	746.1	757.0	758.1	769.5	785.5	800.3	820.2	840.3
12.5°	691.9	694.3	693.5	702.5	712.1	712.8	727.8	748.0	769.5	792.2	816.0
15°	678.7	678.4	670.5	670.1	674.2	675.0	689.8	713.1	737.4	765.4	796.1
17.5°	687.8	684.8	664.0	651.0	648.5	649.2	660.2	685.9	711.6	743.8	780.5
20°	737.7	726.0	677.2	646.2	637.5	637.5	644.0	664.8	693.1	730.6	776.8
22.5°	856.1	838.0	734.0	678.7	648.1	645.0	640.1	656.0	687.5	732.5	792.2
25°	1005.1	996.6	838.0	765.4	702.2	692.3	659.8	665.5	699.1	752.9	834.6
27.5°	1143.3	1128.2	974.6	891.3	802.1	786.8	718.1	695.0	727.1	790.7	895.9
30°	1223.9	1213.7	1115.0	1035.6	929.1	909.9	811.1	753.3	777.1	853.1	982.9
32.5°	1311.6	1305.6	1255.7	1183.4	1066.9	1044.6	931.4	848.2	853.6	936.1	1087.6
35°	1396.8	1404.7	1376.3	1323.4	1215.2	1194.4	1093.0	972.3	947.8	1029.1	1199.6
37.5°	1498.9	1500.9	1483.0	1448.7	1371.1	1354.0	1270.4	1104.7	1050.3	1128.2	1308.0
40°	1703.0	1673.0	1603.4	1576.2	1529.9	1519.4	1424.0	1226.2	1145.6	1229.9	1410.1
42.5°	1923.5	1877.0	1768.0	1723.3	1704.8	1694.9	1551.9	1307.2	1234.8	1331.8	1510.3
45°	2101.3	2063.5	1956.8	1901.5	1903.8	1887.9	1663.6	1379.4	1331.8	1433.9	1622.3
47.5°	2276.4	2213.3	2093.7	2085.8	2112.2	2088.8	1770.2	1451.7	1432.7	1545.2	1734.3
50°	2287.8	2230.3	2181.9	2245.4	2290.8	2261.6	1867.1	1546.2	1537.6	1679.9	1878.8
52.5°	2149.6	2141.4	2215.1	2322.2	2397.4	2371.4	1946.1	1643.5	1644.7	1848.1	2054.7
55°	2099.4	2088.8	2177.3	2308.9	2410.8	2395.3	2005.2	1753.2	1763.5	2052.4	2243.5
57.5°	2184.1	2157.7	2175.1	2284.1	2379.7	2370.7	2066.4	1875.0	1893.6	2287.8	2417.9
60°	2447.1	2393.0	2300.7	2321.1	2380.9	2375.7	2154.3	2010.8	2041.8	2532.9	2528.4
62.5°	2841.0	2779.7	2591.6	2500.8	2487.5	2477.4	2299.2	2177.7	2193.2	2710.0	2464.2
65°	3273.0	3207.2	2983.6	2834.8	2756.9	2735.0	2532.9	2379.0	2281.8	2709.6	2213.6
67.5°	3758.0	3688.4	3465.6	3323.6	3239.3	3201.9	2912.5	2541.7	2253.0	2480.4	1771.4
70°	4254.8	4188.6	4086.4	4136.0	4173.0	4115.9	3510.2	2595.8	2046.4	1944.6	1189.5
72.5°	3991.0	3985.8	4063.4	4533.2	5247.9	5259.3	4107.2	2442.9	1581.1	1155.9	634.1
73°	3746.3	3768.6	3912.3	4474.6	5339.8	5343.7	4119.0	2363.9	1451.7	995.8	556.9
75°	1940.9	2092.2	2625.6	3628.3	4944.5	4962.2	3630.9	1789.5	865.3	553.2	375.3
77.5°	519.8	513.0	846.0	1767.6	3296.5	3273.0	2294.2	866.4	414.6	346.9	263.4
80°	178.2	180.5	287.9	646.6	1538.7	1593.5	995.8	377.9	272.8	241.8	186.5
82.5°	90.8	93.9	150.6	275.0	643.5	629.9	320.4	222.5	182.8	146.9	104.5
85°	48.4	49.9	82.8	142.6	236.1	238.7	112.7	118.8	116.2	83.2	51.5
87.5°	23.8	24.6	39.8	62.9	87.4	84.3	39.4	51.5	57.2	46.9	28.4
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°	901.9	901.9	901.9	901.9	901.9	901.9	901.9	901.9	901.9	901.9	901.9
2.5°	895.9	895.9	900.9	909.1	915.1	920.8	924.7	930.7	934.0	933.7	933.4
5°	889.8	893.6	903.5	913.7	920.5	925.0	925.0	927.7	927.7	926.5	925.0
7.5°	875.8	882.3	896.7	905.8	907.6	902.7	892.8	885.3	875.8	870.9	869.0
10°	853.6	861.8	880.0	884.1	874.3	856.9	833.1	812.7	794.6	786.2	783.5
12.5°	831.6	842.6	859.6	853.1	829.8	795.6	759.0	731.0	710.5	702.5	700.0
15°	813.4	826.6	839.8	819.9	779.0	731.7	691.2	665.1	649.6	643.5	642.0
17.5°	801.3	816.8	821.4	783.9	727.1	674.2	638.3	621.2	614.4	611.8	611.0
20°	802.1	819.5	808.5	749.1	677.2	623.9	600.1	595.1	595.1	595.1	594.7
22.5°	822.8	838.0	803.2	716.5	629.3	581.5	571.3	575.5	578.5	578.5	578.1
25°	866.0	874.3	807.0	685.2	584.1	544.7	545.2	553.2	555.8	555.8	555.0
27.5°	931.9	925.0	813.8	650.3	539.8	511.6	516.8	524.0	525.9	524.8	524.3
30°	1014.4	987.0	819.5	609.4	498.2	480.5	485.0	489.2	487.7	485.0	484.7
32.5°	1106.7	1050.3	816.0	563.7	461.6	448.3	451.0	453.2	451.0	444.5	444.5
35°	1198.1	1107.4	797.5	513.7	432.4	417.3	417.0	424.2	423.7	416.2	416.5
37.5°	1278.5	1152.3	761.5	467.9	407.4	394.7	396.1	400.7	402.9	392.7	391.5
40°	1348.4	1183.4	710.8	429.1	387.5	388.2	384.0	376.8	374.2	369.7	368.9
42.5°	1414.3	1205.0	657.2	396.5	377.2	385.9	371.9	354.9	347.7	351.9	354.5
45°	1479.0	1229.1	605.3	369.7	364.4	379.1	359.8	340.9	332.5	334.5	337.1
47.5°	1558.0	1262.9	542.9	340.9	344.7	366.6	352.3	331.8	319.4	311.7	309.5
50°	1662.1	1311.6	461.9	309.9	323.9	353.0	345.8	318.6	305.0	289.7	286.0
52.5°	1792.2	1357.9	380.2	284.8	306.8	341.2	335.2	307.2	290.5	272.4	269.4
55°	1922.0	1364.3	309.9	263.4	287.6	325.4	322.4	298.2	274.7	259.9	256.9
57.5°	2012.8	1303.4	262.6	245.2	269.0	305.7	310.7	287.2	261.4	250.1	248.2
60°	2014.3	1157.7	233.9	233.0	255.0	288.7	298.5	274.2	253.2	245.5	243.9
62.5°	1854.2	933.0	215.2	224.0	244.7	274.7	289.4	267.1	251.2	248.2	246.7
65°	1554.2	689.3	200.5	215.7	235.4	263.0	281.9	264.9	250.4	249.3	248.2
67.5°	1147.4	472.5	188.0	205.1	224.7	250.9	274.7	261.4	246.0	250.4	248.9
70°	721.8	315.5	176.4	193.0	210.8	236.9	265.2	255.3	240.3	237.6	232.7
72.5°	407.4	228.2	162.4	177.4	192.7	218.3	252.4	245.2	227.4	216.8	211.9
73°	368.1	216.0	158.9	173.6	188.4	214.4	249.3	242.1	223.6	211.9	207.4
75°	269.4	176.7	143.3	158.1	171.0	197.1	234.9	227.0	206.9	193.0	189.9
77.5°	195.2	136.2	123.4	136.6	147.9	172.8	213.4	204.4	184.6	177.1	174.0
80°	140.7	103.2	102.1	115.0	124.9	150.2	190.3	180.9	161.9	184.2	179.3
82.5°	84.0	66.2	75.0	89.3	99.5	125.9	165.3	154.4	136.2	137.6	117.2
85°	40.1	37.4	46.6	58.7	65.9	86.4	137.6	129.0	108.9	89.3	87.4
87.5°	17.8	17.1	22.3	26.1	35.2	51.8	94.2	83.6	79.1	47.3	37.0
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)