

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: P196779

Luminaire Tested: **NAV-AF-03-D-UNV-T3-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196779
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-03-D-UNV-T3-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 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: 11546.5 lumens
Efficiency: N/A
Efficacy: 120.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

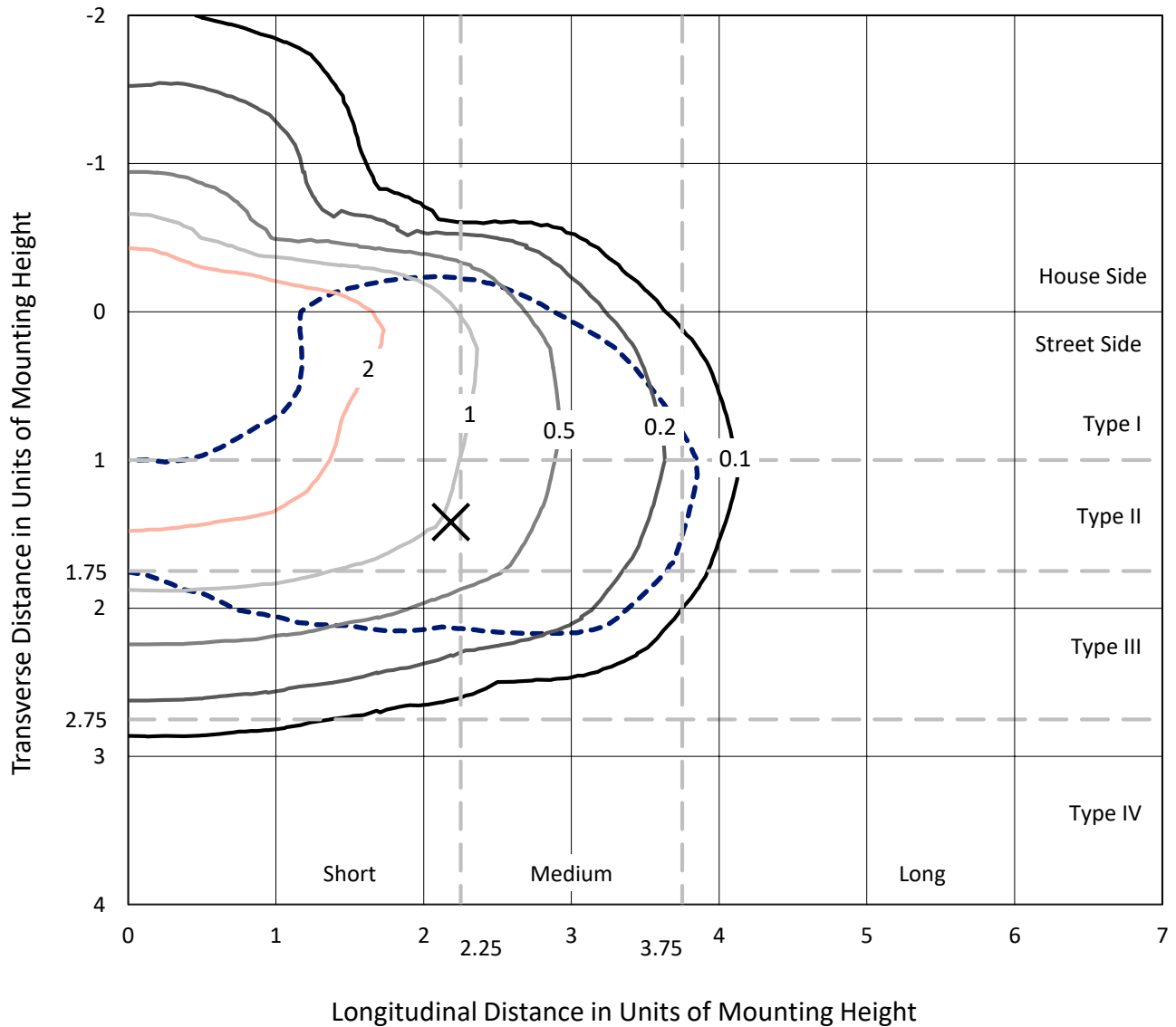
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

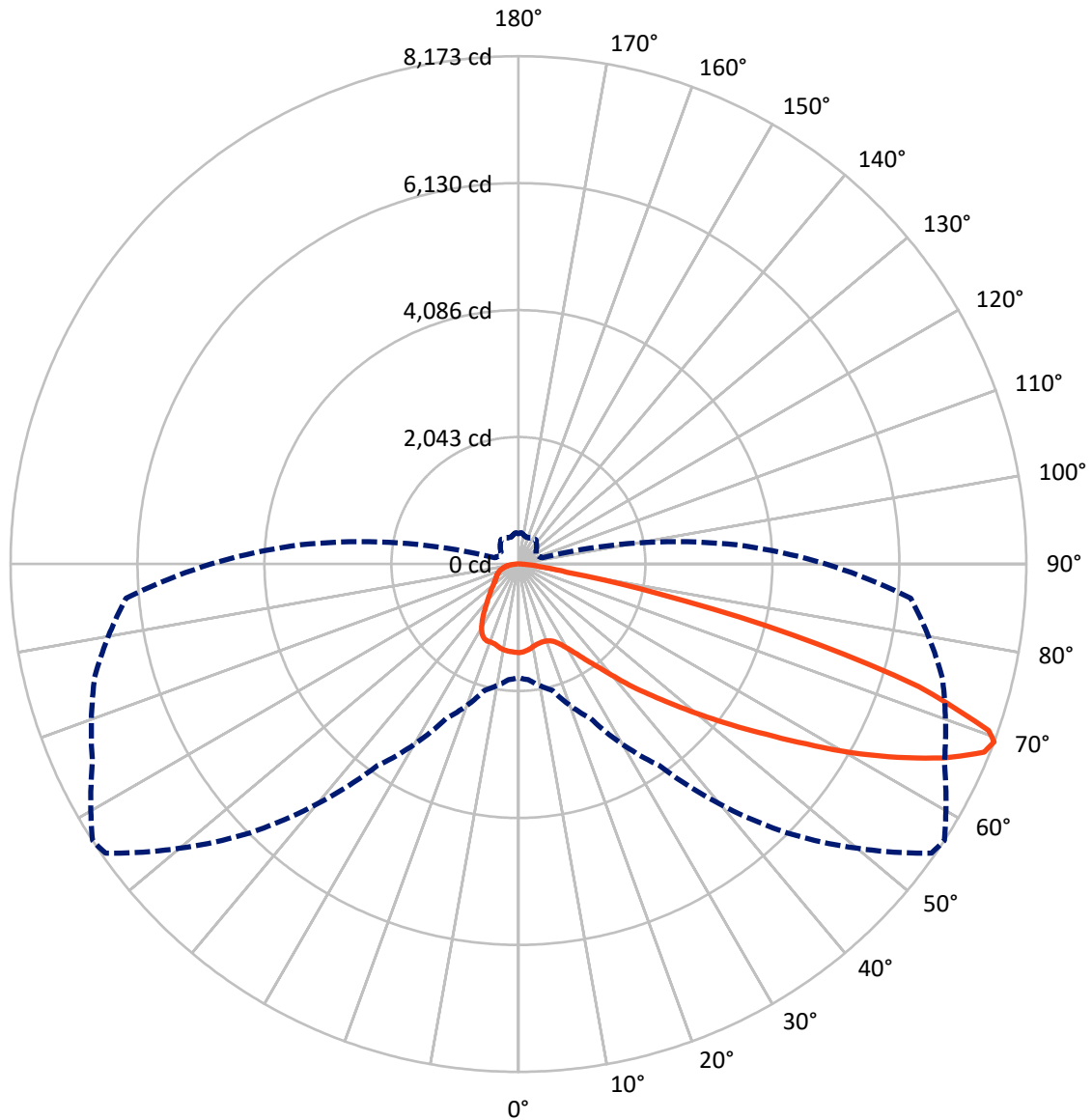
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.6 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	2547.9	0.0	2547.9
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	8998.6	0.0	8998.6
	% Fixture	77.9	0.0	77.9
Total	Lumens	11546.5	0.0	11546.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.6	1.2
10°-20°	379.8	3.3
20°-30°	631.7	5.5
30°-40°	1031.6	8.9
40°-50°	1741.1	15.1
50°-60°	2708.4	23.5
60°-70°	3226.2	27.9
70°-80°	1503.0	13.0
80°-90°	191.2	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°	11546.5	100.0
0°-180°	11546.5	100.0



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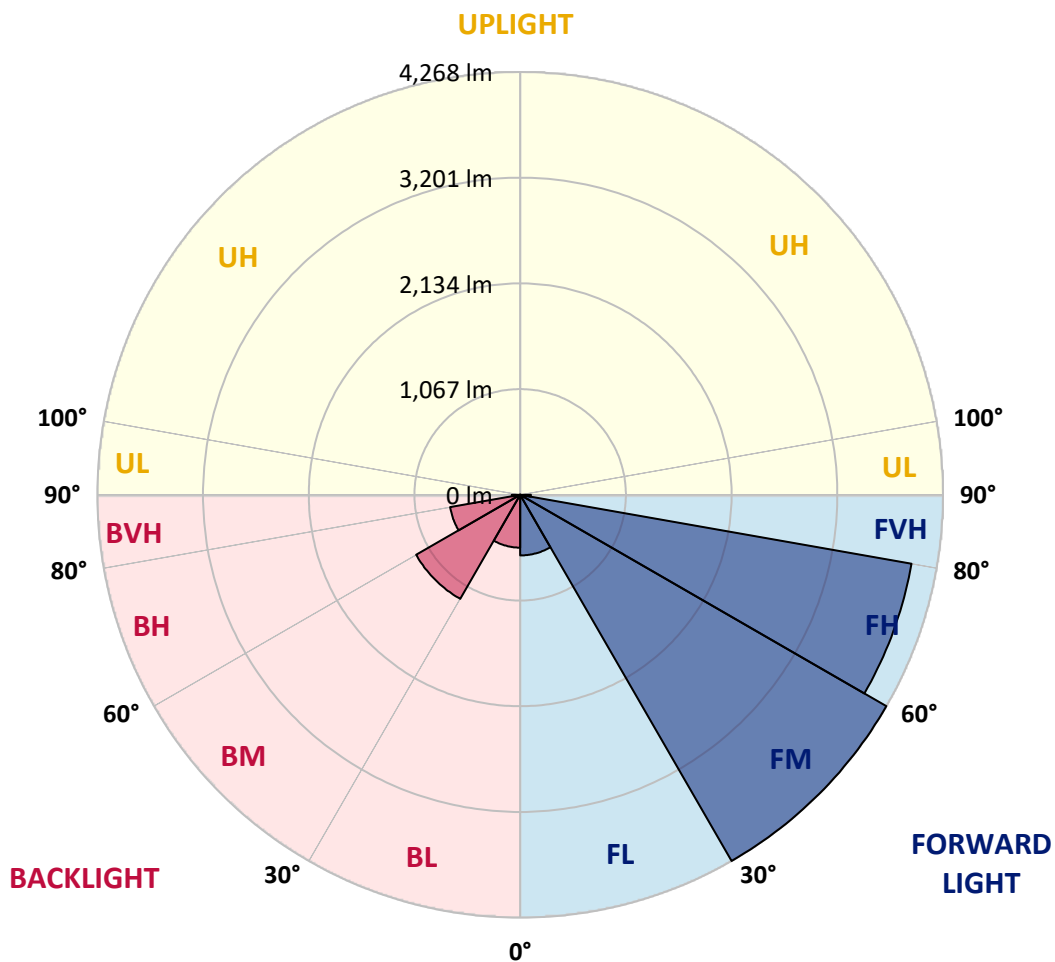
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	611.5	5.3			
FM	(30°-60°)	4268.4	37.0			
FH	(60°-80°)	4011.3	34.7			G2/5000
FVH	(80°-90°)	107.5	0.9			G2/225
BL	(0°-30°)	533.6	4.6	B2/1000		
BM	(30°-60°)	1212.7	10.5	B2/2500		
BH	(60°-80°)	718.0	6.2	B2/1000		G2/1000
BVH	(80°-90°)	83.7	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7
2.5°	1418.5	1418.5	1422.2	1422.2	1422.2	1420.8	1416.3	1417.8	1414.9	1412.6	1408.9
5°	1389.8	1391.2	1395.7	1397.1	1399.3	1400.0	1400.0	1399.3	1400.0	1400.0	1397.9
7.5°	1349.8	1351.3	1356.5	1359.4	1366.1	1372.0	1374.9	1374.9	1378.7	1381.6	1382.3
10°	1325.5	1325.5	1328.4	1328.4	1333.5	1336.5	1346.1	1345.4	1355.7	1365.3	1369.8
12.5°	1322.5	1322.5	1321.0	1315.8	1312.9	1312.1	1321.7	1323.2	1338.8	1355.7	1363.9
15°	1332.1	1332.1	1327.6	1317.2	1306.2	1301.1	1310.7	1313.7	1330.6	1350.6	1363.1
17.5°	1363.1	1362.4	1352.7	1332.1	1312.9	1304.7	1307.8	1310.7	1326.2	1349.1	1364.5
20°	1431.9	1431.9	1411.2	1373.5	1340.2	1321.0	1316.6	1318.8	1329.8	1351.3	1371.2
22.5°	1552.3	1554.5	1517.6	1455.6	1398.6	1358.0	1340.2	1342.5	1347.6	1368.3	1390.5
25°	1729.8	1723.9	1671.3	1583.3	1494.6	1425.2	1389.0	1391.2	1391.2	1410.4	1433.4
27.5°	1917.5	1919.0	1843.6	1749.0	1632.3	1528.6	1471.0	1470.3	1469.5	1488.0	1512.4
30°	2129.7	2130.4	2043.1	1933.8	1799.9	1667.7	1581.2	1580.4	1573.8	1596.8	1628.5
32.5°	2361.7	2361.1	2259.8	2136.3	1987.8	1837.7	1725.3	1724.5	1719.4	1750.5	1788.9
35°	2619.1	2619.1	2518.5	2366.2	2205.8	2038.8	1908.6	1907.8	1910.8	1953.0	1989.2
37.5°	2928.8	2935.5	2814.2	2629.5	2454.2	2276.1	2124.5	2120.0	2097.9	2168.9	2228.8
40°	3251.8	3270.2	3144.6	2928.8	2739.5	2555.5	2388.4	2385.4	2366.2	2441.6	2538.4
42.5°	3601.4	3643.6	3503.8	3283.6	3077.4	2878.6	2710.7	2702.5	2628.7	2746.2	2897.8
45°	4059.7	4087.2	3884.6	3685.0	3490.7	3263.7	3064.0	3020.5	2946.5	3097.3	3293.9
47.5°	4371.7	4358.5	4232.0	4098.2	3973.3	3756.0	3449.2	3393.7	3303.6	3503.2	3719.7
50°	4565.4	4575.0	4504.0	4497.3	4490.8	4339.2	3883.8	3817.3	3713.0	3949.6	4202.4
52.5°	4693.2	4649.6	4662.2	4813.0	4995.7	4923.2	4375.4	4301.5	4194.4	4430.9	4716.1
55°	4640.0	4582.5	4698.4	4995.7	5425.0	5441.3	4915.0	4838.9	4747.2	4942.4	5334.1
57.5°	4419.7	4448.6	4631.9	5045.1	5718.5	5905.6	5535.3	5457.6	5277.2	5475.4	5921.1
60°	4110.0	4168.5	4448.6	4966.8	5924.0	6267.1	6216.1	6164.3	5853.9	5994.3	6537.6
62.5°	3777.4	3835.0	4179.5	4833.0	5831.7	6587.1	6884.3	6852.5	6490.3	6494.1	6928.6
65°	3285.9	3309.5	3661.3	4467.8	5575.2	6876.2	7553.3	7525.2	7098.7	6920.5	7038.1
67.5°	2481.5	2511.1	2800.1	3526.8	4794.6	6719.5	8087.7	8083.3	7464.6	7078.7	6777.9
69°	1832.5	1868.8	2104.6	2738.0	3964.4	6122.2	8112.9	8172.8	7563.7	7062.4	6338.0
70°	1340.9	1382.3	1600.4	2173.2	3302.1	5462.8	7897.8	8026.4	7526.0	6959.7	5995.0
72.5°	569.9	584.0	691.2	980.9	1675.1	3293.9	6468.9	6739.4	6797.1	6236.0	4683.6
75°	357.1	361.4	403.6	503.3	745.1	1362.4	4189.1	4558.0	5074.8	4838.1	3135.7
77.5°	269.1	272.8	297.1	346.7	462.7	508.6	1943.4	2317.4	2906.7	2845.9	1560.4
80°	206.3	208.4	224.7	252.1	326.0	318.6	630.5	792.4	1213.1	1070.4	552.2
82.5°	161.9	162.6	176.7	181.8	227.7	214.3	316.5	352.6	490.1	407.3	269.8
85°	143.4	145.7	159.6	133.1	145.7	129.4	173.7	188.5	260.2	245.4	102.0
87.5°	73.2	76.9	133.9	113.8	73.2	61.4	76.2	82.1	105.7	114.6	49.5
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°	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7	1426.7
2.5°	1409.7	1410.4	1412.6	1416.3	1422.2	1429.6	1438.5	1447.3	1452.6	1456.2	1454.8
5°	1397.9	1398.6	1403.0	1409.7	1417.1	1428.1	1443.0	1454.0	1462.2	1467.4	1466.6
7.5°	1383.1	1385.3	1394.1	1401.6	1411.8	1420.8	1432.6	1443.0	1451.1	1456.2	1455.6
10°	1372.0	1374.2	1385.3	1394.9	1403.8	1405.3	1403.0	1400.0	1399.3	1403.0	1401.6
12.5°	1366.9	1371.2	1381.6	1388.2	1384.6	1370.5	1354.3	1347.6	1345.4	1352.7	1353.5
15°	1368.3	1372.0	1380.8	1376.4	1356.5	1332.9	1323.9	1329.1	1333.5	1338.0	1338.8
17.5°	1372.0	1374.2	1376.4	1360.2	1332.1	1316.6	1313.7	1308.4	1295.2	1287.7	1287.0
20°	1378.7	1381.6	1377.9	1352.0	1326.9	1306.2	1270.6	1238.9	1208.6	1192.3	1185.7
22.5°	1401.6	1403.8	1392.7	1367.6	1329.1	1261.8	1190.2	1135.4	1088.9	1063.7	1054.2
25°	1446.6	1450.3	1434.8	1403.0	1302.5	1184.9	1083.8	1009.8	951.3	921.0	913.0
27.5°	1525.7	1529.4	1512.4	1429.6	1240.4	1082.2	959.6	886.3	836.1	810.1	806.5
30°	1644.1	1649.2	1633.7	1428.9	1145.8	951.3	838.2	795.4	766.6	748.9	748.1
32.5°	1808.1	1827.4	1763.8	1403.8	1029.0	819.0	746.6	731.8	717.8	706.0	706.0
35°	2016.6	2061.7	1892.4	1351.3	900.4	728.9	695.7	681.6	663.9	651.3	649.8
37.5°	2265.7	2336.0	1984.0	1258.1	789.5	685.3	664.6	641.7	613.6	589.1	583.2
40°	2607.9	2624.2	2029.2	1106.6	706.7	661.6	635.7	606.9	571.4	544.1	541.1
42.5°	2951.6	2898.4	2020.3	944.0	659.4	640.1	606.2	574.3	542.6	519.6	519.6
45°	3342.7	3137.9	1953.0	780.6	616.6	615.7	578.8	548.5	524.1	507.1	503.3
47.5°	3716.8	3353.0	1836.9	660.2	572.2	591.4	561.0	536.7	514.5	498.2	495.3
50°	4170.7	3602.2	1713.5	575.8	529.3	569.9	553.7	541.1	519.6	491.5	488.6
52.5°	4621.5	3893.5	1618.1	512.3	491.5	553.0	558.1	559.6	539.6	484.9	481.2
55°	5105.8	4204.7	1517.6	462.7	460.5	544.7	568.4	566.9	557.3	486.4	480.5
57.5°	5566.3	4517.4	1367.6	428.0	436.2	536.7	570.7	547.1	530.0	493.8	484.2
60°	5947.7	4776.0	1147.2	403.6	415.4	520.4	555.9	520.4	491.5	492.3	483.5
62.5°	6133.3	4848.5	877.5	375.6	398.5	493.8	534.5	500.4	473.8	495.3	490.1
65°	5992.1	4642.3	625.4	349.6	377.7	462.7	521.9	483.5	465.0	510.0	504.1
67.5°	5485.0	4080.5	453.9	326.6	357.9	430.9	498.2	467.9	456.0	521.1	507.8
69°	4946.0	3523.1	393.3	313.5	343.7	414.0	482.7	459.8	449.5	505.7	486.4
70°	4498.1	3093.5	363.0	305.3	331.9	404.4	470.9	454.6	442.8	487.2	464.3
72.5°	3225.3	1999.6	305.3	280.9	300.9	383.0	445.0	435.4	417.7	439.9	425.0
75°	1948.5	1043.8	259.5	255.7	268.3	353.4	414.7	402.8	385.1	387.4	380.0
77.5°	895.2	482.0	217.3	226.1	234.4	316.5	377.7	364.4	348.2	342.3	343.0
80°	392.6	281.7	181.8	193.0	197.3	284.6	337.8	323.1	305.3	337.1	312.7
82.5°	212.2	163.4	141.9	149.3	161.9	247.7	293.5	274.2	257.2	299.4	241.7
85°	85.8	83.6	96.1	103.5	112.3	178.2	245.4	225.5	204.8	183.3	178.8
87.5°	36.9	39.9	47.3	50.3	59.9	110.9	164.9	144.1	144.9	124.2	122.0
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)