

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: P195770

Luminaire Tested: **NAV-AF-02-D-UNV-T2-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195770
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-02-D-UNV-T2-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7855 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

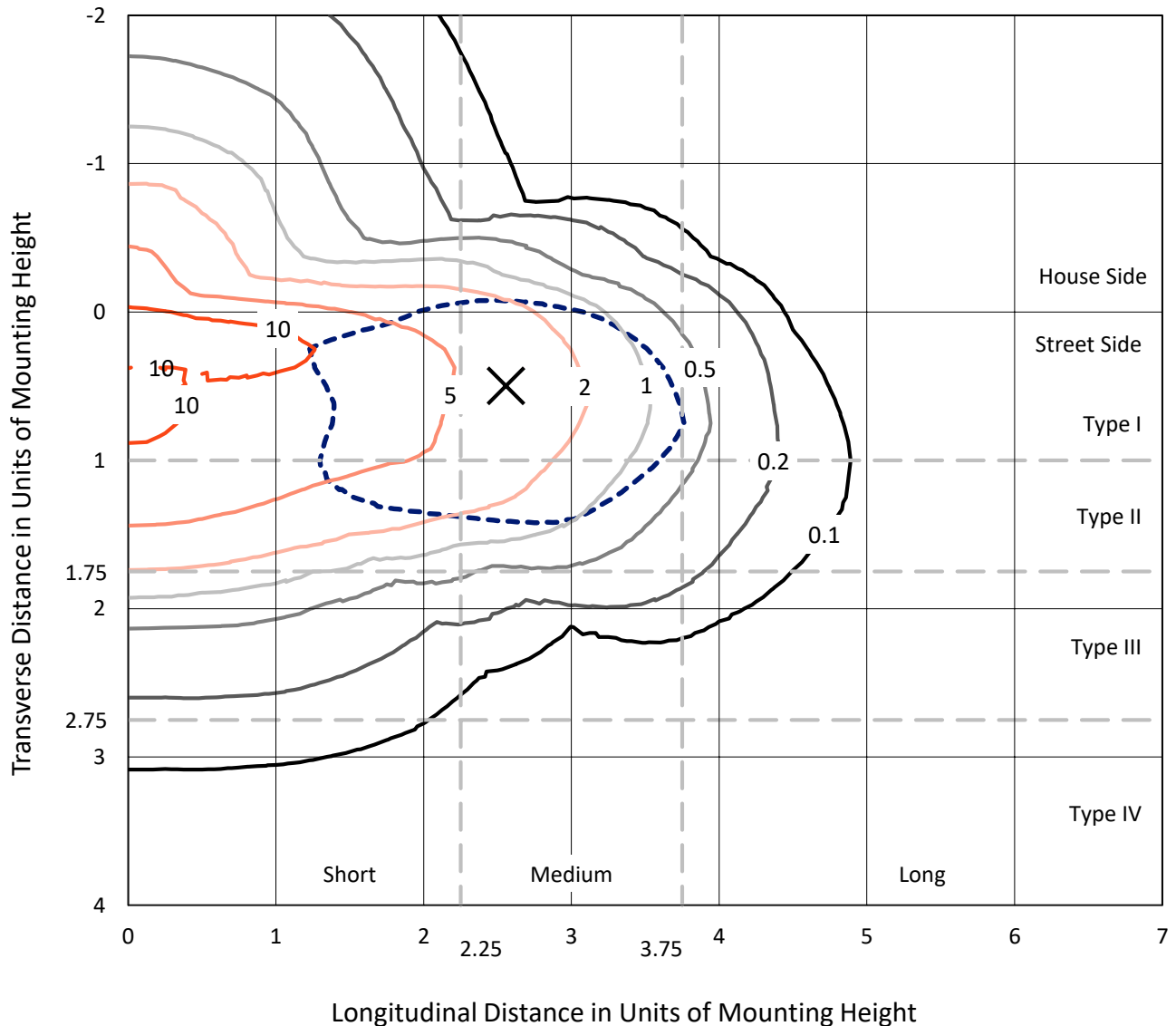
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195770
 CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7050-600

Iso-Footcandle Lines of Horizontal Illumination

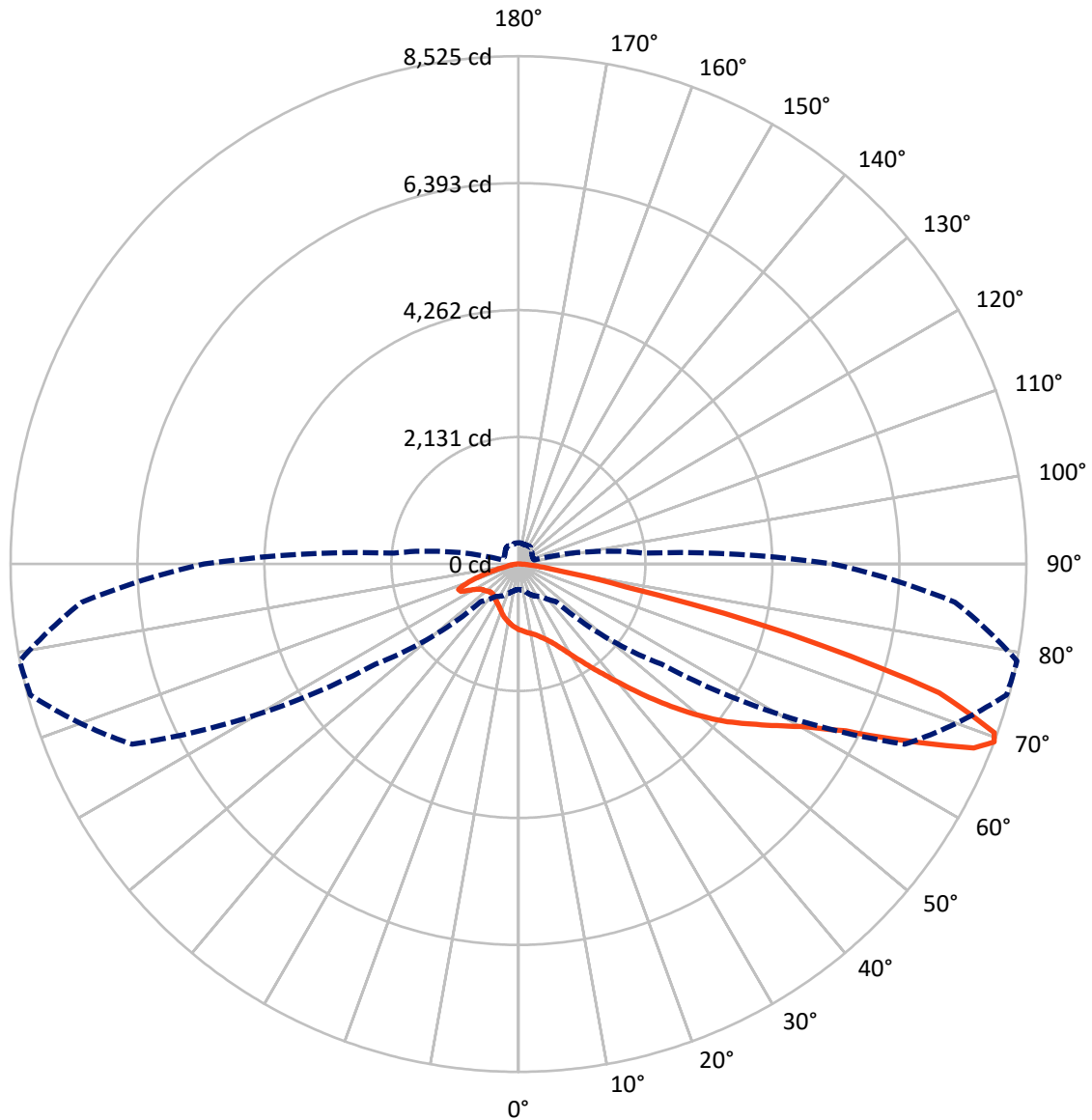
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.3 fc
 Type II - Medium - Full Cutoff

REPORT NUMBER: P195770
CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7050-600

Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P195770

CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7050-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1477.7	0.0	1477.7
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	6377.3	0.0	6377.3
	% Fixture	81.2	0.0	81.2
Total	Lumens	7855.0	0.0	7855.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.2	1.3
10°-20°	293.0	3.7
20°-30°	484.1	6.2
30°-40°	783.9	10.0
40°-50°	1252.3	15.9
50°-60°	1793.4	22.8
60°-70°	1998.1	25.4
70°-80°	999.6	12.7
80°-90°	148.3	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°	7855.0	100.0
0°-180°	7855.0	100.0



REPORT NUMBER: P195770

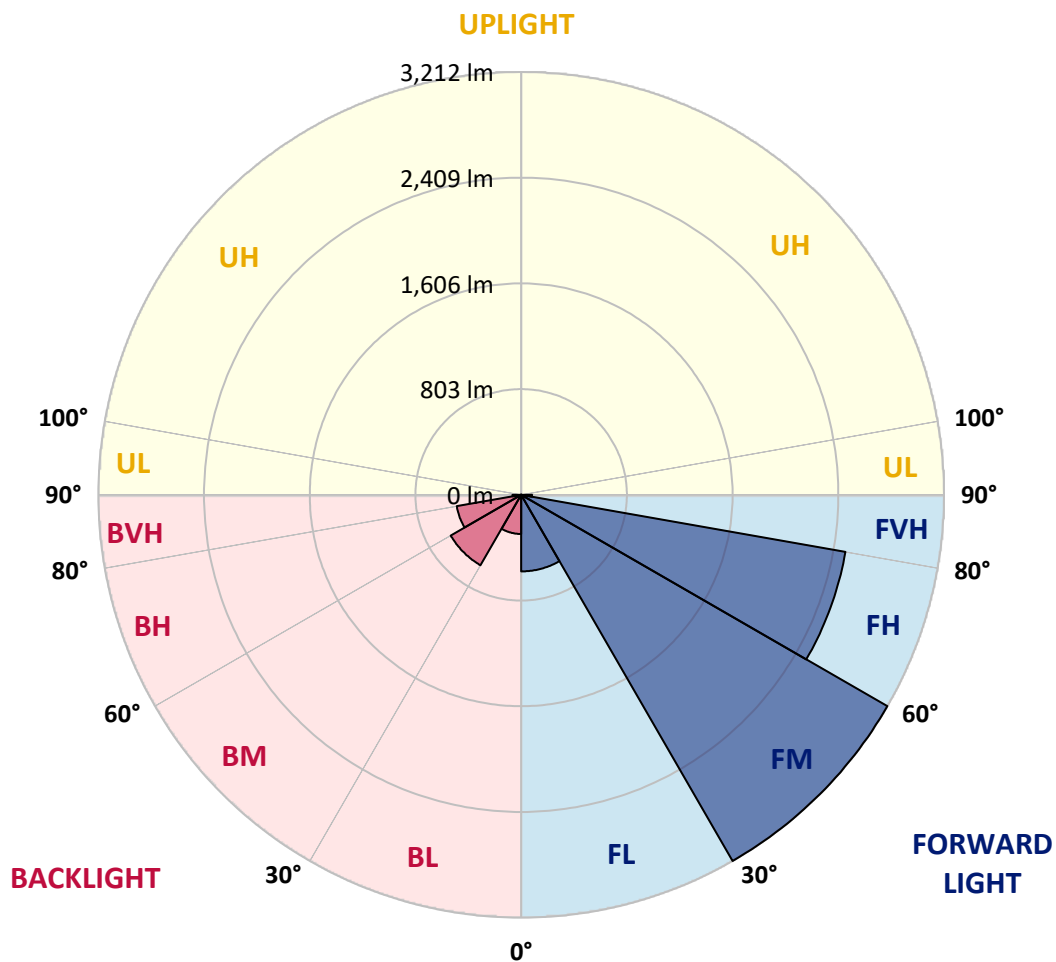
CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7050-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	581.6	7.4			
FM (30°-60°)	3211.9	40.9			
FH (60°-80°)	2500.9	31.8			G2/5000
FVH (80°-90°)	82.9	1.1			G1/100
BL (0°-30°)	297.7	3.8	B1/500		
BM (30°-60°)	617.7	7.9	B1/1000		
BH (60°-80°)	496.8	6.3	B1/500		G1/500
BVH (80°-90°)	65.5	0.8			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 II Medium





REPORT NUMBER: P195770
 CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7050-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3
2.5°	1210.2	1207.7	1207.1	1199.4	1195.3	1186.6	1166.0	1145.0	1125.4	1115.2	1104.4
5°	1311.5	1306.3	1303.8	1290.9	1279.6	1260.1	1227.7	1194.3	1159.3	1141.4	1119.8
7.5°	1372.6	1373.1	1373.1	1362.8	1351.5	1327.9	1286.8	1241.1	1189.2	1165.5	1131.6
10°	1377.8	1378.3	1386.0	1388.5	1391.1	1378.8	1340.8	1283.2	1216.4	1185.6	1141.4
12.5°	1326.9	1330.5	1343.3	1361.8	1388.0	1401.4	1384.9	1328.4	1251.3	1213.8	1159.9
15°	1258.5	1262.1	1278.6	1306.8	1349.0	1393.7	1416.8	1380.3	1297.1	1252.9	1187.1
17.5°	1225.1	1229.2	1240.5	1263.2	1304.3	1364.4	1433.8	1435.8	1351.0	1300.2	1219.5
20°	1209.2	1212.3	1226.7	1245.2	1276.5	1334.1	1435.3	1494.4	1415.3	1356.2	1259.0
22.5°	1245.7	1246.7	1253.9	1264.2	1285.3	1329.4	1434.3	1555.0	1495.4	1426.6	1309.9
25°	1352.6	1345.9	1340.8	1327.9	1333.0	1364.4	1450.7	1619.8	1598.2	1519.1	1377.8
27.5°	1479.0	1478.0	1464.6	1434.8	1415.8	1435.8	1497.5	1692.3	1724.1	1636.8	1466.7
30°	1619.8	1620.3	1606.4	1569.9	1531.4	1533.5	1572.0	1776.0	1874.7	1778.6	1576.1
32.5°	1767.3	1776.5	1750.8	1714.4	1667.6	1652.7	1678.9	1877.3	2048.9	1946.1	1703.0
35°	1943.6	1945.1	1916.8	1863.4	1816.6	1793.0	1817.1	2003.7	2249.8	2142.9	1857.7
37.5°	2126.5	2127.5	2098.2	2029.9	1970.8	1955.4	1982.1	2157.3	2462.6	2367.0	2039.6
40°	2276.0	2286.8	2263.7	2199.5	2139.9	2130.6	2169.2	2341.3	2734.4	2632.2	2256.0
42.5°	2445.6	2458.0	2430.2	2363.4	2316.1	2313.0	2373.2	2551.0	3004.7	2939.0	2501.1
45°	2636.8	2654.3	2615.7	2540.7	2500.6	2568.4	2572.0	2783.3	3316.2	3282.2	2777.1
47.5°	2845.4	2859.8	2828.5	2747.8	2704.1	2802.3	2766.8	3034.5	3652.8	3650.2	3075.7
50°	3006.3	3022.2	3025.3	2989.8	2944.1	2956.4	2980.6	3298.7	3988.3	4028.4	3384.5
52.5°	2977.0	2992.4	3061.8	3154.8	3228.3	3196.4	3225.7	3579.3	4312.6	4397.4	3677.9
55°	2740.6	2748.8	2878.8	3099.8	3412.8	3564.9	3566.9	3884.5	4620.9	4739.7	3956.5
57.5°	2314.6	2315.6	2484.7	2810.5	3305.4	3803.9	4105.5	4267.9	4942.6	5117.9	4301.8
60°	1637.8	1641.9	1838.7	2264.7	2920.5	3775.1	4684.7	4953.9	5315.2	5542.9	4746.8
62.5°	972.3	981.5	1130.1	1471.8	2169.2	3405.1	5026.9	6174.4	5864.1	6166.2	5459.1
65°	632.6	640.3	729.2	900.9	1281.7	2477.5	4914.4	7356.4	6902.6	7146.7	6482.8
67.5°	487.2	493.3	563.2	667.0	786.3	1339.2	3929.2	7604.1	8166.8	8242.9	7346.6
69°	428.1	433.2	484.6	584.3	661.9	886.5	2928.2	7154.4	8482.9	8524.5	7357.4
70°	396.7	400.8	449.1	535.5	607.9	707.6	2241.1	6632.3	8367.2	8473.6	7145.2
72.5°	326.8	330.4	364.9	431.2	496.9	504.1	992.8	4842.9	7045.5	7385.7	6046.5
75°	272.9	274.9	297.5	345.9	402.4	401.4	507.2	2743.2	4299.2	4704.7	3733.4
77.5°	227.7	229.2	244.1	273.9	317.6	316.0	357.2	1184.0	1898.3	1831.5	1285.3
80°	200.9	202.0	209.7	217.4	245.1	243.6	264.7	543.7	772.4	713.8	486.1
82.5°	152.6	154.7	193.7	197.3	190.1	183.5	184.5	316.6	395.7	360.2	261.1
85°	86.3	86.8	124.4	145.4	165.5	124.4	119.7	163.4	195.3	171.1	114.1
87.5°	38.5	40.1	59.6	68.9	89.4	73.0	68.3	69.4	84.3	69.9	45.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P195770

CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7050-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3	1102.3
2.5°	1094.1	1085.3	1064.8	1043.7	1022.7	1009.3	995.4	982.6	977.4	976.9	967.2
5°	1098.7	1078.2	1031.4	980.0	931.2	893.1	861.3	840.7	820.7	817.1	808.4
7.5°	1100.2	1066.8	990.8	908.6	834.1	781.6	749.8	735.9	726.1	723.6	720.5
10°	1099.7	1052.5	945.6	833.0	748.2	708.7	696.8	699.9	704.0	706.1	706.1
12.5°	1108.0	1045.8	900.3	762.1	692.7	673.7	683.0	698.9	711.2	716.4	717.4
15°	1122.9	1041.7	850.5	700.4	653.7	658.3	680.9	704.0	721.5	729.2	731.3
17.5°	1141.4	1036.0	792.9	649.6	631.1	647.0	676.3	705.6	726.6	736.4	738.0
20°	1161.9	1027.8	733.3	611.5	611.0	631.1	660.4	693.2	715.9	726.6	726.1
22.5°	1189.7	1020.1	677.8	583.8	588.9	607.4	631.6	661.4	682.5	692.2	690.2
25°	1226.7	1012.9	628.0	559.1	563.7	576.1	593.0	615.6	630.5	635.7	632.1
27.5°	1276.5	1007.2	588.9	536.5	536.0	541.6	551.9	564.3	571.5	569.9	564.3
30°	1337.7	1001.6	560.1	516.5	509.3	508.8	513.4	520.6	525.2	516.0	511.3
32.5°	1406.0	991.8	534.5	499.0	486.1	481.5	483.6	493.3	512.4	503.1	499.5
35°	1486.7	980.5	508.8	480.0	470.2	461.5	463.0	484.1	541.6	535.0	531.4
37.5°	1583.8	970.2	485.1	459.4	458.9	448.1	447.1	472.3	549.4	535.0	531.9
40°	1700.5	968.2	464.0	436.8	445.0	440.9	437.3	452.7	506.7	477.4	471.8
42.5°	1841.3	977.4	448.6	415.2	429.1	438.9	432.2	435.8	457.9	431.7	427.0
45°	2005.7	1002.6	437.3	396.2	412.1	437.3	429.6	426.5	430.1	415.7	412.7
47.5°	2197.4	1047.3	429.6	380.3	396.2	433.2	428.6	422.4	420.9	412.7	410.6
50°	2402.5	1107.4	424.5	365.9	381.8	426.0	428.1	419.3	416.8	413.2	412.1
52.5°	2606.0	1172.7	418.3	353.6	370.0	417.3	428.6	416.3	412.7	410.6	409.6
55°	2808.4	1240.5	407.0	342.8	361.3	407.0	428.1	412.1	408.0	408.0	408.0
57.5°	3071.0	1343.8	392.1	334.0	350.0	393.6	421.4	407.5	401.9	402.4	402.9
60°	3450.3	1517.0	375.7	324.3	335.1	378.2	411.1	399.3	392.6	394.7	395.2
62.5°	4083.9	1819.7	353.0	310.4	319.6	361.8	397.8	388.0	381.8	385.4	385.9
65°	4928.8	2186.1	323.2	292.9	303.7	343.3	380.8	374.6	367.9	376.7	376.2
67.5°	5444.2	2293.5	291.9	274.4	288.3	323.8	359.7	357.2	352.5	367.9	366.9
69°	5275.1	2099.3	273.9	262.6	277.5	310.4	346.4	345.3	341.7	356.6	355.6
70°	5012.5	1917.9	262.6	254.9	271.9	302.2	337.6	337.6	334.0	346.9	344.3
72.5°	4026.4	1422.5	236.4	235.4	252.3	279.6	314.0	316.6	314.5	319.1	316.6
75°	2363.9	857.2	210.7	213.8	228.7	255.4	287.8	289.8	287.8	287.3	287.8
77.5°	819.7	384.4	186.0	190.7	203.5	230.7	259.0	263.1	260.0	256.4	257.5
80°	320.7	223.5	159.3	166.0	176.8	203.0	230.2	232.8	228.2	227.7	223.5
82.5°	192.7	136.2	123.8	134.6	148.0	176.3	198.9	197.8	194.3	215.3	188.6
85°	83.8	75.5	90.4	101.2	107.9	132.1	168.0	163.4	154.7	136.2	133.1
87.5°	33.9	39.1	49.8	60.1	64.8	85.3	115.1	111.0	112.5	92.5	92.0
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)