

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: P197216

Luminaire Tested: **NAV-AF-02-D-UNV-T2-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197216
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-T2-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7861 lumens
Efficiency: N/A
Efficacy: 92.5 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

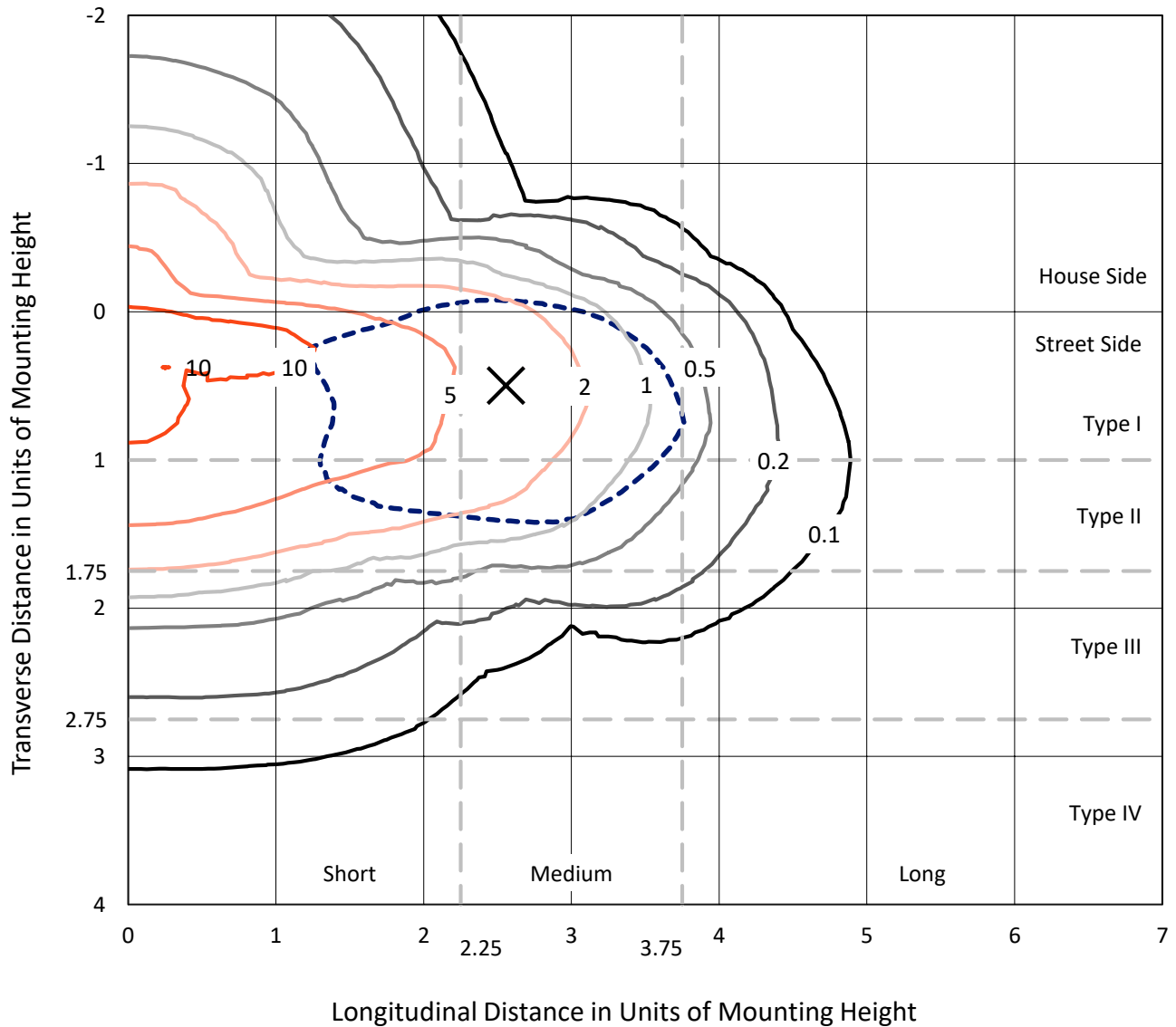
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197216
 CATALOG NUMBER: NAV-AF-02-D-UNV-T2-8030-800

Iso-Footcandle Lines of Horizontal Illumination

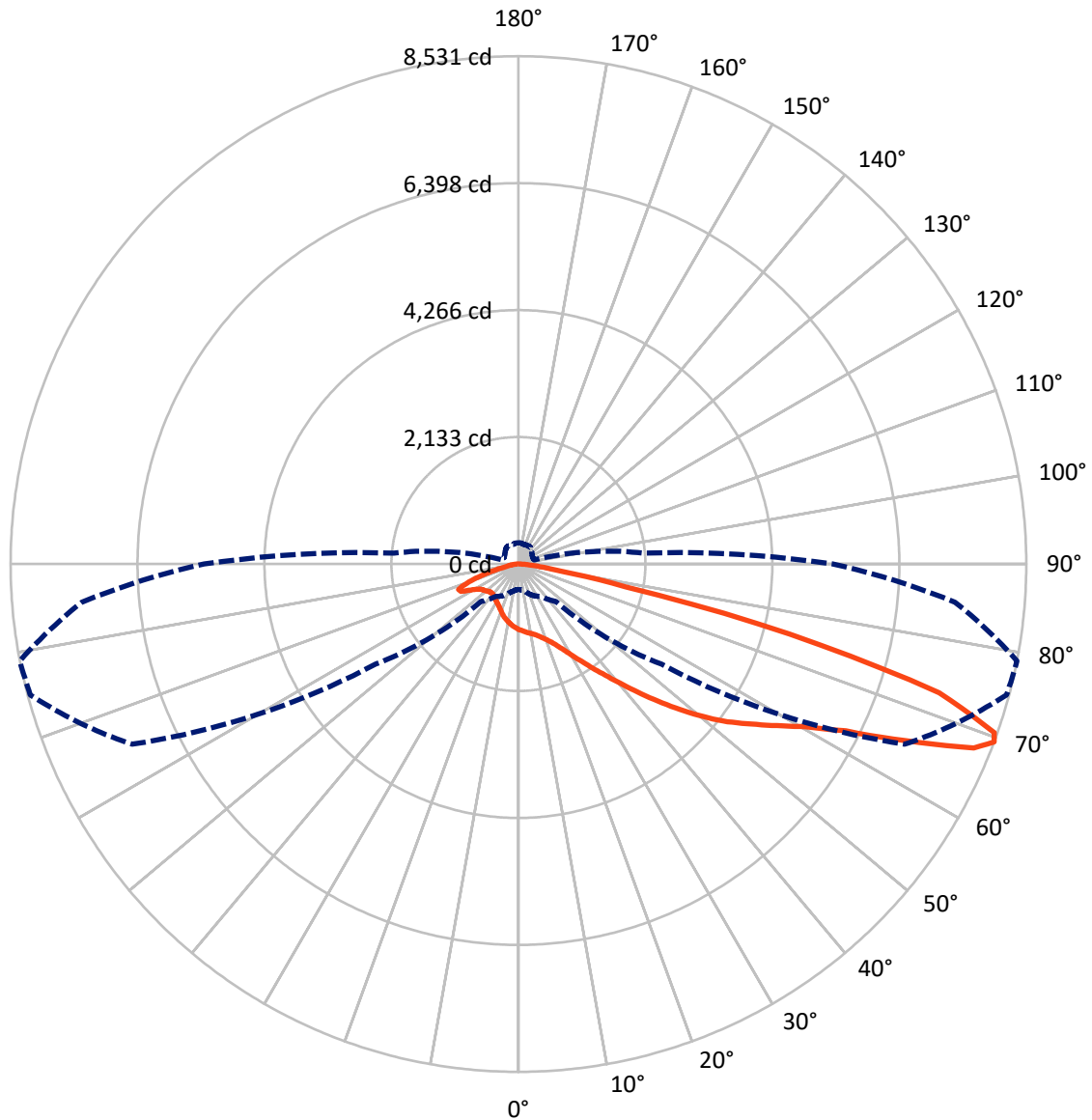
× Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P197216
CATALOG NUMBER: NAV-AF-02-D-UNV-T2-8030-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197216

CATALOG NUMBER: NAV-AF-02-D-UNV-T2-8030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1478.8	0.0	1478.8
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	6382.2	0.0	6382.2
	% Fixture	81.2	0.0	81.2
Total	Lumens	7861.0	0.0	7861.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	1.3
10°-20°	293.2	3.7
20°-30°	484.5	6.2
30°-40°	784.5	10.0
40°-50°	1253.2	15.9
50°-60°	1794.8	22.8
60°-70°	1999.6	25.4
70°-80°	1000.4	12.7
80°-90°	148.5	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°	7861.0	100.0
0°-180°	7861.0	100.0

Coefficient of Utilization



REPORT NUMBER: P197216

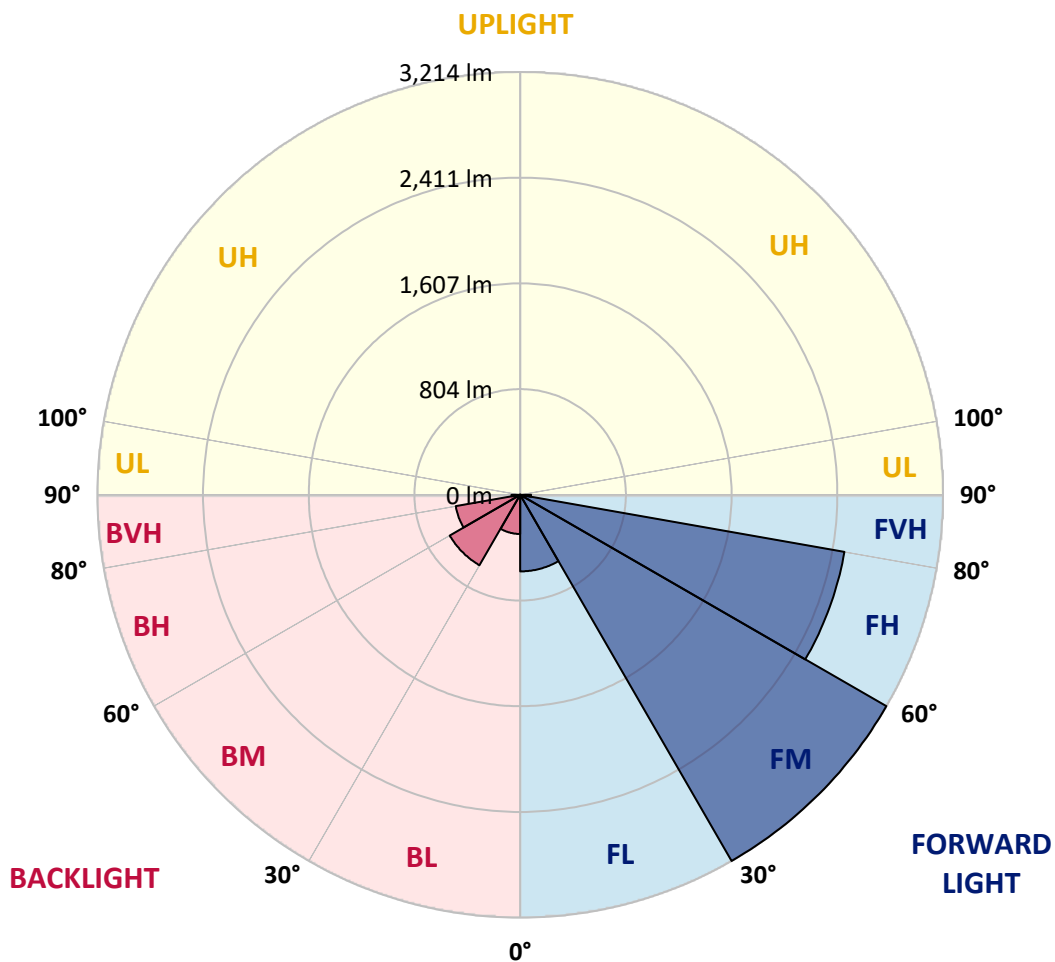
CATALOG NUMBER: NAV-AF-02-D-UNV-T2-8030-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	582.0	7.4			
FM	(30°-60°)	3214.4	40.9			
FH	(60°-80°)	2502.8	31.8			G2/5000
FVH	(80°-90°)	83.0	1.1			G1/100
BL	(0°-30°)	297.9	3.8	B1/500		
BM	(30°-60°)	618.2	7.9	B1/1000		
BH	(60°-80°)	497.2	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: P197216

CATALOG NUMBER: NAV-AF-02-D-UNV-T2-8030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1
2.5°	1211.1	1208.6	1208.1	1200.3	1196.2	1187.5	1166.9	1145.8	1126.3	1116.0	1105.2
5°	1312.5	1307.3	1304.7	1291.9	1280.6	1261.0	1228.6	1195.2	1160.2	1142.2	1120.6
7.5°	1373.7	1374.2	1374.2	1363.9	1352.6	1328.9	1287.8	1242.0	1190.1	1166.4	1132.5
10°	1378.8	1379.3	1387.0	1389.6	1392.2	1379.8	1341.8	1284.2	1217.3	1186.5	1142.2
12.5°	1327.9	1331.5	1344.3	1362.9	1389.1	1402.5	1386.0	1329.4	1252.3	1214.7	1160.7
15°	1259.5	1263.1	1279.5	1307.8	1350.0	1394.7	1417.9	1381.4	1298.1	1253.8	1188.0
17.5°	1226.1	1230.2	1241.5	1264.1	1305.3	1365.4	1434.9	1436.9	1352.1	1301.1	1220.4
20°	1210.1	1213.2	1227.6	1246.1	1277.5	1335.1	1436.4	1495.5	1416.3	1357.2	1260.0
22.5°	1246.6	1247.7	1254.9	1265.1	1286.2	1330.5	1435.4	1556.2	1496.6	1427.7	1310.9
25°	1353.6	1346.9	1341.8	1328.9	1334.1	1365.4	1451.8	1621.0	1599.4	1520.2	1378.8
27.5°	1480.1	1479.1	1465.7	1435.9	1416.9	1436.9	1498.6	1693.5	1725.4	1638.0	1467.8
30°	1621.0	1621.5	1607.7	1571.1	1532.6	1534.6	1573.2	1777.4	1876.1	1779.9	1577.3
32.5°	1768.6	1777.9	1752.2	1715.7	1668.9	1653.9	1680.2	1878.7	2050.5	1947.6	1704.3
35°	1945.0	1946.6	1918.3	1864.8	1818.0	1794.3	1818.5	2005.2	2251.6	2144.6	1859.1
37.5°	2128.1	2129.2	2099.8	2031.4	1972.3	1956.9	1983.6	2159.0	2464.5	2368.8	2041.2
40°	2277.8	2288.6	2265.4	2201.2	2141.5	2132.2	2170.8	2343.1	2736.5	2634.2	2257.7
42.5°	2447.5	2459.8	2432.1	2365.2	2317.9	2314.8	2375.0	2552.9	3007.0	2941.2	2503.0
45°	2638.8	2656.3	2617.7	2542.6	2502.5	2570.4	2574.0	2785.4	3318.7	3284.8	2779.2
47.5°	2847.6	2862.0	2830.6	2749.9	2706.2	2804.4	2768.9	3036.9	3655.6	3653.0	3078.0
50°	3008.6	3024.5	3027.6	2992.1	2946.4	2958.7	2982.9	3301.2	3991.4	4031.5	3387.1
52.5°	2979.3	2994.7	3064.1	3157.2	3230.8	3198.9	3228.2	3582.0	4315.9	4400.8	3680.8
55°	2742.7	2750.9	2881.0	3102.2	3415.4	3567.6	3569.7	3887.5	4624.5	4743.3	3959.5
57.5°	2316.4	2317.4	2486.6	2812.6	3307.9	3806.8	4108.6	4271.2	4946.4	5121.8	4305.1
60°	1639.0	1643.1	1840.1	2266.5	2922.7	3778.0	4688.2	4957.7	5319.3	5547.1	4750.5
62.5°	973.0	982.3	1130.9	1472.9	2170.8	3407.7	5030.8	6179.2	5868.5	6170.9	5463.3
65°	633.1	640.8	729.8	901.5	1282.6	2479.4	4918.1	7362.0	6907.9	7152.2	6487.7
67.5°	487.5	493.7	563.7	667.5	786.9	1340.2	3932.2	7609.9	8173.1	8249.2	7352.3
69°	428.4	433.5	485.0	584.7	662.4	887.1	2930.4	7159.9	8489.3	8531.0	7363.1
70°	397.0	401.1	449.5	535.9	608.4	708.2	2242.8	6637.4	8373.6	8480.1	7150.7
72.5°	327.1	330.7	365.1	431.5	497.3	504.5	993.6	4846.6	7050.9	7391.3	6051.1
75°	273.1	275.1	297.8	346.1	402.7	401.7	507.6	2745.3	4302.5	4708.3	3736.3
77.5°	227.8	229.4	244.3	274.1	317.8	316.3	357.4	1184.9	1899.8	1832.9	1286.2
80°	201.1	202.1	209.8	217.5	245.3	243.8	264.9	544.1	773.0	714.3	486.5
82.5°	152.7	154.8	193.9	197.5	190.3	183.6	184.6	316.8	396.0	360.5	261.3
85°	86.4	86.9	124.5	145.5	165.6	124.5	119.8	163.5	195.4	171.3	114.2
87.5°	38.6	40.1	59.7	68.9	89.5	73.0	68.4	69.4	84.3	69.9	45.3
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: P197216

CATALOG NUMBER: NAV-AF-02-D-UNV-T2-8030-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1	1103.1
2.5°	1094.9	1086.2	1065.6	1044.5	1023.4	1010.1	996.2	983.3	978.2	977.7	967.9
5°	1099.5	1079.0	1032.2	980.7	931.9	893.8	861.9	841.4	821.3	817.7	809.0
7.5°	1101.1	1067.7	991.5	909.3	834.7	782.2	750.3	736.5	726.7	724.1	721.0
10°	1100.6	1053.3	946.3	833.7	748.8	709.2	697.4	700.5	704.6	706.6	706.6
12.5°	1108.8	1046.6	901.0	762.7	693.3	674.2	683.5	699.4	711.8	716.9	717.9
15°	1123.7	1042.5	851.1	701.0	654.2	658.8	681.4	704.6	722.1	729.8	731.8
17.5°	1142.2	1036.8	793.5	650.1	631.5	647.5	676.8	706.1	727.2	737.0	738.5
20°	1162.8	1028.6	733.9	612.0	611.5	631.5	660.9	693.8	716.4	727.2	726.7
22.5°	1190.6	1020.9	678.3	584.2	589.4	607.9	632.1	661.9	683.0	692.7	690.7
25°	1227.6	1013.7	628.5	559.5	564.2	576.5	593.5	616.1	631.0	636.2	632.6
27.5°	1277.5	1008.0	589.4	536.9	536.4	542.1	552.3	564.7	571.9	570.3	564.7
30°	1338.7	1002.3	560.6	516.9	509.7	509.1	513.8	521.0	525.6	516.3	511.7
32.5°	1407.1	992.6	534.9	499.4	486.5	481.9	483.9	493.7	512.7	503.5	499.9
35°	1487.8	981.3	509.1	480.3	470.6	461.8	463.4	484.5	542.1	535.4	531.8
37.5°	1585.0	971.0	485.5	459.8	459.3	448.5	447.4	472.6	549.8	535.4	532.3
40°	1701.8	968.9	464.4	437.1	445.4	441.3	437.7	453.1	507.1	477.8	472.1
42.5°	1842.7	978.2	449.0	415.5	429.4	439.2	432.5	436.1	458.2	432.0	427.4
45°	2007.3	1003.4	437.7	396.5	412.5	437.7	429.9	426.9	430.5	416.1	413.0
47.5°	2199.1	1048.1	429.9	380.6	396.5	433.5	428.9	422.7	421.2	413.0	410.9
50°	2404.3	1108.3	424.8	366.2	382.1	426.3	428.4	419.7	417.1	413.5	412.5
52.5°	2608.0	1173.6	418.6	353.8	370.3	417.6	428.9	416.6	413.0	410.9	409.9
55°	2810.6	1241.5	407.3	343.0	361.5	407.3	428.4	412.5	408.3	408.3	408.3
57.5°	3073.4	1344.9	392.4	334.3	350.2	393.9	421.7	407.8	402.2	402.7	403.2
60°	3452.9	1518.2	375.9	324.5	335.3	378.5	411.4	399.6	392.9	395.0	395.5
62.5°	4087.0	1821.1	353.3	310.6	319.9	362.1	398.1	388.3	382.1	385.7	386.2
65°	4932.5	2187.8	323.5	293.1	303.9	343.5	381.1	374.9	368.2	377.0	376.5
67.5°	5448.4	2295.3	292.1	274.6	288.5	324.0	360.0	357.4	352.8	368.2	367.2
69°	5279.2	2100.9	274.1	262.8	277.7	310.6	346.6	345.6	342.0	356.9	355.9
70°	5016.4	1919.3	262.8	255.1	272.1	302.4	337.9	337.9	334.3	347.1	344.6
72.5°	4029.4	1423.5	236.6	235.5	252.5	279.8	314.2	316.8	314.7	319.4	316.8
75°	2365.7	857.8	210.9	213.9	228.9	255.6	288.0	290.1	288.0	287.5	288.0
77.5°	820.3	384.7	186.2	190.8	203.7	230.9	259.2	263.3	260.2	256.6	257.7
80°	320.9	223.7	159.4	166.1	176.9	203.1	230.4	233.0	228.3	227.8	223.7
82.5°	192.9	136.3	123.9	134.7	148.1	176.4	199.0	198.0	194.4	215.5	188.7
85°	83.8	75.6	90.5	101.3	108.0	132.2	168.2	163.5	154.8	136.3	133.2
87.5°	33.9	39.1	49.9	60.2	64.8	85.4	115.2	111.1	112.6	92.6	92.1
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)