

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: P197066

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-8030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197066
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-8030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5559 lumens
Efficiency: N/A
Efficacy: 84.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-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

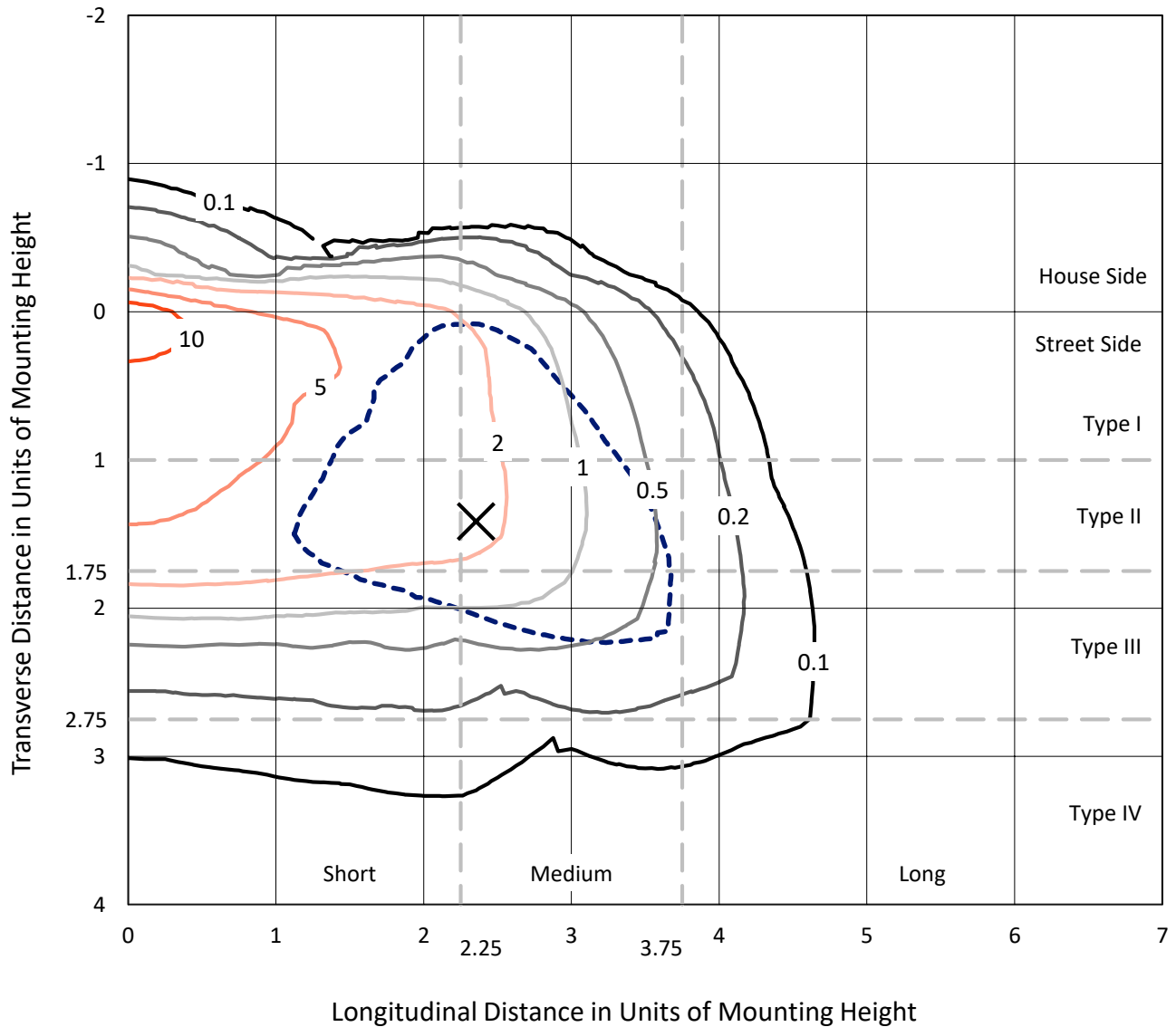


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Iso-Footcandle Lines of Horizontal Illumination

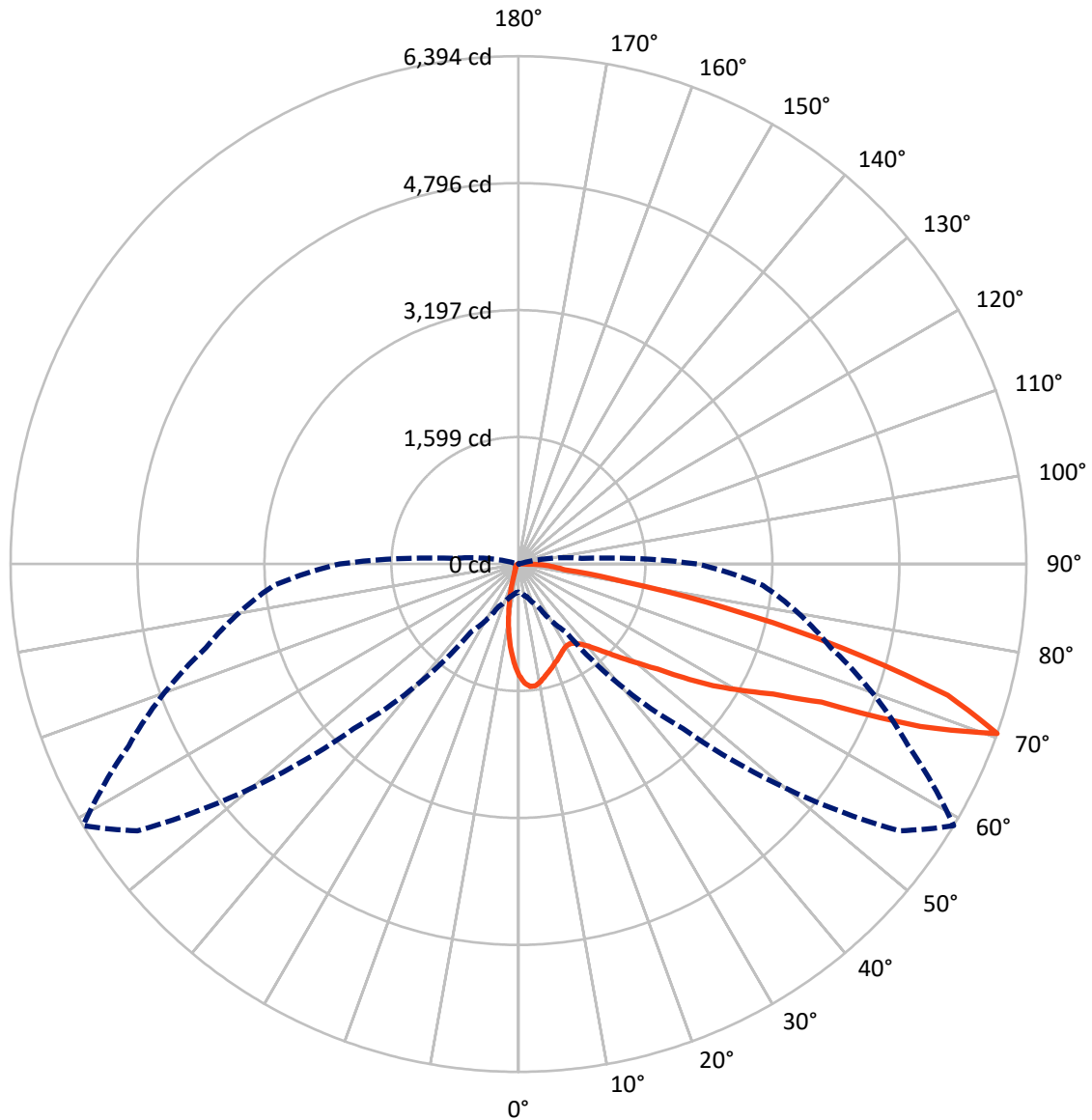
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	427.3	0.0	427.3
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	5131.7	0.0	5131.7
	% Fixture	92.3	0.0	92.3
Total	Lumens	5559.0	0.0	5559.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.6	2.1
10°-20°	242.4	4.4
20°-30°	328.2	5.9
30°-40°	473.6	8.5
40°-50°	786.6	14.1
50°-60°	1203.2	21.6
60°-70°	1496.4	26.9
70°-80°	827.2	14.9
80°-90°	85.8	1.5
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°	5559.0	100.0
0°-180°	5559.0	100.0



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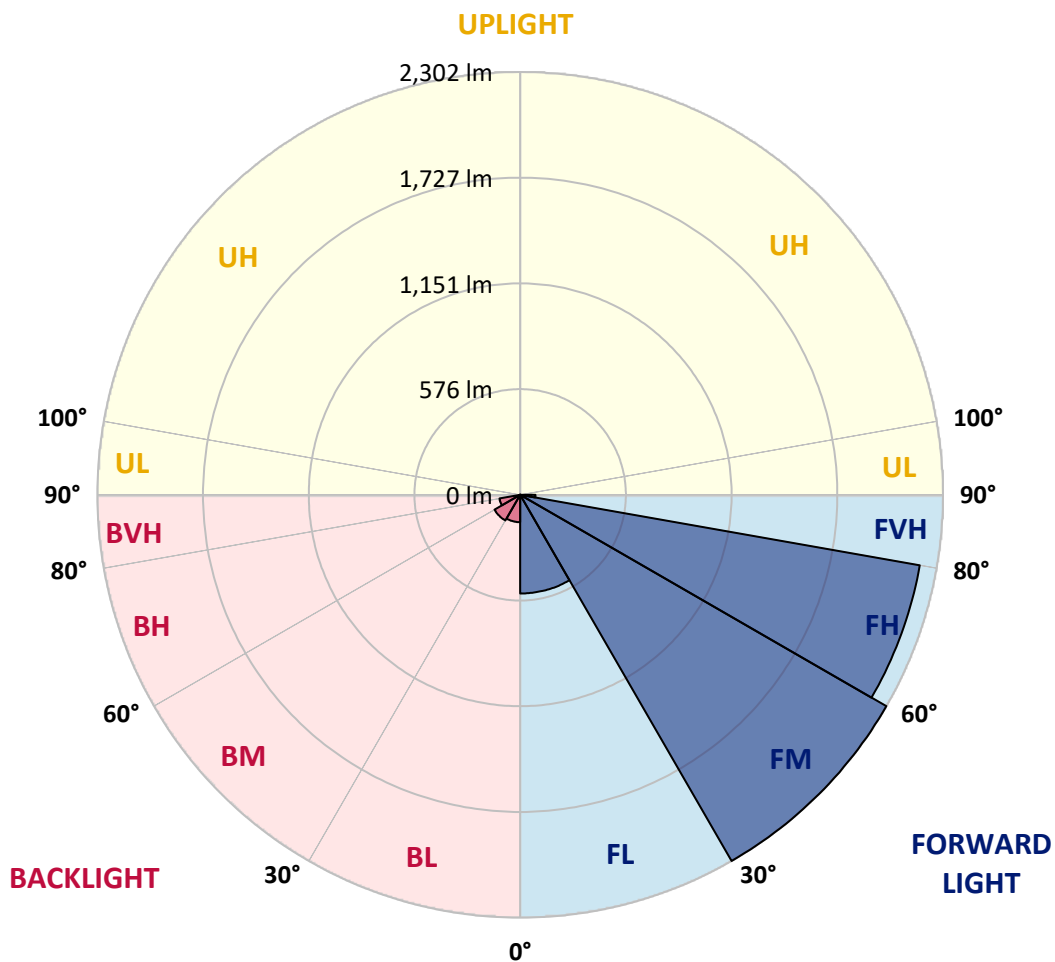
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	537.3	9.7			
FM	(30°-60°)	2302.0	41.4			
FH	(60°-80°)	2209.0	39.7			G2/5000
FVH	(80°-90°)	83.3	1.5			G1/100
BL	(0°-30°)	148.9	2.7	B1/500		
BM	(30°-60°)	161.3	2.9	B0/220		
BH	(60°-80°)	114.6	2.1	B1/500		G1/500
BVH	(80°-90°)	2.5	0.0			G0/10
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°	59°	65°	75°	85°
0°	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7
2.5°	1588.9	1586.4	1575.9	1573.8	1562.1	1538.6	1511.3	1500.4	1478.2	1443.0	1404.0
5°	1615.3	1616.6	1617.4	1612.8	1611.2	1591.9	1561.7	1548.7	1518.9	1461.0	1389.7
7.5°	1516.4	1519.7	1530.2	1534.8	1555.0	1562.5	1556.2	1547.8	1524.3	1456.0	1355.8
10°	1412.0	1418.3	1429.6	1437.1	1461.9	1482.0	1507.6	1509.7	1504.6	1439.2	1317.6
12.5°	1322.2	1328.1	1340.7	1355.8	1380.9	1406.9	1445.1	1458.5	1475.3	1428.3	1290.3
15°	1245.1	1246.7	1258.9	1277.8	1310.9	1346.5	1391.8	1411.5	1444.3	1424.1	1269.4
17.5°	1177.5	1178.0	1185.9	1203.1	1243.4	1290.3	1343.2	1369.2	1410.7	1418.3	1250.9
20°	1133.1	1132.7	1133.1	1142.3	1178.0	1233.7	1297.9	1325.2	1378.4	1411.1	1232.1
22.5°	1118.0	1115.9	1106.3	1102.9	1125.5	1174.6	1251.3	1287.0	1349.5	1409.0	1218.2
25°	1136.4	1135.2	1114.6	1095.3	1097.4	1128.1	1204.0	1247.6	1326.8	1416.6	1214.9
27.5°	1196.0	1193.5	1162.0	1124.3	1100.4	1105.8	1168.7	1214.4	1308.8	1435.0	1219.5
30°	1274.0	1274.4	1240.9	1195.2	1139.0	1107.9	1149.9	1193.1	1296.6	1462.7	1229.5
32.5°	1360.8	1360.4	1336.5	1283.6	1211.9	1146.5	1158.3	1194.7	1298.3	1503.4	1248.8
35°	1450.5	1445.9	1438.0	1391.4	1307.5	1214.0	1196.4	1223.3	1315.9	1557.1	1281.5
37.5°	1554.1	1552.4	1560.4	1511.3	1425.8	1313.4	1263.5	1281.5	1360.4	1636.3	1334.4
40°	1718.9	1709.7	1713.5	1646.8	1559.2	1447.2	1357.4	1362.1	1431.3	1741.2	1417.8
42.5°	2033.0	1995.7	1925.7	1800.7	1705.9	1595.6	1480.3	1472.3	1531.5	1868.2	1527.7
45°	2408.3	2365.6	2189.0	1970.5	1852.7	1755.0	1632.1	1610.7	1654.8	2019.6	1669.4
47.5°	2721.6	2675.5	2441.5	2147.9	2002.0	1919.4	1800.3	1775.1	1802.4	2195.3	1839.7
50°	2828.5	2803.0	2597.5	2295.5	2152.5	2103.9	2011.2	1969.3	1976.0	2384.9	2038.5
52.5°	2779.5	2770.7	2633.1	2396.6	2291.8	2307.7	2242.3	2198.2	2190.7	2592.0	2258.2
55°	2675.9	2671.7	2604.6	2452.8	2414.6	2494.3	2566.4	2528.3	2457.0	2812.2	2439.8
57.5°	2527.9	2543.8	2592.0	2561.0	2565.6	2691.4	2867.5	2887.2	2780.7	2987.5	2574.4
60°	2132.4	2175.2	2396.2	2677.1	2892.3	3019.3	3190.0	3226.9	3055.0	3107.4	2730.0
62.5°	1576.3	1637.6	1952.5	2468.7	3072.2	3642.9	3619.0	3602.7	3316.7	3268.0	3013.1
65°	925.9	997.6	1263.9	1929.0	2800.9	4043.8	4420.0	4193.5	3715.5	3601.8	3463.9
67.5°	461.3	461.7	582.1	1018.2	2069.9	3764.1	5589.1	5458.3	4563.4	4093.7	3641.7
70°	354.8	364.4	430.7	591.7	1046.7	2931.7	5857.1	6394.3	5415.5	4071.9	3089.8
72.5°	300.7	307.0	383.3	515.0	782.5	1609.5	5070.4	5652.0	5167.7	3440.4	2277.5
75°	216.4	221.4	339.3	467.2	720.4	798.4	3478.1	4191.9	3877.3	2420.1	1253.4
77.5°	53.7	53.3	118.3	379.1	644.5	665.1	1995.7	2688.1	2224.7	990.9	322.1
80°	23.9	23.1	26.8	79.7	599.7	627.8	877.7	1357.4	853.4	160.6	98.5
82.5°	16.8	15.9	16.8	29.4	200.5	582.5	530.5	588.4	312.4	54.9	41.9
85°	5.5	5.0	9.2	24.7	56.2	335.9	517.5	439.5	232.3	23.5	28.1
87.5°	0.8	0.8	3.4	13.4	16.4	112.0	303.6	304.5	104.4	13.8	12.6
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°	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7	1405.7
2.5°	1384.3	1359.5	1324.7	1289.9	1258.5	1226.2	1200.2	1188.0	1182.6	1175.0	1158.7
5°	1352.4	1307.5	1231.2	1156.2	1086.1	1019.0	961.6	928.9	893.6	892.0	874.8
7.5°	1301.3	1237.5	1117.2	1000.6	893.6	791.3	703.3	646.2	607.2	582.9	566.1
10°	1244.2	1162.4	1003.1	839.1	693.6	556.9	443.7	369.9	325.0	302.4	289.4
12.5°	1198.9	1096.2	890.7	684.4	502.0	345.1	239.9	186.2	162.3	153.1	148.9
15°	1159.9	1035.4	785.4	546.0	335.1	198.4	138.8	121.2	117.4	117.4	117.0
17.5°	1120.5	976.7	683.1	410.1	210.9	130.0	109.5	106.9	107.4	108.6	108.6
20°	1083.2	920.9	584.6	292.3	138.4	104.0	99.4	98.5	99.8	101.5	101.1
22.5°	1053.0	871.8	492.3	200.9	106.5	94.4	91.4	90.2	91.0	92.3	91.8
25°	1031.6	829.9	407.6	140.1	92.7	86.0	82.6	80.9	80.1	80.9	80.5
27.5°	1018.6	794.7	327.9	105.3	83.0	77.6	73.4	70.0	67.9	67.9	67.1
30°	1010.2	761.5	257.1	87.2	75.1	69.2	63.3	58.7	55.4	54.5	54.1
32.5°	1009.8	733.0	192.1	77.2	67.5	60.8	53.7	47.8	44.0	43.2	42.8
35°	1020.3	710.0	141.3	69.6	60.8	52.8	44.9	38.6	35.2	35.2	34.8
37.5°	1047.5	696.5	106.9	63.7	55.4	46.1	37.7	31.9	28.9	29.8	29.8
40°	1098.3	694.0	87.2	59.1	50.7	40.3	30.6	26.0	24.7	26.0	26.0
42.5°	1175.9	707.4	77.6	55.8	46.5	34.4	25.6	22.2	21.8	23.1	23.1
45°	1276.9	733.9	72.1	52.8	41.9	28.5	21.4	19.3	18.9	20.5	20.5
47.5°	1399.4	769.5	67.1	49.5	37.3	23.5	18.0	16.4	16.4	18.0	18.5
50°	1544.5	817.7	62.1	46.1	33.5	19.7	15.1	13.8	14.3	15.9	16.4
52.5°	1711.4	876.9	57.5	43.2	29.4	15.9	12.6	11.7	12.2	13.8	14.3
55°	1855.2	928.4	52.0	40.3	23.9	13.0	10.5	10.1	10.5	12.6	12.6
57.5°	1980.6	977.9	47.0	35.6	18.9	10.5	8.4	8.4	9.2	11.3	11.7
60°	2147.1	1055.9	42.8	30.2	14.3	8.0	6.7	7.1	8.4	10.1	10.5
62.5°	2441.9	1188.4	37.3	25.2	10.5	6.3	5.5	5.9	7.5	9.6	10.1
65°	2810.9	1313.8	31.0	21.0	8.0	4.6	4.2	5.5	7.5	9.6	10.1
67.5°	2773.2	1142.7	24.3	16.8	5.9	3.8	3.4	5.0	7.1	9.6	10.1
70°	2249.0	801.0	18.0	11.3	4.6	3.4	3.4	5.0	7.1	9.2	9.6
72.5°	1560.0	445.8	13.8	7.5	4.2	3.4	2.9	4.6	6.7	9.2	9.6
75°	742.3	136.7	10.9	5.5	3.8	2.9	2.5	4.6	6.7	9.2	9.6
77.5°	142.6	34.8	8.8	4.6	3.4	2.9	2.5	4.2	6.7	8.8	9.2
80°	48.2	15.5	7.1	4.2	3.4	2.9	2.5	4.2	6.3	8.4	8.8
82.5°	26.4	8.8	6.3	3.8	3.4	2.5	2.1	3.8	5.9	8.4	8.8
85°	20.5	6.3	5.0	3.8	3.4	2.5	2.1	3.8	5.9	8.0	8.4
87.5°	10.5	4.6	4.2	3.8	3.4	2.5	2.1	3.4	5.5	7.5	8.4
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)