

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: P196573

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196573
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5791.8 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

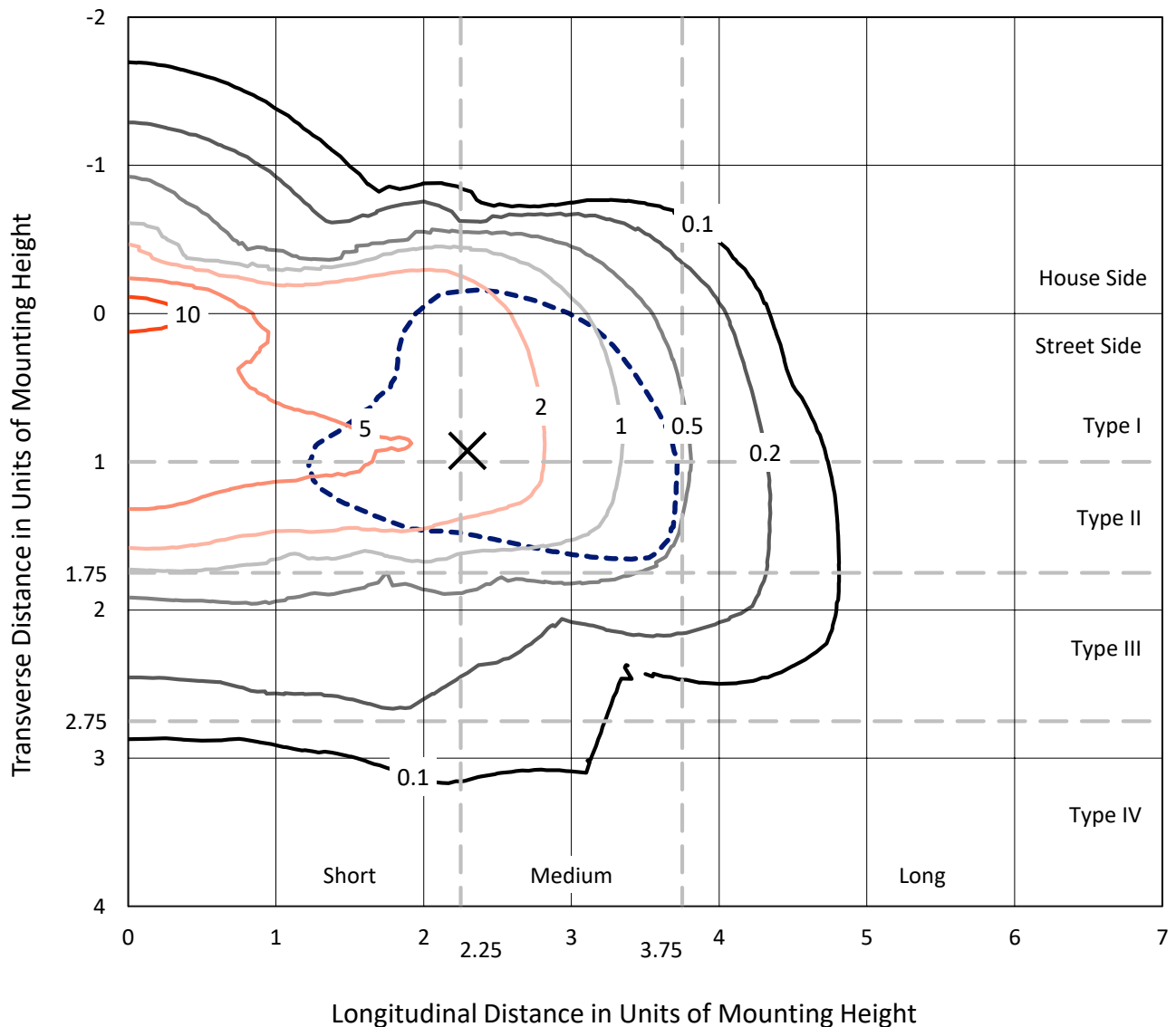
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

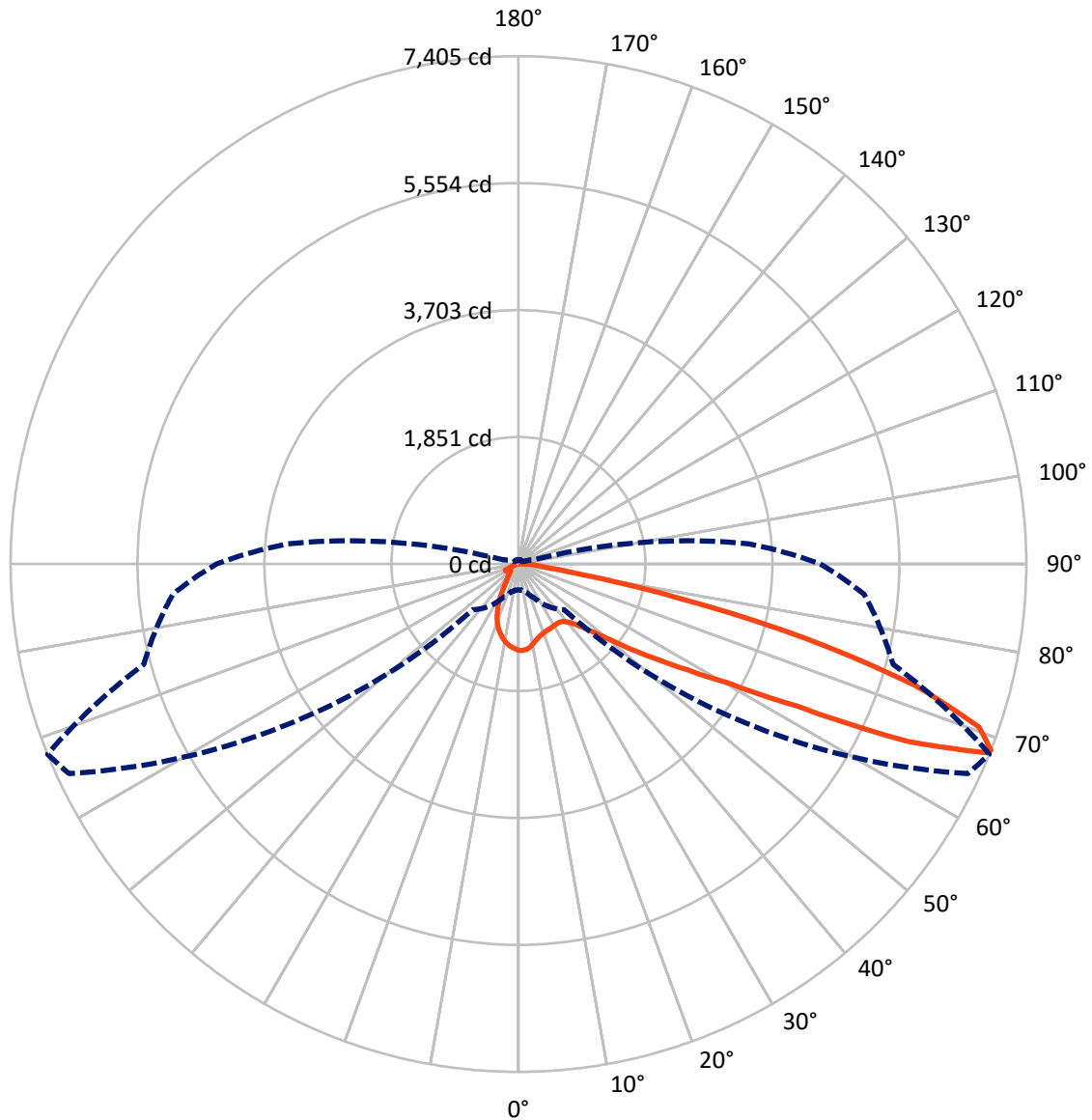
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.6 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	947.5	0.0	947.5
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	4844.3	0.0	4844.3
	% Fixture	83.6	0.0	83.6
Total	Lumens	5791.8	0.0	5791.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.0	1.9
10°-20°	250.4	4.3
20°-30°	338.7	5.8
30°-40°	477.6	8.2
40°-50°	785.3	13.6
50°-60°	1217.3	21.0
60°-70°	1578.4	27.3
70°-80°	905.8	15.6
80°-90°	130.3	2.2
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°	5791.8	100.0
0°-180°	5791.8	100.0



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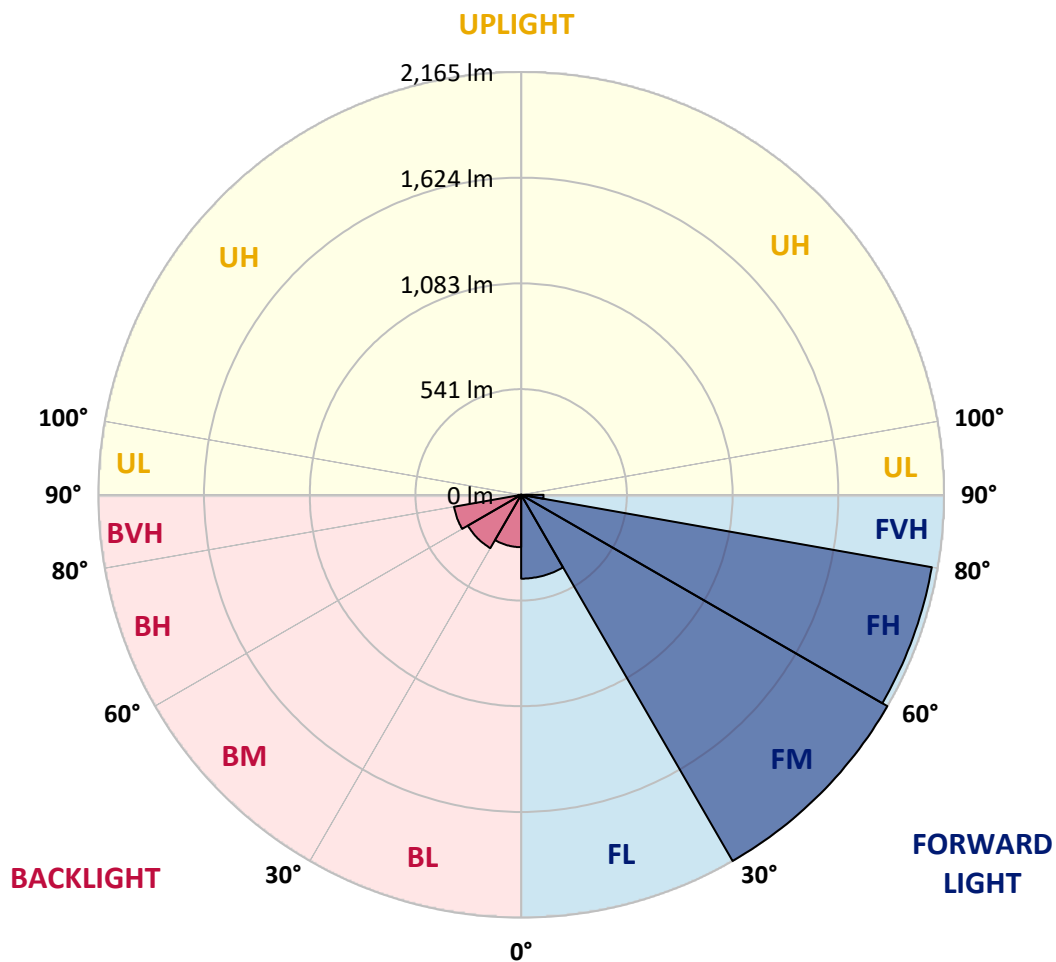
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	429.3	7.4			
FM (30°-60°)	2165.1	37.4			
FH (60°-80°)	2135.1	36.9			G2/5000
FVH (80°-90°)	114.8	2.0			G2/225
BL (0°-30°)	267.9	4.6	B1/500		
BM (30°-60°)	315.2	5.4	B1/1000		
BH (60°-80°)	349.0	6.0	B1/500		G1/500
BVH (80°-90°)	15.5	0.3			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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3
2.5°	1226.6	1236.4	1236.4	1243.6	1250.0	1255.3	1259.9	1259.9	1259.9	1256.8	1254.2
5°	1097.6	1110.8	1112.7	1130.9	1154.7	1183.9	1216.4	1245.1	1250.8	1261.4	1265.5
7.5°	1007.9	1012.1	1019.3	1031.7	1056.0	1091.9	1143.0	1207.4	1222.8	1256.1	1273.5
10°	944.3	947.8	953.9	966.3	988.2	1020.8	1071.1	1154.7	1180.4	1239.4	1273.9
12.5°	897.8	900.4	906.1	917.4	939.8	968.9	1020.4	1107.5	1139.1	1222.8	1279.2
15°	861.5	866.0	870.6	881.5	904.2	932.2	984.4	1072.9	1107.5	1209.5	1289.0
17.5°	847.1	849.4	850.1	855.8	876.3	904.5	956.8	1048.8	1084.3	1199.0	1296.6
20°	856.1	856.6	849.0	845.2	856.9	883.1	933.7	1030.7	1066.9	1189.5	1299.6
22.5°	895.9	895.9	876.3	859.6	851.6	867.9	918.3	1018.1	1057.4	1182.3	1299.6
25°	971.6	968.1	937.6	904.5	869.3	862.6	908.4	1010.2	1050.3	1178.6	1294.7
27.5°	1071.1	1068.0	1029.1	980.3	916.6	874.0	905.0	1003.8	1043.1	1172.9	1284.2
30°	1192.1	1189.5	1145.2	1081.3	987.4	909.9	913.0	999.1	1037.4	1163.4	1266.4
32.5°	1312.9	1311.3	1276.1	1210.7	1085.1	970.8	933.7	998.4	1034.3	1152.0	1244.8
35°	1434.2	1434.2	1412.7	1357.4	1216.4	1062.3	977.3	1012.4	1040.0	1146.0	1226.2
37.5°	1613.6	1606.4	1566.3	1509.2	1381.7	1181.2	1047.6	1041.9	1062.0	1156.2	1220.1
40°	1891.3	1870.5	1770.2	1674.2	1562.2	1333.3	1150.5	1099.0	1111.1	1191.0	1234.5
42.5°	2181.9	2149.0	2016.2	1862.6	1748.7	1520.9	1285.7	1191.8	1191.4	1258.3	1280.3
45°	2431.2	2414.2	2270.4	2075.6	1961.6	1732.1	1456.2	1329.4	1315.9	1362.8	1368.5
47.5°	2576.2	2564.8	2478.1	2301.1	2214.4	1981.4	1672.6	1520.6	1494.7	1522.8	1514.2
50°	2536.0	2547.0	2522.0	2431.6	2486.0	2331.7	1948.4	1782.3	1733.5	1761.6	1740.4
52.5°	2324.9	2354.4	2376.7	2394.1	2642.3	2800.5	2295.0	2109.2	2068.8	2063.8	2043.3
55°	1944.7	1991.6	2061.9	2189.9	2600.4	3176.9	2900.4	2504.7	2445.5	2414.5	2422.5
57.5°	1323.4	1394.5	1546.2	1789.5	2382.1	3337.4	3795.5	3015.3	2915.5	2805.0	2830.7
60°	729.1	788.5	968.9	1214.1	1883.7	3313.5	4588.9	3845.5	3531.0	3238.2	3291.2
62.5°	471.8	484.7	619.0	829.3	1156.2	2925.3	5029.6	5232.9	4566.6	3809.6	3884.0
65°	379.1	388.2	454.0	668.8	805.5	1881.9	5049.3	6672.0	6232.8	4585.8	4588.2
67.5°	370.4	374.5	412.8	562.5	755.5	1024.6	4364.6	7239.5	7341.3	5502.2	5059.1
68°	375.8	380.7	419.2	545.2	755.2	944.3	4033.9	7230.9	7405.3	5655.5	5059.1
70°	331.4	337.5	427.5	564.1	723.0	811.9	2762.3	6846.8	7127.5	6007.6	4800.5
72.5°	173.2	168.4	211.5	445.3	813.8	846.0	1459.2	5720.2	6047.7	5563.9	4147.4
75°	135.1	122.9	118.4	175.9	715.8	877.4	847.6	4065.6	4313.1	4010.8	2772.1
77.5°	127.1	112.3	103.7	104.1	315.1	913.0	685.6	2392.7	2392.7	1913.2	884.6
80°	102.1	88.5	82.8	94.6	152.1	841.4	715.4	1090.4	930.1	494.5	243.6
82.5°	67.3	60.2	60.5	76.8	115.4	561.8	828.5	538.4	404.5	219.1	143.3
85°	42.7	36.7	40.9	53.7	86.4	250.4	820.2	374.2	267.9	122.9	71.4
87.5°	21.6	16.6	20.4	28.0	52.6	71.9	675.3	334.2	198.7	51.1	39.0
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°	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3	1260.3
2.5°	1254.2	1245.9	1241.7	1234.8	1226.6	1218.2	1212.6	1209.9	1208.4	1209.2	1208.9
5°	1263.2	1252.3	1234.5	1209.2	1183.1	1155.4	1134.2	1117.9	1107.8	1104.7	1103.9
7.5°	1270.1	1254.2	1220.9	1174.7	1130.1	1081.6	1040.4	1007.5	985.2	975.0	974.6
10°	1268.9	1248.5	1196.0	1127.9	1062.3	991.2	926.5	871.4	831.3	811.9	811.1
12.5°	1270.1	1242.1	1165.2	1072.9	979.2	877.4	781.3	695.4	635.6	607.3	606.1
15°	1274.6	1235.2	1133.9	1011.6	881.9	738.1	600.8	493.0	438.4	420.0	420.0
17.5°	1274.3	1223.9	1097.6	940.5	766.6	573.9	410.2	343.5	338.2	355.3	358.0
20°	1266.7	1205.7	1050.6	856.1	631.1	397.2	278.1	268.7	311.0	358.0	363.2
22.5°	1255.0	1182.3	996.6	758.1	473.3	258.8	214.4	228.9	286.4	344.7	353.0
25°	1238.7	1153.9	934.5	644.3	314.7	186.2	178.9	196.7	237.2	276.2	282.2
27.5°	1214.9	1117.9	866.8	520.9	200.9	153.2	155.9	168.4	185.7	202.4	205.9
30°	1184.9	1075.9	793.0	384.4	152.4	137.0	141.5	149.0	156.7	167.2	169.5
32.5°	1154.7	1033.3	716.2	264.1	133.2	128.3	132.8	137.0	143.3	150.6	152.1
35°	1127.4	993.5	637.1	184.2	124.9	122.6	124.9	127.5	134.0	141.2	141.9
37.5°	1107.8	960.9	554.6	145.7	119.9	117.7	118.8	119.9	127.5	138.1	139.2
40°	1105.1	939.4	471.0	130.9	116.2	113.1	112.3	113.1	122.9	135.1	136.2
42.5°	1130.9	940.5	389.3	124.9	113.1	109.7	106.7	108.1	116.9	126.4	127.1
45°	1191.8	967.1	318.6	122.2	110.5	107.8	103.2	104.1	108.1	113.1	113.8
47.5°	1299.2	1025.0	264.4	120.7	108.1	106.0	100.3	98.0	98.4	101.1	101.1
50°	1470.9	1121.8	231.5	119.2	106.3	102.1	95.7	91.2	90.0	91.6	91.9
52.5°	1727.2	1287.8	215.7	116.2	102.9	97.2	90.0	85.5	83.6	85.1	85.1
55°	2073.3	1553.1	208.1	112.0	98.8	91.2	84.7	81.0	79.4	80.7	80.7
57.5°	2467.9	1897.8	220.9	106.3	93.4	84.7	80.2	77.6	76.4	77.6	77.9
60°	2936.7	2348.7	309.5	99.1	87.7	79.1	76.4	75.0	74.2	75.3	75.3
62.5°	3559.7	2948.8	479.0	93.4	81.7	73.8	72.9	72.2	71.4	72.6	72.6
65°	4232.4	3494.7	493.0	90.0	76.4	69.3	69.6	69.6	68.9	70.0	70.0
67.5°	4446.7	3447.4	275.5	85.9	70.0	64.7	66.2	66.2	65.9	66.9	66.5
68°	4401.2	3372.5	239.9	84.7	68.9	63.6	65.1	65.4	65.1	66.2	65.9
70°	4063.1	2960.9	157.8	78.3	63.9	59.8	62.1	62.4	62.1	63.6	63.2
72.5°	3353.9	2220.8	116.6	68.5	57.9	54.8	57.2	57.5	57.9	59.4	59.0
75°	2130.0	1226.6	91.9	58.2	51.8	49.1	51.5	52.6	53.3	55.6	54.5
77.5°	583.5	372.2	74.6	49.6	44.7	43.4	45.1	46.6	47.3	49.9	48.1
80°	204.4	164.6	62.1	41.9	37.0	36.7	38.2	39.8	40.5	42.7	40.5
82.5°	124.1	107.4	49.6	32.9	29.2	28.7	30.6	32.1	32.9	32.9	31.3
85°	64.7	56.7	36.3	23.1	20.1	18.9	22.3	24.2	24.6	24.2	23.1
87.5°	36.3	32.1	19.3	10.9	9.1	9.5	11.7	14.4	15.6	15.2	14.4
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)