

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: P195691

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7050-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195691  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)  
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-SL4-7050-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5460 lumens  
Efficiency: N/A  
Efficacy: 81.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 67  
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

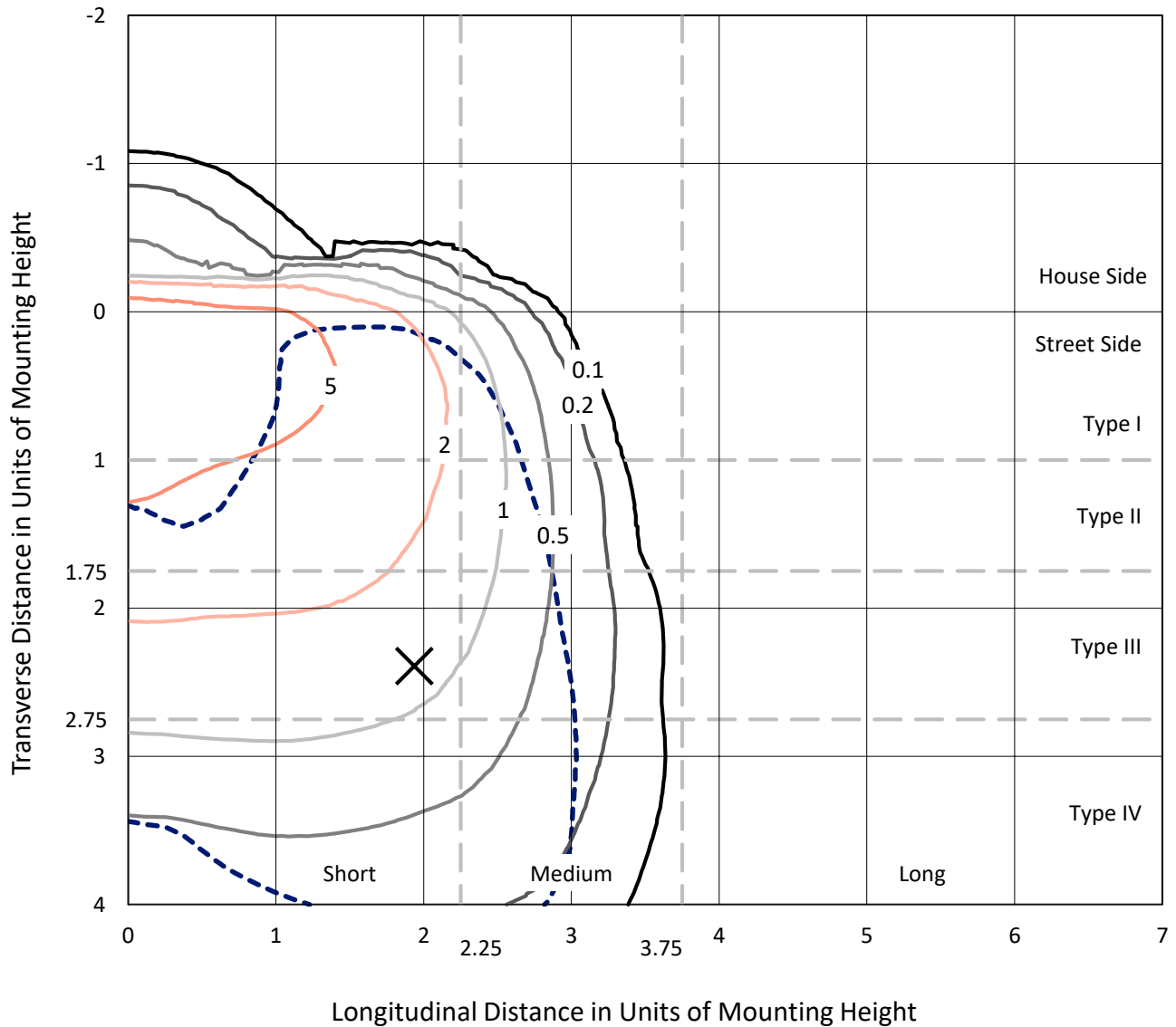


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

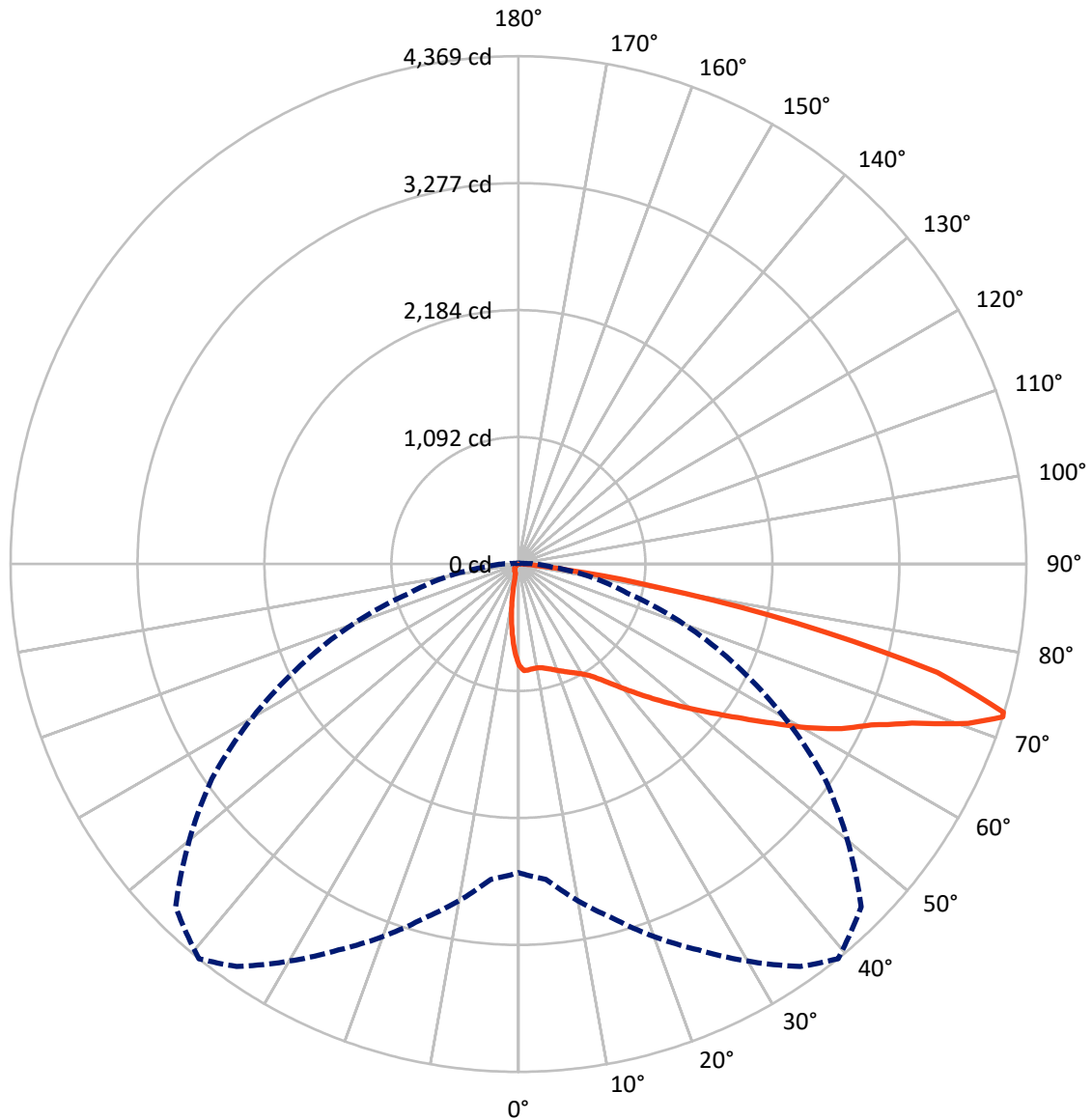


Based on 10 foot mounting height. Maximum calculated value = 9.2 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral    - - - Horizontal Cone Through 72-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	357.8	0.0	357.8
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	5102.2	0.0	5102.2
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	5460.0	0.0	5460.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.1	1.3
10°-20°	172.1	3.2
20°-30°	285.8	5.2
30°-40°	455.5	8.3
40°-50°	751.9	13.8
50°-60°	1135.5	20.8
60°-70°	1479.2	27.1
70°-80°	999.5	18.3
80°-90°	109.5	2.0
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°	5460.0	100.0
0°-180°	5460.0	100.0

**Coefficient of Utilization**



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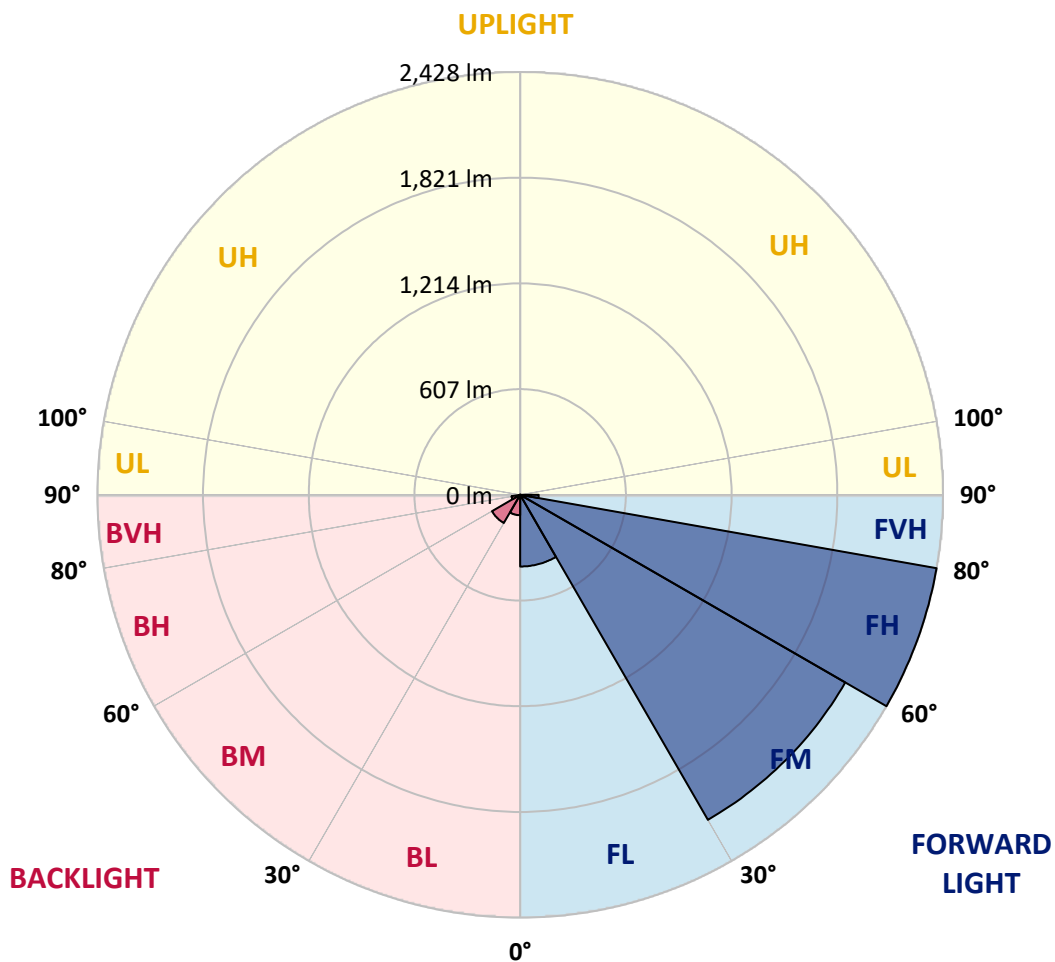
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	411.8	7.5			
FM	(30°-60°)	2155.7	39.5			
FH	(60°-80°)	2428.4	44.5			G2/5000
FVH	(80°-90°)	106.3	1.9			G2/225
BL	(0°-30°)	117.2	2.1	B1/500		
BM	(30°-60°)	187.2	3.4	B0/220		
BH	(60°-80°)	50.3	0.9	B0/110		G0/110
BVH	(80°-90°)	3.2	0.1			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9
2.5°	930.6	932.3	930.1	926.3	920.7	917.3	912.5	902.2	889.4	878.2	865.3
5°	937.9	938.7	936.1	928.8	920.3	915.5	909.5	898.4	885.1	869.6	846.4
7.5°	940.0	939.6	936.6	927.6	914.3	908.2	897.9	884.2	870.5	856.3	830.1
10°	939.2	939.2	937.0	928.4	913.4	907.8	896.2	881.6	864.5	850.3	822.4
12.5°	936.1	937.9	936.6	931.9	920.7	916.4	906.1	891.5	875.2	860.6	831.0
15°	940.0	942.6	945.2	943.4	937.0	933.1	923.7	908.7	895.4	879.9	848.2
17.5°	955.5	961.0	967.1	967.5	960.6	953.7	943.0	927.6	914.7	900.5	866.2
20°	984.6	988.9	1000.1	1002.2	988.5	978.6	963.6	945.6	932.7	920.7	882.9
22.5°	1028.0	1032.7	1041.7	1038.7	1015.6	1004.0	985.1	964.5	951.2	944.3	902.2
25°	1093.7	1095.0	1097.1	1083.8	1045.6	1032.7	1009.5	986.4	975.6	974.8	929.7
27.5°	1170.9	1172.7	1163.2	1133.6	1079.1	1062.3	1036.2	1015.1	1010.0	1016.4	964.5
30°	1259.4	1259.8	1233.6	1185.5	1117.7	1099.3	1072.2	1049.0	1053.8	1069.6	1009.1
32.5°	1349.9	1345.6	1309.6	1246.9	1170.5	1148.2	1125.0	1101.8	1115.6	1147.8	1074.4
35°	1432.8	1431.0	1388.6	1315.6	1239.2	1219.4	1202.7	1178.2	1200.6	1252.9	1163.2
37.5°	1515.6	1514.3	1465.8	1389.8	1323.7	1309.6	1297.1	1278.2	1314.7	1391.6	1282.1
40°	1607.0	1604.9	1545.2	1472.3	1422.0	1414.3	1407.0	1398.9	1461.1	1568.0	1430.2
42.5°	1719.9	1710.5	1629.3	1562.0	1530.2	1532.3	1532.8	1540.9	1638.4	1777.9	1604.9
45°	1849.5	1828.5	1713.9	1658.1	1649.1	1662.0	1674.8	1708.8	1844.8	2019.5	1798.0
47.5°	1975.3	1941.4	1811.3	1761.6	1780.0	1806.6	1837.5	1903.6	2076.6	2272.3	1973.2
50°	2083.5	2048.7	1907.9	1866.7	1925.5	1965.0	2019.9	2120.0	2321.3	2486.1	2083.5
52.5°	2168.5	2141.0	2010.1	1982.6	2086.9	2141.0	2227.3	2358.6	2552.2	2626.9	2160.7
55°	2231.1	2217.4	2107.9	2111.8	2266.3	2344.4	2451.8	2600.3	2747.1	2736.3	2218.7
57.5°	2302.0	2291.2	2210.5	2264.2	2482.2	2583.1	2707.1	2826.5	2888.7	2824.3	2275.3
60°	2374.5	2377.9	2335.0	2448.7	2749.2	2860.8	2969.0	2998.6	3010.2	2913.6	2335.0
62.5°	2429.4	2444.0	2447.9	2647.9	3023.1	3118.3	3165.1	3144.1	3141.5	3033.4	2330.3
65°	2492.5	2530.7	2594.3	2866.4	3272.0	3334.7	3368.2	3398.6	3334.2	3069.0	2101.1
67.5°	2601.6	2661.6	2804.6	3134.2	3559.6	3652.3	3747.2	3715.0	3363.0	2707.1	1600.6
70°	2748.3	2821.7	3074.1	3484.0	3949.8	4105.1	4184.5	3689.6	2855.2	1870.6	844.3
72°	2655.6	2722.2	3157.4	3662.6	4226.2	4368.7	4170.0	3218.4	2069.7	969.6	282.9
72.5°	2565.5	2634.2	3130.8	3660.5	4253.7	4362.7	4075.1	3032.5	1831.5	754.6	194.9
75°	1780.0	1866.7	2684.0	3290.5	3841.2	3721.4	3117.9	1836.2	663.6	129.6	64.4
77.5°	920.3	987.2	1628.1	2325.1	2677.1	2451.8	1842.7	796.6	183.7	68.7	42.5
80°	570.4	603.5	761.5	1145.6	1390.7	1216.4	813.0	321.9	117.6	40.8	33.9
82.5°	295.3	320.6	479.4	462.3	513.8	427.1	300.0	269.6	72.5	25.3	34.8
85°	97.0	103.0	294.5	307.3	219.8	147.7	133.1	257.1	21.0	16.3	29.6
87.5°	12.9	15.0	103.4	176.0	108.2	67.0	79.8	90.6	7.3	9.0	8.2
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°	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9	873.9
2.5°	856.7	851.2	833.6	816.0	795.8	777.3	762.7	753.3	757.6	743.4	745.6
5°	832.3	818.1	779.5	737.8	692.8	650.7	617.2	592.3	587.6	566.2	567.0
7.5°	808.7	785.5	722.8	654.1	579.5	518.9	464.0	415.9	398.8	381.2	370.9
10°	795.8	764.0	675.2	575.2	470.0	381.2	303.9	243.4	218.0	199.6	190.6
12.5°	799.7	757.6	639.5	503.5	365.3	252.4	171.7	127.5	112.0	103.4	100.4
15°	812.5	758.9	607.4	433.5	265.7	152.8	100.9	86.3	85.0	84.6	84.1
17.5°	824.5	760.2	573.4	360.6	177.7	97.4	81.1	79.8	79.8	79.8	79.8
20°	837.0	760.6	536.1	284.1	116.8	79.8	76.4	75.5	76.4	76.4	76.4
22.5°	851.6	763.6	500.1	209.9	86.3	75.1	73.0	72.5	73.0	73.0	72.5
25°	869.6	770.0	461.0	150.2	78.1	72.1	70.0	69.5	70.0	69.5	69.5
27.5°	893.7	778.6	415.5	107.7	74.7	69.1	67.0	67.0	67.0	66.5	66.5
30°	924.6	788.9	354.5	85.0	71.3	66.1	64.4	64.4	64.0	63.5	63.5
32.5°	968.8	805.7	288.0	76.8	67.4	62.2	60.5	61.0	60.5	60.1	59.7
35°	1031.4	831.8	222.3	72.5	63.5	58.4	56.7	56.7	56.7	55.8	55.8
37.5°	1120.3	871.8	166.5	68.2	59.7	54.5	52.4	52.4	51.9	51.1	51.5
40°	1230.2	922.0	120.6	64.4	55.8	50.2	48.5	47.6	46.8	45.9	45.9
42.5°	1362.4	970.9	90.6	60.5	51.9	46.8	44.6	43.8	42.1	41.2	40.8
45°	1510.5	1022.9	75.1	55.8	47.6	42.9	41.2	39.5	37.3	36.1	35.6
47.5°	1635.4	1054.6	67.0	51.1	43.4	39.1	37.3	34.8	32.2	31.3	31.3
50°	1710.5	1041.3	60.1	46.4	39.1	35.2	33.1	29.6	27.9	27.0	26.6
52.5°	1752.5	1001.8	54.5	42.5	35.2	30.9	27.9	24.9	24.0	23.2	23.2
55°	1781.3	944.7	48.5	38.6	31.8	27.0	23.6	21.5	20.6	20.2	19.7
57.5°	1808.8	875.2	42.9	35.2	28.3	24.0	20.2	19.3	17.6	17.2	17.2
60°	1816.9	779.5	37.8	31.3	25.3	21.0	17.6	16.3	14.6	14.2	14.2
62.5°	1713.0	620.2	33.5	26.6	22.3	18.0	15.5	13.7	12.0	12.0	12.0
65°	1431.5	421.1	28.8	23.2	19.7	15.5	13.3	11.2	10.3	10.3	10.3
67.5°	997.1	234.8	24.5	19.7	16.7	12.9	11.2	9.4	9.0	9.4	9.4
70°	449.4	93.1	20.6	16.3	13.7	10.7	9.4	8.2	9.0	9.0	9.0
72°	134.8	49.8	17.2	13.3	11.2	9.4	8.2	7.7	8.6	9.0	9.0
72.5°	100.0	44.6	16.3	12.9	11.2	9.0	7.7	7.7	8.6	9.0	9.0
75°	51.5	30.5	12.4	9.4	8.2	7.3	6.4	7.3	8.6	8.6	8.6
77.5°	40.3	24.9	10.3	7.3	6.9	6.4	6.0	6.9	7.7	7.7	7.7
80°	37.8	16.3	8.2	6.9	6.0	5.6	5.6	6.0	6.9	7.3	7.3
82.5°	38.2	13.3	7.3	6.4	5.6	5.2	5.2	5.6	6.4	6.9	6.9
85°	24.5	9.0	6.4	5.6	5.2	4.7	4.7	5.2	6.0	6.4	6.4
87.5°	8.2	6.9	5.6	5.2	4.3	4.3	4.3	4.3	5.2	5.6	6.0
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)