

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: P196651

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7030-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196651  
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-SL4-7030-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 3000K, 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: 5280.5 lumens  
Efficiency: N/A  
Efficacy: 78.8 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

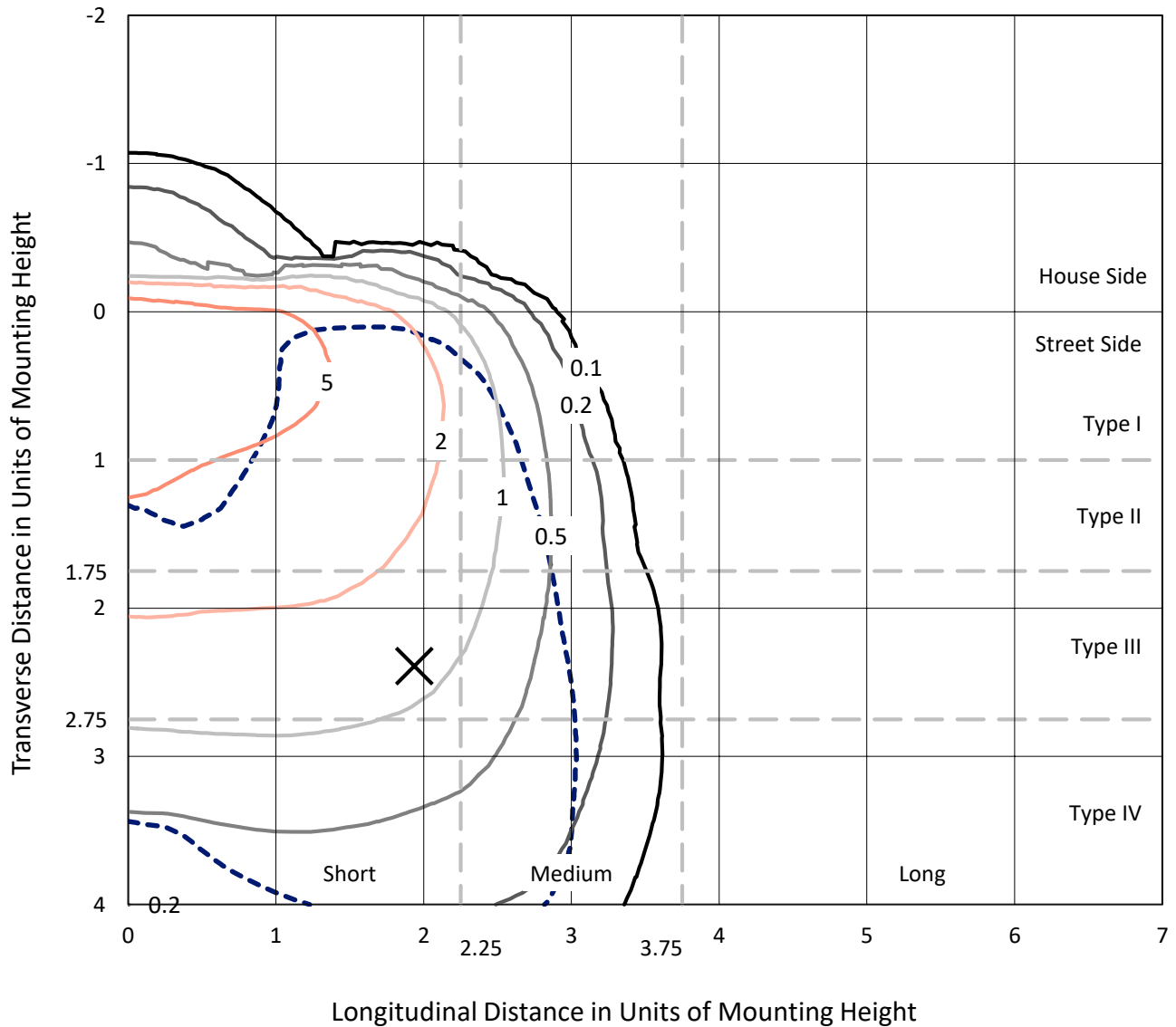
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

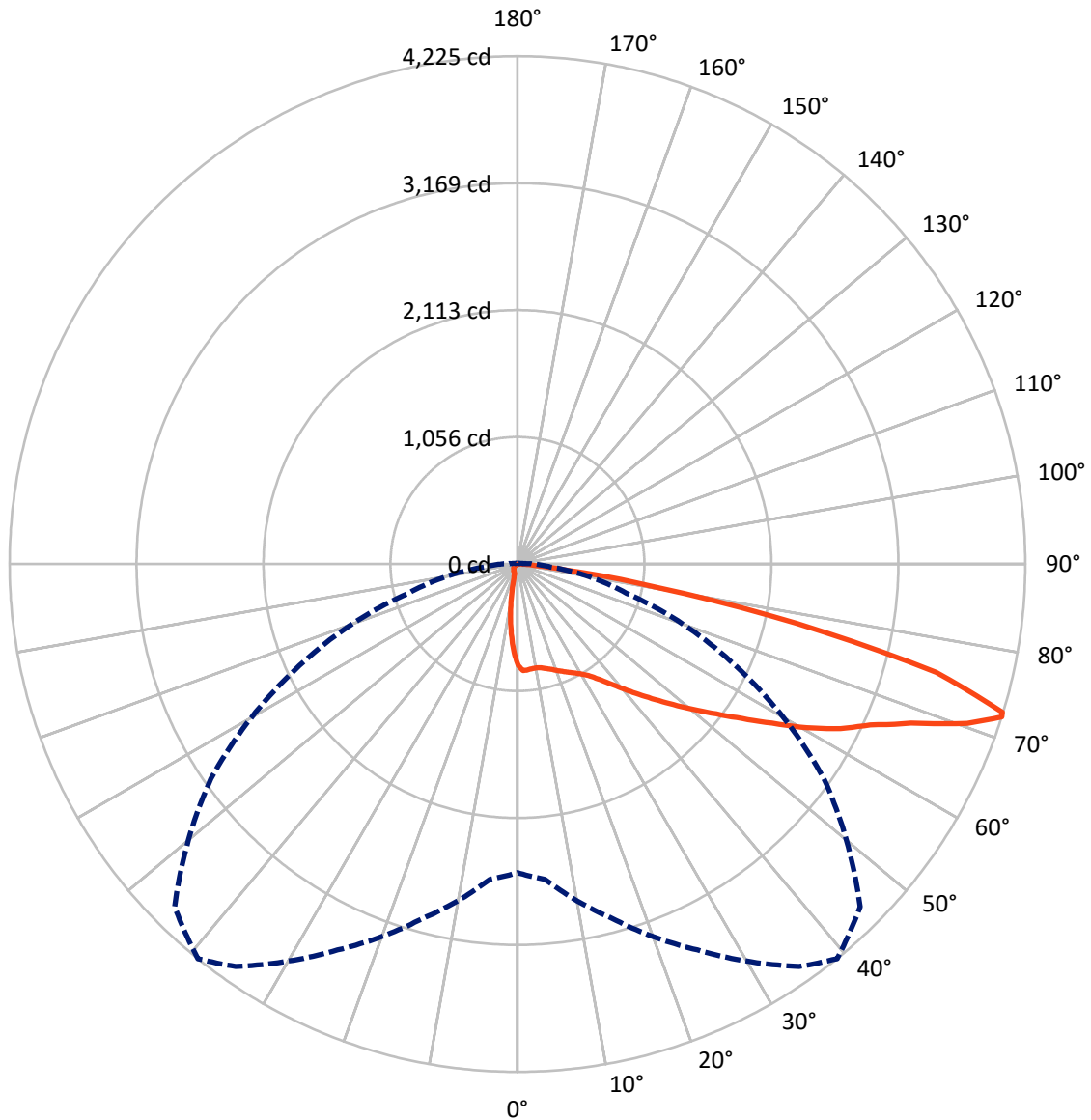


Based on 10 foot mounting height. Maximum calculated value = 8.9 fc  
 Type IV - Short - Non-Cutoff

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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	346.1	0.0	346.1
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	4934.4	0.0	4934.4
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	5280.5	0.0	5280.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.7	1.3
10°-20°	166.4	3.2
20°-30°	276.4	5.2
30°-40°	440.5	8.3
40°-50°	727.2	13.8
50°-60°	1098.2	20.8
60°-70°	1430.5	27.1
70°-80°	966.6	18.3
80°-90°	105.9	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°	5280.5	100.0
0°-180°	5280.5	100.0

**Coefficient of Utilization**



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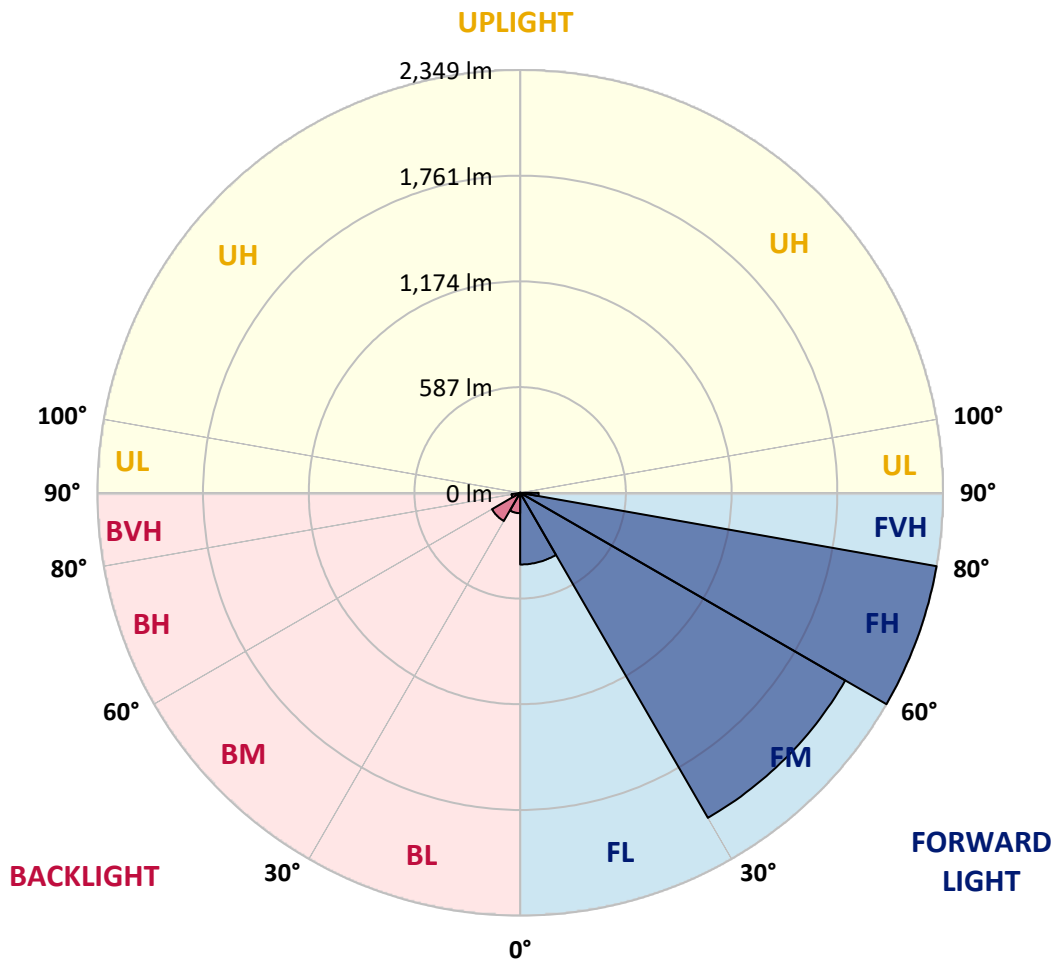
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	398.3	7.5			
FM	(30°-60°)	2084.8	39.5			
FH	(60°-80°)	2348.5	44.5			G2/5000
FVH	(80°-90°)	102.8	1.9			G2/225
BL	(0°-30°)	113.3	2.1	B1/500		
BM	(30°-60°)	181.1	3.4	B0/220		
BH	(60°-80°)	48.6	0.9	B0/110		G0/110
BVH	(80°-90°)	3.1	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°	845.2	845.2	845.2	845.2	845.2	845.2	845.2	845.2	845.2	845.2	845.2
2.5°	900.0	901.6	899.5	895.8	890.5	887.0	882.5	872.6	860.1	849.4	836.9
5°	907.1	907.8	905.3	898.3	890.0	885.4	879.6	868.8	855.9	841.1	818.6
7.5°	909.1	908.7	905.8	897.0	884.2	878.3	868.4	855.2	841.9	828.1	802.8
10°	908.3	908.3	906.2	897.9	883.4	878.0	866.8	852.7	836.1	822.4	795.4
12.5°	905.3	907.1	905.8	901.2	890.5	886.3	876.3	862.2	846.4	832.3	803.7
15°	909.1	911.6	914.1	912.5	906.2	902.5	893.3	878.8	865.9	851.0	820.3
17.5°	924.0	929.5	935.3	935.7	929.0	922.3	912.0	897.0	884.6	870.9	837.7
20°	952.3	956.4	967.3	969.3	956.0	946.5	932.0	914.5	902.1	890.5	853.9
22.5°	994.3	998.7	1007.5	1004.5	982.1	971.0	952.7	932.7	919.9	913.3	872.6
25°	1057.7	1058.9	1061.0	1048.2	1011.2	998.7	976.3	954.0	943.6	942.7	899.1
27.5°	1132.5	1134.1	1125.0	1096.3	1043.7	1027.4	1002.1	981.8	976.8	983.0	932.7
30°	1217.9	1218.4	1193.0	1146.5	1081.0	1063.1	1037.0	1014.6	1019.1	1034.4	975.9
32.5°	1305.5	1301.4	1266.6	1205.9	1132.0	1110.4	1088.0	1065.6	1078.9	1110.1	1039.0
35°	1385.6	1384.0	1342.9	1272.4	1198.5	1179.4	1163.2	1139.5	1161.1	1211.6	1125.0
37.5°	1465.8	1464.5	1417.6	1344.1	1280.2	1266.6	1254.6	1236.3	1271.4	1345.8	1240.0
40°	1554.2	1552.1	1494.4	1423.8	1375.2	1367.8	1360.8	1352.8	1413.0	1516.4	1383.2
42.5°	1663.4	1654.3	1575.7	1510.6	1479.9	1482.0	1482.4	1490.3	1584.5	1719.4	1552.1
45°	1788.8	1768.4	1657.6	1603.6	1594.8	1607.3	1619.8	1652.5	1784.2	1953.1	1739.0
47.5°	1910.4	1877.6	1751.8	1703.7	1721.5	1747.3	1777.1	1841.0	2008.3	2197.6	1908.3
50°	2015.0	1981.3	1845.2	1805.3	1862.3	1900.4	1953.5	2050.2	2245.0	2404.4	2015.0
52.5°	2097.1	2070.6	1943.9	1917.4	2018.3	2070.6	2154.0	2281.2	2468.2	2540.5	2089.7
55°	2157.8	2144.5	2038.7	2042.4	2191.8	2267.3	2371.2	2514.8	2656.7	2646.4	2145.8
57.5°	2226.2	2215.9	2137.8	2189.8	2400.7	2498.2	2618.2	2733.5	2793.8	2731.5	2200.5
60°	2296.4	2299.8	2258.3	2368.2	2658.9	2766.8	2871.4	2900.0	2911.2	2817.8	2258.3
62.5°	2349.5	2363.8	2367.4	2560.8	2923.7	3015.8	3061.1	3040.6	3038.3	2933.6	2253.7
65°	2410.6	2447.5	2508.9	2772.1	3164.4	3225.0	3257.4	3286.8	3224.7	2968.1	2032.0
67.5°	2516.0	2574.1	2712.4	3031.2	3442.5	3532.3	3624.0	3592.9	3252.4	2618.2	1547.9
70°	2658.0	2729.0	2973.1	3369.5	3819.9	3970.2	4047.0	3568.3	2761.3	1809.2	816.5
72°	2568.3	2632.7	3053.6	3542.1	4087.3	4225.0	4032.9	3112.6	2001.7	937.8	273.5
72.5°	2481.2	2547.6	3027.9	3540.1	4113.8	4219.3	3941.1	2932.8	1771.3	729.8	188.5
75°	1721.5	1805.3	2595.7	3182.2	3715.0	3599.1	3015.4	1775.9	641.8	125.3	62.3
77.5°	890.0	954.8	1574.5	2248.7	2589.1	2371.2	1782.1	770.5	177.6	66.4	41.1
80°	551.6	583.7	736.4	1108.0	1345.0	1176.4	786.2	311.4	113.7	39.5	32.8
82.5°	285.6	310.1	463.7	447.1	496.9	413.0	290.2	260.7	70.2	24.5	33.7
85°	93.9	99.7	284.7	297.1	212.5	142.8	128.7	248.7	20.3	15.8	28.6
87.5°	12.4	14.5	100.1	170.2	104.6	64.8	77.2	87.6	7.1	8.7	7.8
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°	845.2	845.2	845.2	845.2	845.2	845.2	845.2	845.2	845.2	845.2	845.2
2.5°	828.6	823.2	806.2	789.2	769.6	751.8	737.6	728.5	732.7	719.0	721.1
5°	804.9	791.2	753.9	713.6	670.0	629.4	597.0	572.8	568.2	547.5	548.4
7.5°	782.1	759.7	699.0	632.6	560.4	501.8	448.7	402.3	385.6	368.6	358.7
10°	769.6	738.9	653.0	556.2	454.5	368.6	293.9	235.4	210.9	193.1	184.3
12.5°	773.3	732.7	618.5	487.0	353.2	244.0	166.1	123.3	108.3	100.1	97.1
15°	785.8	733.9	587.4	419.2	257.0	147.8	97.6	83.5	82.2	81.7	81.4
17.5°	797.5	735.2	554.6	348.6	171.9	94.2	78.4	77.2	77.2	77.2	77.2
20°	809.5	735.6	518.4	274.8	112.9	77.2	73.9	73.1	73.9	73.9	73.9
22.5°	823.6	738.5	483.6	203.0	83.5	72.6	70.6	70.2	70.6	70.6	70.2
25°	841.1	744.7	445.9	145.4	75.5	69.7	67.6	67.2	67.6	67.2	67.2
27.5°	864.2	753.1	401.8	104.3	72.2	66.8	64.8	64.8	64.8	64.4	64.4
30°	894.2	762.9	342.8	82.2	69.0	63.9	62.3	62.3	61.8	61.4	61.4
32.5°	936.9	779.1	278.5	74.3	65.2	60.2	58.6	59.0	58.6	58.1	57.7
35°	997.5	804.4	215.0	70.2	61.4	56.5	54.8	54.8	54.8	54.0	54.0
37.5°	1083.5	843.2	161.0	66.0	57.7	52.8	50.7	50.7	50.3	49.3	49.8
40°	1189.8	891.7	116.7	62.3	54.0	48.6	46.9	46.1	45.3	44.5	44.5
42.5°	1317.5	939.0	87.6	58.6	50.3	45.3	43.1	42.4	40.7	39.9	39.5
45°	1460.8	989.3	72.6	54.0	46.1	41.5	39.9	38.2	36.2	34.9	34.4
47.5°	1581.6	1019.9	64.8	49.3	41.9	37.8	36.2	33.7	31.1	30.3	30.3
50°	1654.3	1007.1	58.1	44.8	37.8	34.1	32.0	28.6	27.0	26.1	25.7
52.5°	1694.9	968.9	52.8	41.1	34.1	29.9	27.0	24.0	23.3	22.4	22.4
55°	1722.7	913.6	46.9	37.3	30.7	26.1	22.8	20.8	19.8	19.5	19.1
57.5°	1749.4	846.4	41.5	34.1	27.5	23.3	19.5	18.7	17.1	16.6	16.6
60°	1757.2	753.9	36.5	30.3	24.5	20.3	17.1	15.8	14.1	13.6	13.6
62.5°	1656.7	599.9	32.3	25.7	21.7	17.5	15.0	13.3	11.6	11.6	11.6
65°	1384.5	407.2	27.9	22.4	19.1	15.0	12.9	10.8	10.0	10.0	10.0
67.5°	964.3	227.0	23.7	19.1	16.2	12.4	10.8	9.2	8.7	9.2	9.2
70°	434.7	90.0	19.8	15.8	13.3	10.4	9.2	7.8	8.7	8.7	8.7
72°	130.3	48.2	16.6	12.9	10.8	9.2	7.8	7.4	8.3	8.7	8.7
72.5°	96.7	43.1	15.8	12.4	10.8	8.7	7.4	7.4	8.3	8.7	8.7
75°	49.8	29.5	12.0	9.2	7.8	7.1	6.2	7.1	8.3	8.3	8.3
77.5°	39.0	24.0	10.0	7.1	6.7	6.2	5.8	6.7	7.4	7.4	7.4
80°	36.5	15.8	7.8	6.7	5.8	5.4	5.4	5.8	6.7	7.1	7.1
82.5°	36.9	12.9	7.1	6.2	5.4	5.0	5.0	5.4	6.2	6.7	6.7
85°	23.7	8.7	6.2	5.4	5.0	4.6	4.6	5.0	5.8	6.2	6.2
87.5°	7.8	6.7	5.4	5.0	4.2	4.2	4.2	4.2	5.0	5.4	5.8
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)