

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: P196947

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-8030-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196947  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-AFL-8030-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8174 lumens  
Efficiency: N/A  
Efficacy: 85.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 96  
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

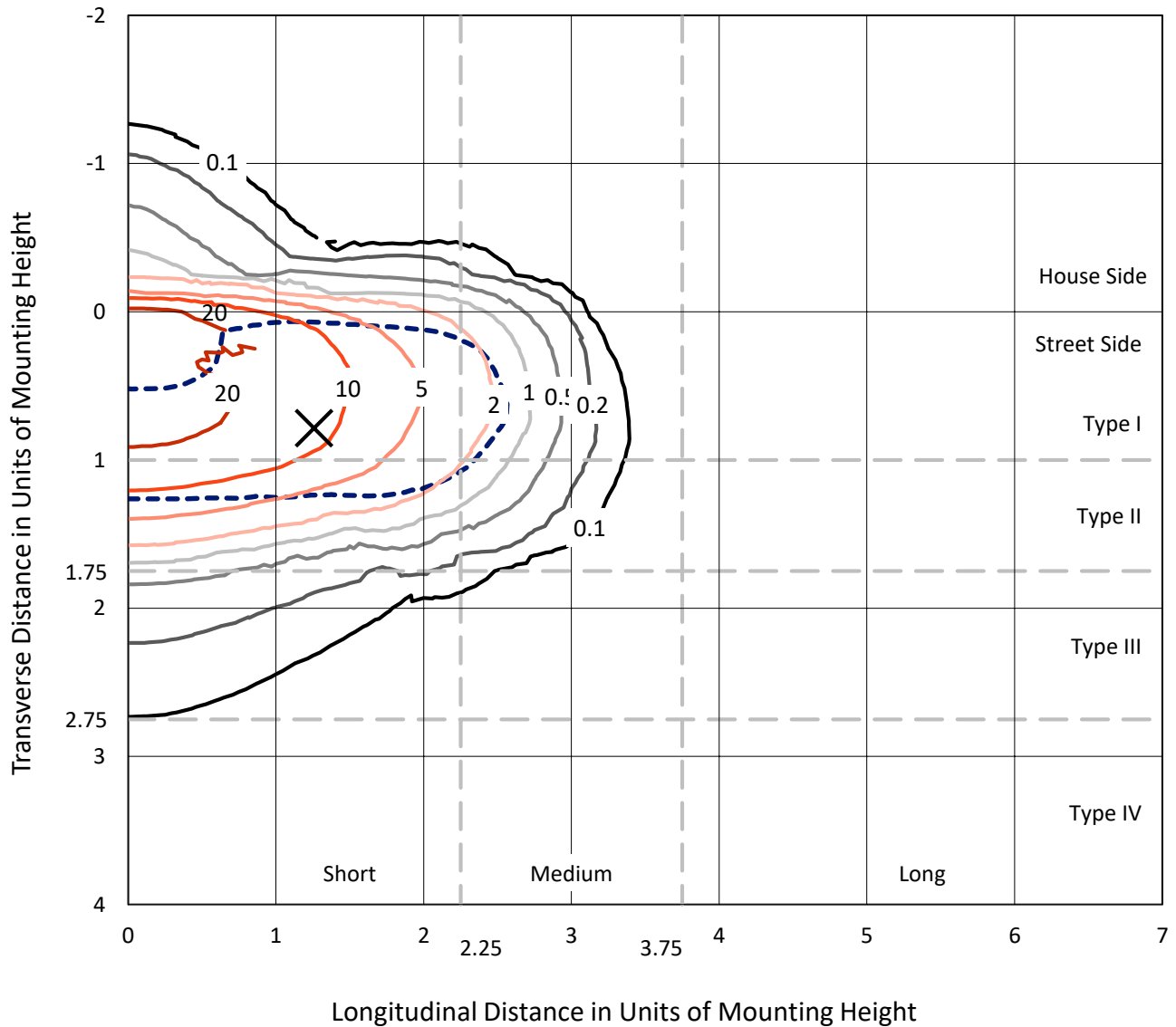


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

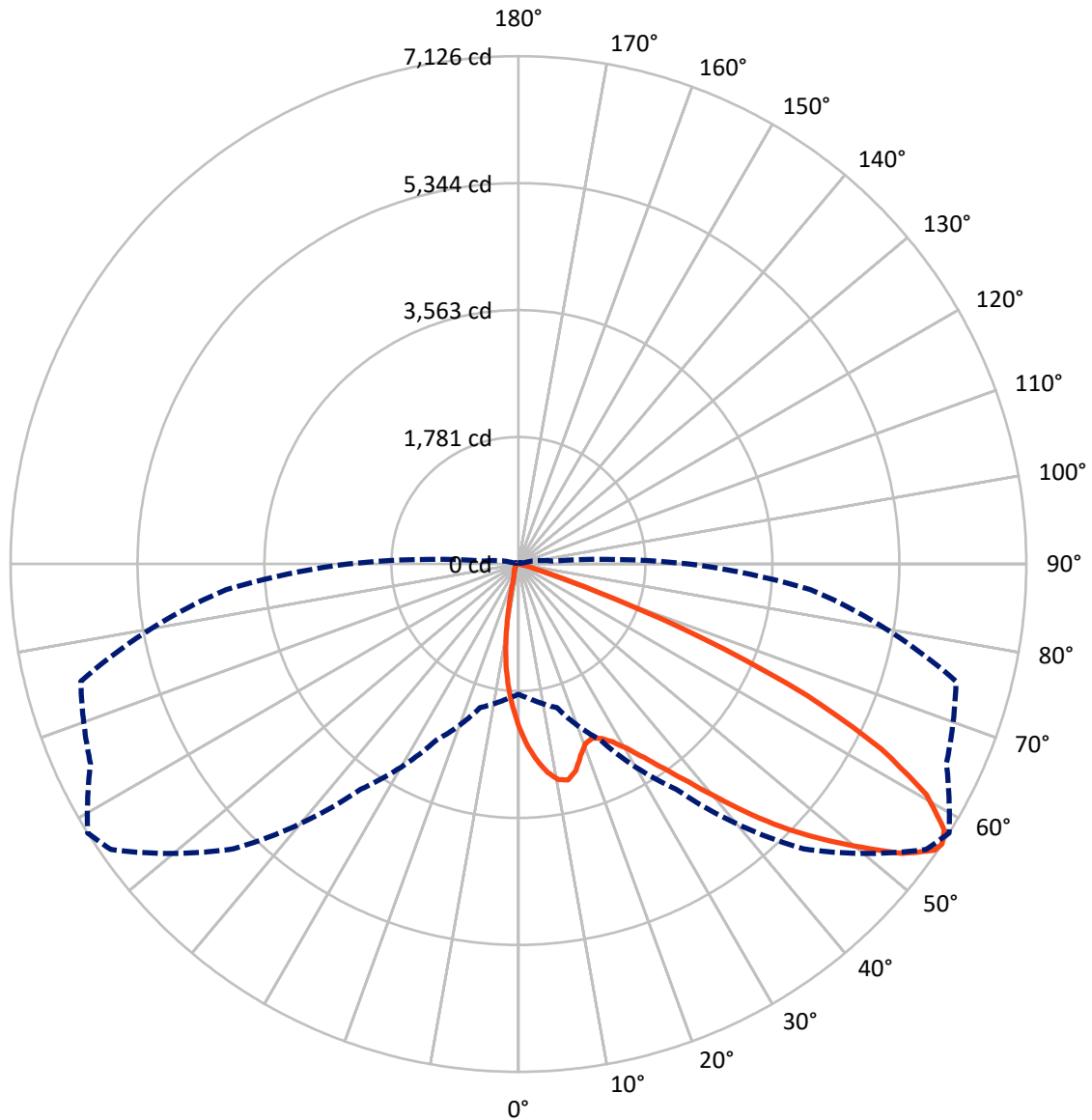


Based on 10 foot mounting height. Maximum calculated value = 28.8 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 56-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	510.2	0.0	510.2
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	7663.8	0.0	7663.8
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	8174.0	0.0	8174.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	197.4	2.4
10°-20°	459.4	5.6
20°-30°	773.0	9.5
30°-40°	1323.6	16.2
40°-50°	1997.4	24.4
50°-60°	2076.2	25.4
60°-70°	1165.6	14.3
70°-80°	159.7	2.0
80°-90°	21.6	0.3
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°	8174.0	100.0
0°-180°	8174.0	100.0

**Coefficient of Utilization**



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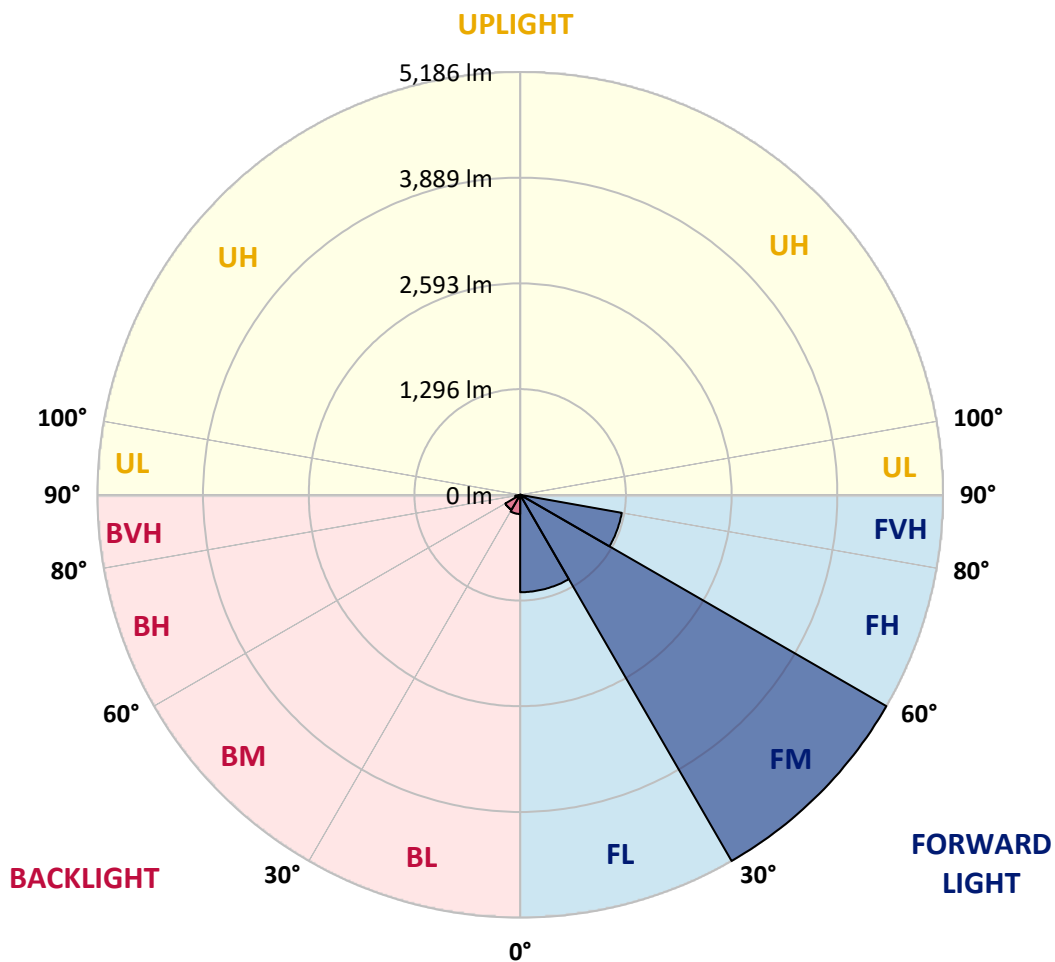
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1194.4	14.6			
FM	(30°-60°)	5185.9	63.4			
FH	(60°-80°)	1264.8	15.5			G1/1800
FVH	(80°-90°)	18.7	0.2			G1/100
BL	(0°-30°)	235.4	2.9	B1/500		
BM	(30°-60°)	211.3	2.6	B0/220		
BH	(60°-80°)	60.5	0.7	B0/110		G0/110
BVH	(80°-90°)	3.0	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-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3
2.5°	2784.5	2767.7	2750.2	2717.8	2687.9	2641.7	2578.1	2562.5	2512.6	2430.3	2353.6
5°	3024.6	3021.5	3009.7	2983.5	2951.0	2894.9	2823.2	2775.2	2697.8	2568.1	2420.3
7.5°	2882.4	2908.6	2951.7	3012.8	3053.9	3048.3	2993.4	2951.7	2875.0	2697.8	2485.8
10°	2429.7	2434.7	2493.9	2622.4	2825.7	3015.3	3087.0	3075.8	3005.3	2811.3	2543.2
12.5°	2270.0	2273.1	2286.9	2328.0	2460.2	2724.7	3049.6	3108.2	3102.6	2919.9	2604.3
15°	2282.5	2284.4	2288.1	2301.2	2338.6	2471.5	2860.0	3009.0	3164.9	3022.8	2664.2
17.5°	2381.0	2379.8	2367.9	2355.5	2367.3	2411.0	2666.7	2823.8	3151.8	3109.4	2713.4
20°	2573.1	2579.4	2539.4	2483.9	2455.2	2457.1	2571.2	2689.1	3078.3	3176.8	2750.2
22.5°	2843.1	2847.5	2782.0	2686.0	2601.8	2559.4	2591.2	2653.6	2993.4	3239.2	2780.2
25°	3165.6	3165.6	3073.9	2937.3	2807.0	2714.1	2686.6	2710.3	2961.0	3309.6	2810.1
27.5°	3513.6	3526.0	3406.3	3227.3	3055.2	2919.2	2833.2	2828.8	2986.0	3398.2	2843.8
30°	3892.1	3903.3	3761.1	3542.2	3338.3	3164.3	3032.1	3003.4	3081.4	3517.3	2893.0
32.5°	4268.8	4278.1	4121.0	3897.7	3660.1	3455.6	3281.6	3236.0	3252.9	3691.3	2965.4
35°	4747.7	4749.6	4550.7	4285.0	4031.2	3791.1	3570.9	3526.0	3507.3	3910.8	3069.5
37.5°	5128.8	5113.8	4987.8	4736.5	4445.3	4194.6	3935.8	3877.1	3832.2	4219.5	3231.0
40°	5218.6	5218.6	5199.9	5124.4	4893.0	4651.7	4401.0	4313.7	4214.5	4583.1	3448.1
42.5°	4984.7	4999.7	5123.2	5287.2	5289.0	5134.4	4889.3	4815.7	4641.1	4997.2	3685.1
45°	4461.5	4465.8	4762.1	5204.9	5505.4	5594.0	5413.1	5311.5	5069.5	5427.5	3902.1
47.5°	4273.1	4286.9	4412.8	4954.2	5521.7	5966.3	5915.8	5776.1	5466.2	5820.4	4104.8
50°	3983.8	4000.6	4154.7	4585.0	5375.7	6205.2	6396.6	6246.9	5827.2	6147.8	4205.2
52.5°	3291.5	3317.7	3535.4	4096.7	5010.9	6215.1	6836.9	6747.1	6197.1	6323.0	4193.3
55°	2265.0	2284.4	2538.2	3198.0	4275.0	5910.2	7026.5	7088.2	6527.0	6362.3	4135.9
56°	1827.2	1899.6	2085.4	2724.7	3855.9	5650.7	6982.8	7125.6	6624.9	6356.1	4111.0
57.5°	1208.0	1221.7	1424.4	1974.4	3096.3	5087.6	6785.8	7045.8	6750.8	6324.3	4092.9
60°	568.1	574.4	647.3	911.1	1675.7	3707.5	6145.3	6576.8	6797.0	6257.5	4092.3
62.5°	370.4	371.7	380.4	434.7	685.4	2019.3	5094.5	5715.6	6414.7	6250.1	4080.4
65°	305.0	308.1	297.5	304.3	358.6	761.5	3593.4	4455.9	5517.3	6074.2	3947.0
67.5°	268.8	269.4	255.1	247.0	262.6	334.3	1810.4	2810.7	4126.6	5161.2	3251.0
70°	245.1	244.5	228.3	209.5	210.2	222.0	590.0	1167.4	2283.1	3064.5	1866.5
72.5°	217.6	218.9	209.5	183.3	174.6	157.2	222.0	314.9	777.0	984.1	492.0
75°	190.8	188.3	179.0	162.1	145.9	105.4	111.6	134.1	202.7	200.8	106.0
77.5°	144.7	142.2	146.6	138.4	114.1	73.6	61.1	69.8	91.7	85.4	43.0
80°	110.4	109.1	99.8	118.5	104.1	55.5	41.8	43.0	49.9	45.5	21.2
82.5°	79.8	79.2	75.5	73.0	66.1	40.5	31.8	33.7	37.4	31.8	15.6
85°	30.6	30.6	59.2	49.9	45.5	27.4	22.5	24.3	28.7	23.1	10.6
87.5°	5.0	5.0	39.9	33.1	20.6	13.7	14.3	15.6	16.8	13.7	8.1
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°	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3	2314.3
2.5°	2308.1	2266.3	2174.6	2086.1	2008.7	1923.9	1880.9	1831.0	1812.3	1774.9	1778.6
5°	2331.8	2244.5	2060.5	1866.5	1688.8	1507.9	1379.5	1258.5	1191.1	1124.4	1124.4
7.5°	2356.1	2222.6	1938.3	1628.3	1329.0	1019.0	799.5	623.6	525.7	460.2	458.4
10°	2372.9	2194.6	1799.2	1352.0	910.5	525.1	316.8	249.5	225.1	214.5	213.9
12.5°	2394.8	2166.5	1640.8	1026.5	505.8	249.5	197.7	187.1	182.7	180.2	180.2
15°	2413.5	2126.6	1448.7	690.4	265.7	187.1	170.3	166.5	165.9	165.3	165.9
17.5°	2417.8	2069.8	1218.6	404.1	192.7	163.4	155.9	152.8	152.8	152.2	152.2
20°	2407.9	1995.0	964.1	249.5	166.5	150.3	142.2	138.4	137.8	137.8	137.8
22.5°	2387.3	1899.6	712.8	189.0	151.5	138.4	127.8	124.1	124.1	124.7	125.4
25°	2361.7	1786.7	489.6	162.8	140.3	126.0	115.4	111.6	112.9	114.1	114.7
27.5°	2329.3	1652.0	320.5	140.9	125.4	113.5	104.1	101.7	104.1	106.6	107.9
30°	2296.8	1504.2	217.0	122.2	108.5	99.8	94.2	93.5	97.3	102.9	103.5
32.5°	2275.6	1352.7	164.0	109.8	95.4	87.9	85.4	86.7	92.3	98.5	99.8
35°	2273.8	1204.9	139.7	99.8	86.7	79.8	78.6	82.3	88.6	93.5	94.8
37.5°	2303.1	1066.4	126.6	92.3	79.8	73.0	71.1	78.0	83.6	88.6	89.8
40°	2362.3	942.3	117.9	85.4	74.2	66.1	64.9	70.5	76.1	81.7	83.6
42.5°	2436.5	826.3	107.9	78.6	68.0	58.6	57.4	61.7	67.4	75.5	76.7
45°	2500.8	718.4	97.3	71.1	61.1	50.5	49.9	54.9	59.2	66.7	68.0
47.5°	2555.0	628.6	87.3	63.0	52.4	44.9	44.3	46.8	49.3	56.1	57.4
50°	2526.3	552.5	77.3	51.8	42.4	38.7	38.0	38.0	41.2	48.0	49.3
52.5°	2455.9	505.1	68.0	43.0	34.9	33.1	31.2	31.8	34.9	38.0	38.7
55°	2399.1	482.7	59.9	38.0	29.3	27.4	25.6	24.9	25.6	24.3	23.1
56°	2385.4	480.2	58.0	36.8	28.1	25.6	23.1	21.8	21.2	18.7	18.1
57.5°	2379.2	480.2	54.9	34.3	26.2	23.1	20.0	17.5	15.0	13.1	13.1
60°	2374.2	483.3	51.1	29.9	22.5	18.7	14.3	10.6	8.7	8.7	8.7
62.5°	2363.6	482.1	46.8	24.9	19.3	14.3	8.7	6.9	6.2	6.9	7.5
65°	2244.5	447.8	41.2	20.0	15.0	10.0	5.0	5.0	5.6	6.9	7.5
67.5°	1808.5	339.3	33.7	15.6	10.6	7.5	4.4	4.4	5.6	6.9	7.5
70°	993.4	179.0	28.7	11.2	8.1	6.2	4.4	3.7	5.6	6.9	7.5
72.5°	242.6	74.8	26.2	8.7	7.5	5.6	3.7	3.7	5.6	6.9	7.5
75°	59.9	56.1	21.2	6.9	6.2	5.0	3.7	3.7	5.6	6.9	7.5
77.5°	28.1	74.2	14.3	6.2	5.6	4.4	3.7	3.7	5.6	6.9	6.9
80°	16.8	56.1	8.7	5.6	5.0	4.4	3.7	3.7	5.6	6.9	7.5
82.5°	10.0	16.2	6.2	5.6	5.0	3.7	3.7	3.7	5.6	6.9	7.5
85°	8.7	8.1	6.2	5.6	5.0	4.4	3.7	3.7	6.2	7.5	7.5
87.5°	6.9	6.2	5.6	5.0	5.0	4.4	3.7	3.7	5.6	6.9	7.5
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)