

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: P270415

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270415
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-7027-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 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: 8702.8 lumens
Efficiency: N/A
Efficacy: 90.7 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

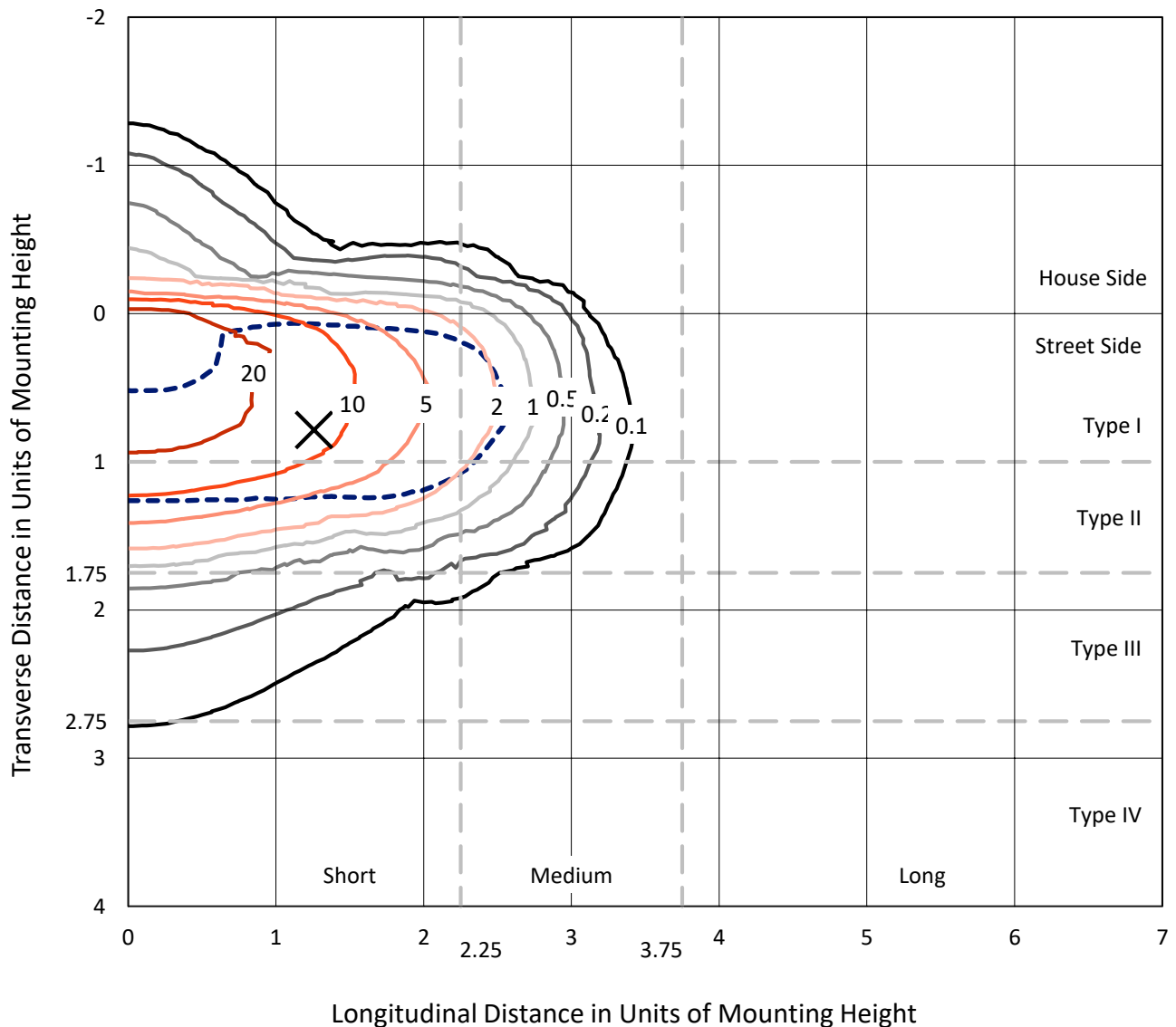


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

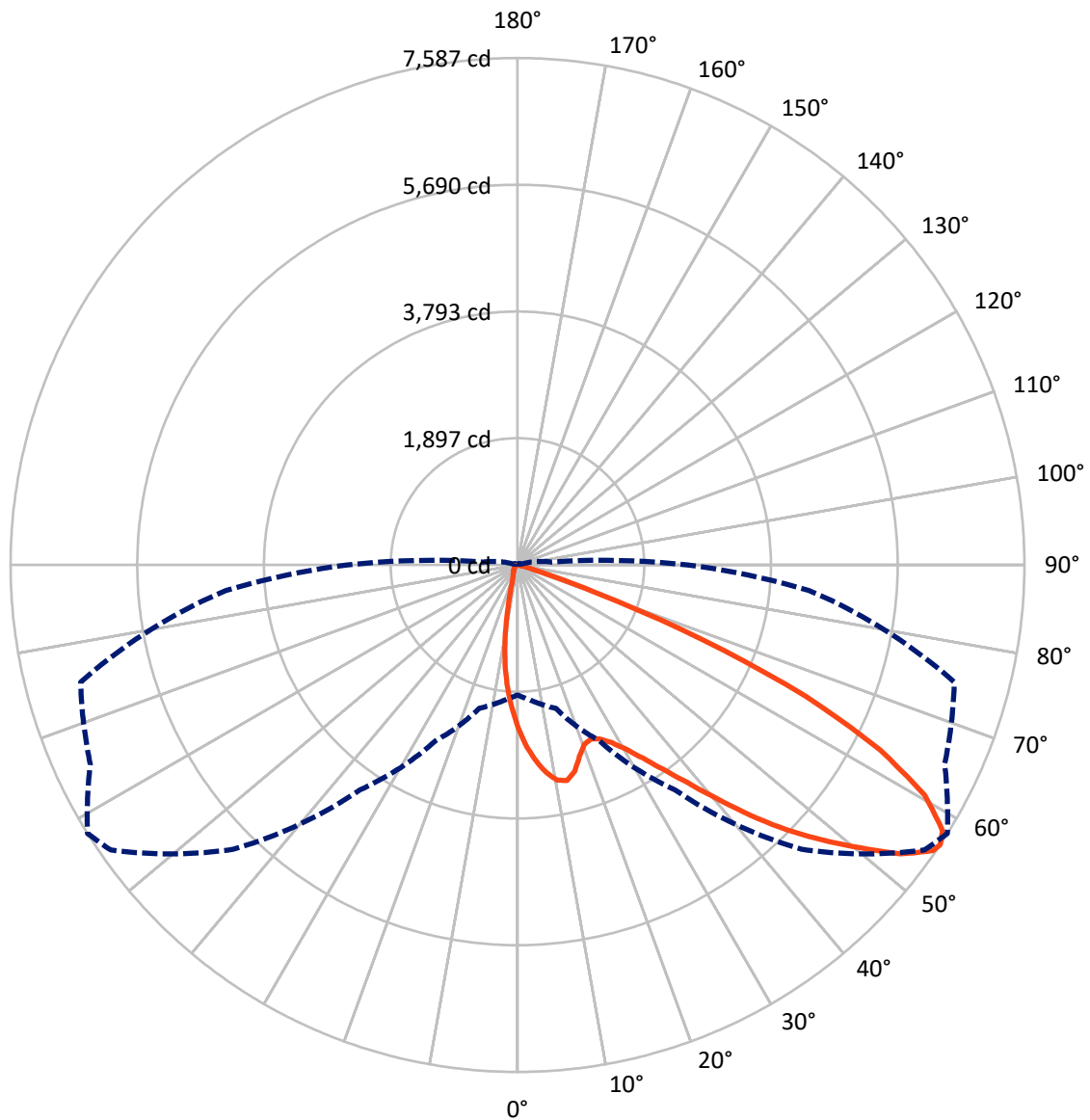


Based on 10 foot mounting height. Maximum calculated value = 30.6 fc
 Type II - Short - Full Cutoff

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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
House Side	Lumens	543.2	0.0	543.2
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	8159.6	0.0	8159.6
	% Fixture	93.8	0.0	93.8
Total	Lumens	8702.8	0.0	8702.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.2	2.4
10°-20°	489.1	5.6
20°-30°	823.0	9.5
30°-40°	1409.3	16.2
40°-50°	2126.6	24.4
50°-60°	2210.6	25.4
60°-70°	1241.0	14.3
70°-80°	170.1	2.0
80°-90°	23.1	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°	8702.8	100.0
0°-180°	8702.8	100.0

Coefficient of Utilization



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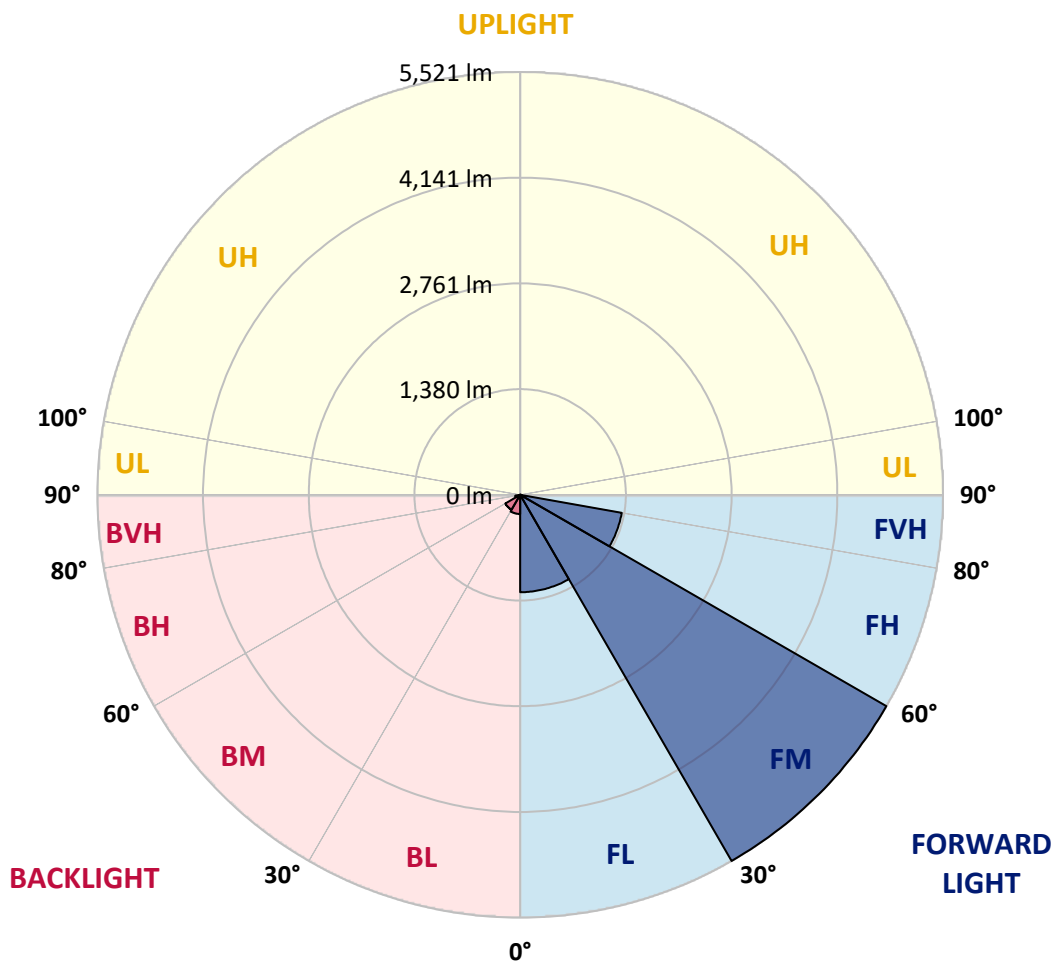
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1271.7	14.6			
FM	(30°-60°)	5521.4	63.4			
FH	(60°-80°)	1346.6	15.5			G1/1800
FVH	(80°-90°)	19.9	0.2			G1/100
BL	(0°-30°)	250.6	2.9	B1/500		
BM	(30°-60°)	225.0	2.6	B1/1000		
BH	(60°-80°)	64.4	0.7	B0/110		G0/110
BVH	(80°-90°)	3.2	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°	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1
2.5°	2964.6	2946.7	2928.1	2893.6	2861.7	2812.7	2745.0	2728.3	2675.2	2587.5	2505.8
5°	3220.3	3217.0	3204.3	3176.4	3141.9	3082.2	3005.8	2954.7	2872.4	2734.4	2576.9
7.5°	3068.9	3096.7	3142.6	3207.7	3251.5	3245.5	3187.0	3142.6	3061.0	2872.4	2646.6
10°	2586.8	2592.1	2655.2	2792.0	3008.6	3210.4	3286.7	3274.7	3199.8	2993.2	2707.8
12.5°	2416.9	2420.3	2434.8	2478.7	2619.4	2900.9	3246.8	3309.3	3303.2	3108.8	2772.8
15°	2430.2	2432.2	2436.2	2450.0	2489.9	2631.3	3045.1	3203.6	3369.7	3218.3	2836.5
17.5°	2535.0	2533.7	2521.2	2507.9	2520.5	2566.9	2839.2	3006.4	3355.8	3310.7	2888.9
20°	2739.7	2746.2	2703.7	2644.6	2614.1	2616.0	2737.6	2863.1	3277.3	3382.3	2928.1
22.5°	3027.1	3031.7	2962.0	2859.8	2770.2	2725.0	2758.9	2825.2	3187.0	3448.8	2960.1
25°	3370.4	3370.4	3272.7	3127.3	2988.7	2889.7	2860.5	2885.6	3152.6	3523.7	2991.9
27.5°	3740.8	3754.1	3626.6	3436.0	3252.9	3108.0	3016.5	3011.7	3179.1	3618.1	3027.7
30°	4143.9	4155.9	4004.5	3771.4	3554.2	3369.1	3228.2	3197.7	3280.7	3744.9	3080.2
32.5°	4545.0	4554.9	4387.6	4149.9	3896.8	3679.1	3493.9	3445.4	3463.3	3930.1	3157.3
35°	5054.9	5056.9	4845.1	4562.2	4291.9	4036.4	3801.9	3754.1	3734.3	4163.9	3268.2
37.5°	5460.5	5444.6	5310.5	5042.9	4732.8	4466.0	4190.4	4127.9	4080.1	4492.5	3440.1
40°	5556.1	5556.1	5536.3	5455.9	5209.6	4952.6	4685.6	4592.8	4487.2	4879.6	3671.2
42.5°	5307.1	5323.1	5454.6	5629.1	5631.2	5466.5	5205.6	5127.3	4941.3	5320.4	3923.4
45°	4750.1	4754.8	5070.2	5541.6	5861.6	5955.9	5763.3	5655.1	5397.5	5778.5	4154.5
47.5°	4549.6	4564.2	4698.3	5274.7	5878.9	6352.3	6298.5	6149.7	5819.8	6196.9	4370.3
50°	4241.4	4259.5	4423.4	4881.6	5723.6	6606.6	6810.4	6651.1	6204.2	6545.5	4477.2
52.5°	3504.5	3532.3	3764.1	4361.7	5335.0	6617.3	7279.1	7183.6	6598.0	6732.1	4464.5
55°	2411.6	2432.2	2702.5	3404.8	4551.6	6292.5	7481.1	7546.8	6949.2	6773.8	4403.5
56°	1945.5	2022.4	2220.3	2900.9	4105.3	6016.3	7434.6	7586.6	7053.4	6767.3	4376.9
57.5°	1286.2	1300.7	1516.5	2102.2	3296.7	5416.7	7224.8	7501.7	7187.6	6733.4	4357.7
60°	604.9	611.6	689.2	970.1	1784.2	3947.3	6542.9	7002.3	7236.7	6662.4	4357.0
62.5°	394.4	395.8	405.0	462.7	729.8	2150.0	5424.1	6085.4	6829.6	6654.4	4344.5
65°	324.6	328.1	316.7	324.0	381.8	810.7	3825.8	4744.0	5874.2	6467.2	4202.4
67.5°	286.2	286.9	271.6	262.9	279.6	355.9	1927.6	2992.6	4393.5	5495.1	3461.3
70°	261.0	260.2	243.0	223.0	223.8	236.3	628.2	1243.0	2430.9	3262.9	1987.3
72.5°	231.8	233.1	223.0	195.2	185.9	167.4	236.3	335.2	827.2	1047.8	523.9
75°	203.1	200.5	190.6	172.7	155.3	112.2	118.8	142.7	215.9	213.7	112.8
77.5°	154.0	151.4	156.0	147.4	121.5	78.3	65.0	74.4	97.6	91.0	45.9
80°	117.5	116.2	106.2	126.1	110.9	59.1	44.5	45.9	53.1	48.5	22.5
82.5°	85.0	84.4	80.4	77.8	70.3	43.2	33.9	35.8	39.9	33.9	16.6
85°	32.5	32.5	63.2	53.1	48.5	29.3	24.0	26.0	30.5	24.6	11.3
87.5°	5.3	5.3	42.5	35.3	21.9	14.6	15.4	16.6	18.0	14.6	8.7
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°	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1	2464.1
2.5°	2457.5	2412.8	2315.3	2221.0	2138.7	2048.3	2002.5	1949.4	1929.5	1889.7	1893.6
5°	2482.6	2389.6	2193.8	1987.3	1798.0	1605.5	1468.6	1339.9	1268.1	1197.1	1197.1
7.5°	2508.4	2366.4	2063.6	1733.6	1414.9	1085.0	851.2	663.9	559.7	490.0	488.0
10°	2526.5	2336.5	1915.5	1439.5	969.5	559.0	337.4	265.5	239.7	228.3	227.7
12.5°	2549.7	2306.7	1746.9	1092.9	538.4	265.5	210.6	199.2	194.6	191.9	191.9
15°	2569.6	2264.2	1542.4	735.1	282.8	199.2	181.3	177.2	176.6	176.0	176.6
17.5°	2574.3	2203.7	1297.4	430.3	205.2	173.9	165.9	162.7	162.7	162.1	162.1
20°	2563.7	2124.0	1026.6	265.5	177.2	160.0	151.4	147.4	146.8	146.8	146.8
22.5°	2541.8	2022.4	758.9	201.2	161.3	147.4	136.2	132.1	132.1	132.8	133.5
25°	2514.4	1902.3	521.2	173.4	149.4	134.1	122.9	118.8	120.2	121.5	122.2
27.5°	2480.0	1758.9	341.3	150.0	133.5	120.8	110.9	108.2	110.9	113.5	114.9
30°	2445.5	1601.5	231.0	130.2	115.5	106.2	100.3	99.6	103.6	109.6	110.2
32.5°	2422.9	1440.2	174.6	116.9	101.6	93.7	91.0	92.3	98.3	104.9	106.2
35°	2420.8	1282.8	148.7	106.2	92.3	85.0	83.6	87.7	94.3	99.6	100.9
37.5°	2452.1	1135.4	134.7	98.3	85.0	77.8	75.6	83.1	89.0	94.3	95.6
40°	2515.2	1003.2	125.6	91.0	79.1	70.3	69.1	75.0	80.9	87.0	89.0
42.5°	2594.1	879.8	114.9	83.6	72.4	62.4	61.1	65.8	71.8	80.4	81.7
45°	2662.5	764.8	103.6	75.6	65.0	53.8	53.1	58.4	63.2	71.1	72.4
47.5°	2720.2	669.2	93.0	67.1	55.8	47.8	47.2	49.8	52.5	59.7	61.1
50°	2689.7	588.3	82.4	55.2	45.2	41.1	40.6	40.6	43.7	51.2	52.5
52.5°	2614.7	537.8	72.4	45.9	37.2	35.3	33.1	33.9	37.2	40.6	41.1
55°	2554.3	513.9	63.7	40.6	31.3	29.3	27.2	26.6	27.2	26.0	24.6
56°	2539.7	511.2	61.8	39.2	29.9	27.2	24.6	23.3	22.5	19.9	19.3
57.5°	2533.1	511.2	58.4	36.6	27.8	24.6	21.2	18.5	15.9	14.0	14.0
60°	2527.8	514.5	54.4	31.9	24.0	19.9	15.4	11.3	9.3	9.3	9.3
62.5°	2516.5	513.2	49.8	26.6	20.7	15.4	9.3	7.2	6.6	7.2	7.9
65°	2389.6	476.7	43.7	21.2	15.9	10.6	5.3	5.3	6.0	7.2	7.9
67.5°	1925.5	361.2	35.8	16.6	11.3	7.9	4.6	4.6	6.0	7.2	7.9
70°	1057.8	190.6	30.5	11.9	8.7	6.6	4.6	4.0	6.0	7.2	7.9
72.5°	258.4	79.7	27.8	9.3	7.9	6.0	4.0	4.0	6.0	7.2	7.9
75°	63.7	59.7	22.5	7.2	6.6	5.3	4.0	4.0	6.0	7.2	7.9
77.5°	29.9	79.1	15.4	6.6	6.0	4.6	4.0	4.0	6.0	7.2	7.2
80°	18.0	59.7	9.3	6.0	5.3	4.6	4.0	4.0	6.0	7.2	7.9
82.5°	10.6	17.2	6.6	6.0	5.3	4.0	4.0	4.0	6.0	7.2	7.9
85°	9.3	8.7	6.6	6.0	5.3	4.6	4.0	4.0	6.6	7.9	7.9
87.5°	7.2	6.6	6.0	5.3	5.3	4.6	4.0	4.0	6.0	7.2	7.9
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)