

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: P196475

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196475
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-05-D-UNV-AFL-7030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 800mA 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: 19722.4 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 210
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

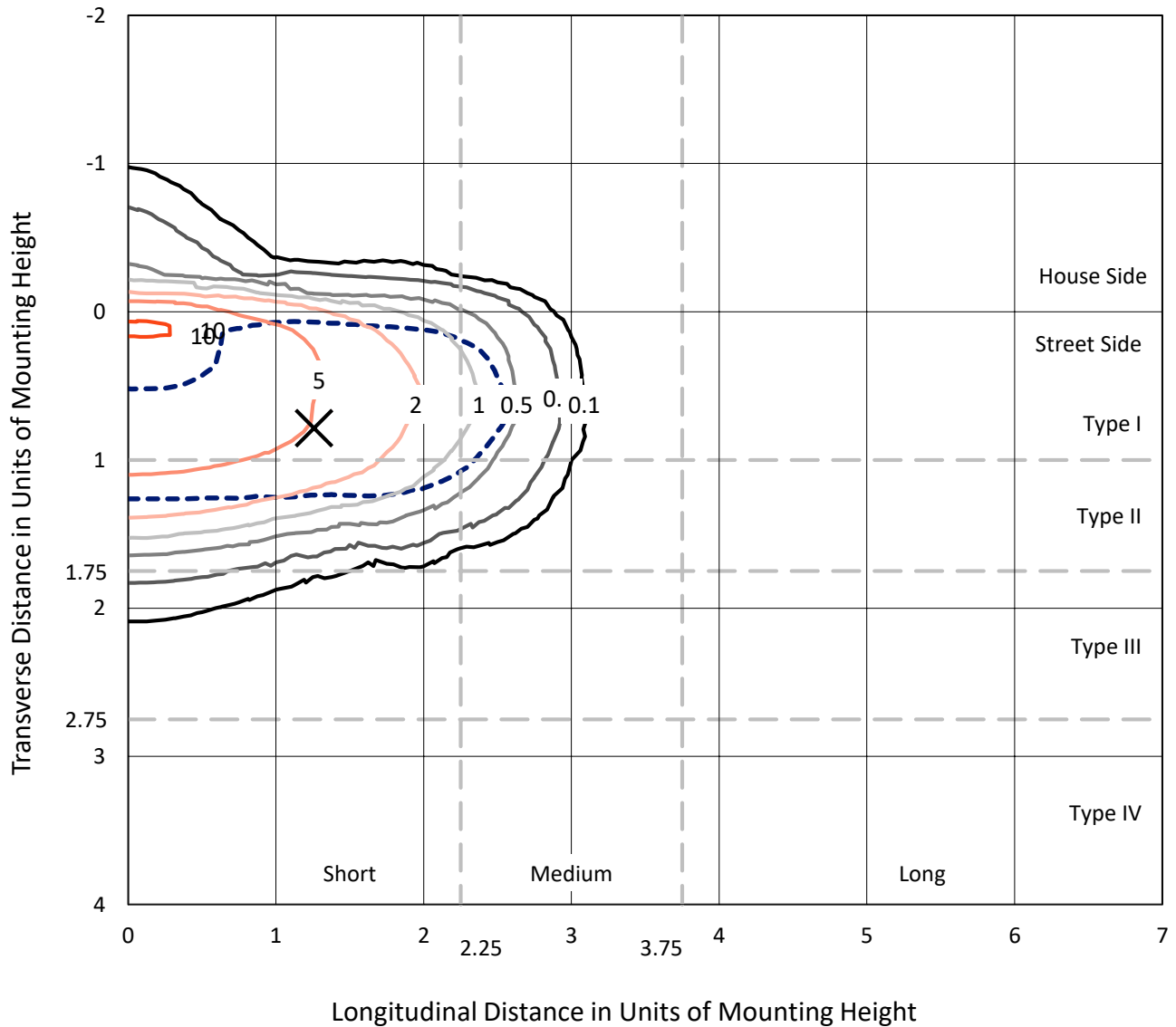


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

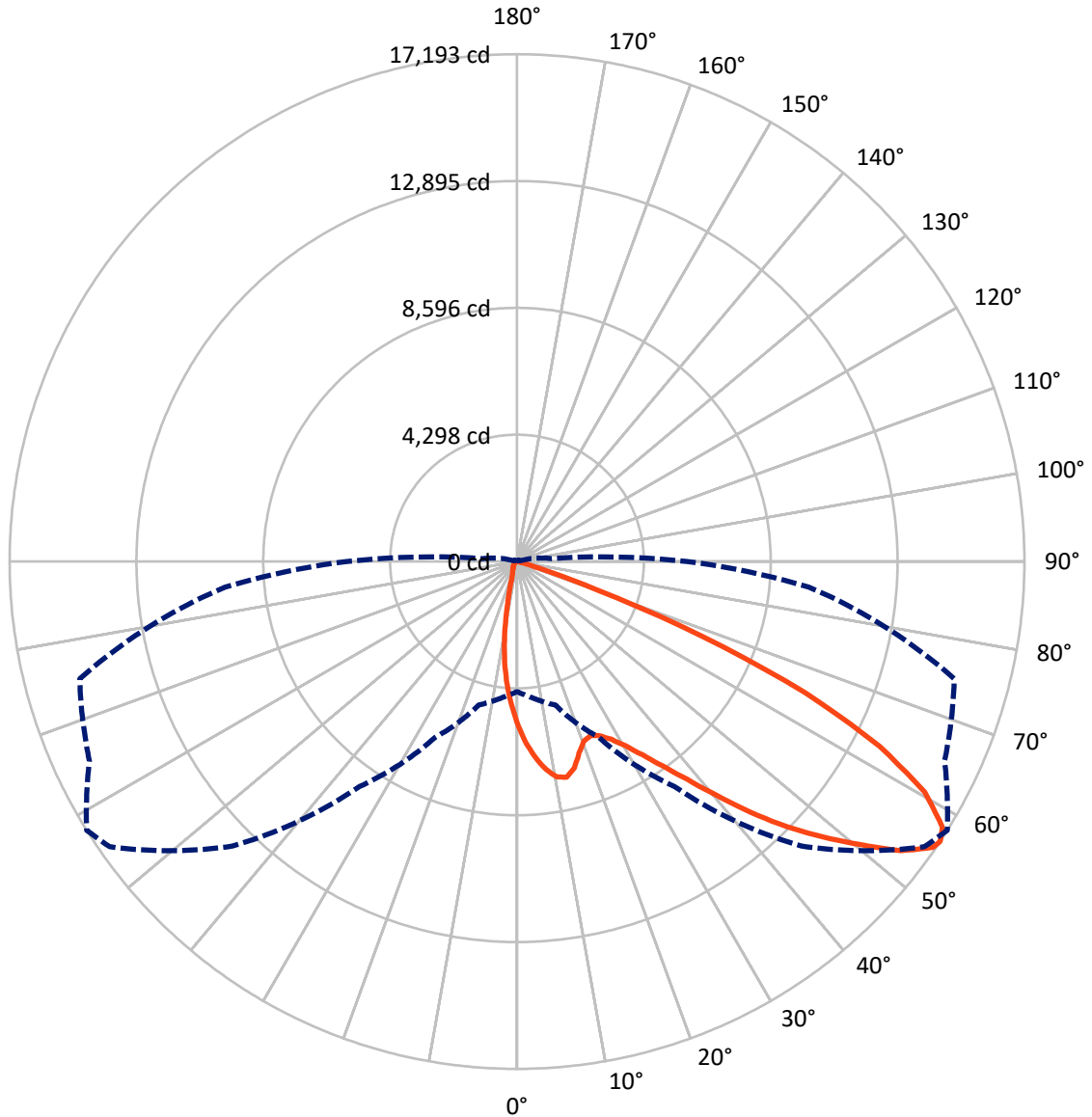


Based on 25 foot mounting height. Maximum calculated value = 11.1 fc
 Type II - Short - Full Cutoff

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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	1231.1	0.0	1231.1
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	18491.3	0.0	18491.3
	% Fixture	93.8	0.0	93.8
Total	Lumens	19722.4	0.0	19722.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	476.3	2.4
10°-20°	1108.4	5.6
20°-30°	1865.1	9.5
30°-40°	3193.7	16.2
40°-50°	4819.4	24.4
50°-60°	5009.6	25.4
60°-70°	2812.3	14.3
70°-80°	385.4	2.0
80°-90°	52.2	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°	19722.4	100.0
0°-180°	19722.4	100.0

Coefficient of Utilization



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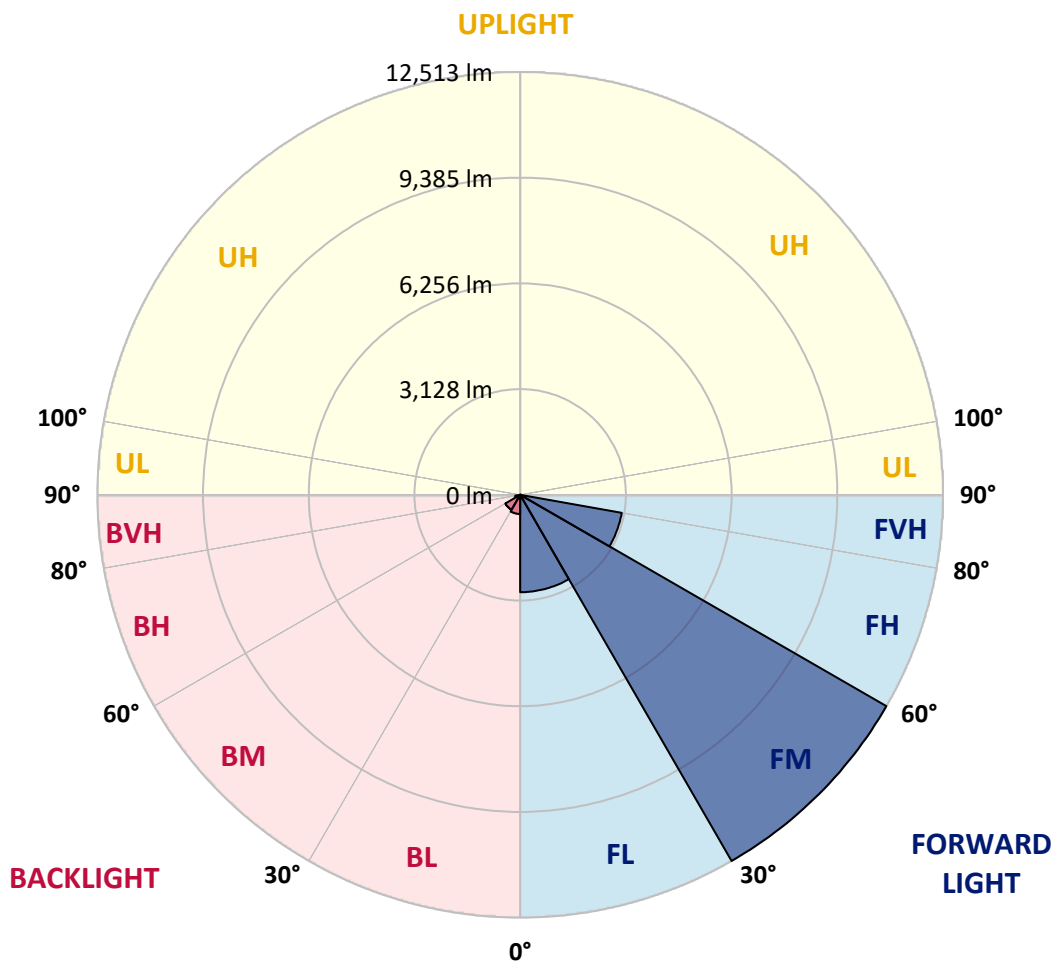
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2881.9	14.6			
FM	(30°-60°)	12512.7	63.4			
FH	(60°-80°)	3051.7	15.5			G2/5000
FVH	(80°-90°)	45.0	0.2			G1/100
BL	(0°-30°)	567.9	2.9	B2/1000		
BM	(30°-60°)	509.9	2.6	B1/1000		
BH	(60°-80°)	146.0	0.7	B1/500		G1/500
BVH	(80°-90°)	7.2	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0
2.5°	6718.6	6677.9	6635.8	6557.5	6485.3	6373.9	6220.4	6182.9	6062.5	5863.8	5678.8
5°	7297.9	7290.4	7261.8	7198.5	7120.3	6985.0	6811.9	6696.0	6509.4	6196.4	5839.8
7.5°	6954.8	7018.0	7121.8	7269.2	7368.6	7355.0	7222.7	7121.8	6936.8	6509.4	5997.8
10°	5862.5	5874.5	6017.4	6327.3	6817.9	7275.3	7448.3	7421.2	7251.2	6783.3	6136.2
12.5°	5477.1	5484.7	5517.8	5617.1	5936.0	6574.1	7358.1	7499.5	7486.0	7045.0	6283.7
15°	5507.2	5511.8	5520.8	5552.4	5642.7	5963.2	6900.6	7260.3	7636.4	7293.4	6428.2
17.5°	5745.0	5742.0	5713.3	5683.3	5711.8	5817.2	6434.2	6813.4	7604.9	7502.5	6547.1
20°	6208.4	6223.5	6127.3	5993.3	5924.0	5928.6	6204.0	6488.4	7427.3	7665.0	6635.8
22.5°	6860.0	6870.6	6712.6	6480.8	6277.7	6175.4	6252.2	6402.6	7222.7	7815.6	6708.1
25°	7638.0	7638.0	7416.7	7087.2	6772.8	6548.6	6482.4	6539.5	7144.4	7985.5	6780.3
27.5°	8477.5	8507.7	8218.8	7786.9	7371.6	7043.6	6836.0	6825.4	7204.5	8199.3	6861.5
30°	9391.0	9418.0	9075.0	8546.8	8054.7	7634.9	7315.9	7246.7	7434.8	8486.6	6980.3
32.5°	10299.8	10322.4	9943.1	9404.5	8831.2	8337.7	7917.8	7808.0	7848.6	8906.4	7155.0
35°	11455.4	11459.8	10979.9	10338.8	9726.5	9147.1	8615.9	8507.7	8462.5	9436.0	7406.2
37.5°	12374.8	12338.6	12034.7	11428.3	10725.7	10120.6	9496.3	9354.8	9246.5	10180.9	7795.9
40°	12591.5	12591.5	12546.4	12364.3	11806.0	11223.6	10618.8	10408.1	10168.9	11058.1	8319.5
42.5°	12027.1	12063.4	12361.3	12757.0	12761.5	12388.4	11796.9	11619.4	11198.1	12057.3	8891.4
45°	10764.8	10775.2	11490.0	12558.4	13283.6	13497.4	13061.0	12815.7	12231.8	13095.6	9415.0
47.5°	10310.4	10343.5	10647.5	11953.5	13322.7	14395.7	14273.7	13936.7	13188.8	14043.5	9904.1
50°	9612.1	9652.7	10024.4	11062.7	12970.7	14971.9	15433.9	15072.8	14060.0	14833.5	10146.4
52.5°	7941.9	8005.1	8530.2	9884.4	12090.4	14996.1	16496.2	16279.5	14952.3	15256.3	10117.7
55°	5465.1	5511.8	6124.2	7716.2	10314.8	14260.2	16953.6	17102.6	15748.4	15351.2	9979.3
56°	4408.8	4583.3	5031.8	6574.1	9303.7	13634.3	16848.4	17192.9	15984.6	15336.0	9919.1
57.5°	2914.6	2947.7	3436.7	4763.9	7470.9	12275.5	16372.8	17000.3	16288.6	15259.3	9875.5
60°	1370.7	1385.9	1561.9	2198.4	4043.1	8945.5	14827.5	15868.7	16400.0	15098.3	9874.0
62.5°	893.8	896.8	917.9	1048.8	1653.6	4872.3	12292.0	13790.7	15477.5	15080.3	9845.4
65°	735.9	743.3	717.8	734.3	865.3	1837.3	8670.2	10751.2	13312.2	14655.9	9523.4
67.5°	648.6	650.0	615.4	595.9	633.4	806.6	4368.1	6781.7	9956.7	12453.1	7844.0
70°	591.3	589.9	550.7	505.6	507.1	535.7	1423.4	2816.8	5508.8	7394.2	4503.6
72.5°	525.1	528.2	505.6	442.4	421.3	379.2	535.7	759.9	1874.9	2374.4	1187.2
75°	460.4	454.4	431.9	391.2	352.2	254.2	269.4	323.5	489.1	484.6	255.7
77.5°	349.1	343.1	353.6	334.0	275.4	177.5	147.5	168.5	221.1	206.2	103.8
80°	266.4	263.4	240.8	285.9	251.3	134.0	100.8	103.8	120.4	109.8	51.2
82.5°	192.7	191.1	182.0	176.0	159.5	97.8	76.7	81.3	90.2	76.7	37.5
85°	73.8	73.8	142.9	120.4	109.8	66.2	54.2	58.7	69.3	55.7	25.5
87.5°	12.0	12.0	96.2	79.8	49.6	33.1	34.6	37.5	40.7	33.1	19.5
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°	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0	5584.0
2.5°	5569.0	5468.1	5246.9	5033.2	4846.7	4642.1	4538.2	4417.9	4372.7	4282.4	4291.4
5°	5626.1	5415.4	4971.7	4503.6	4074.9	3638.5	3328.5	3036.6	2873.9	2713.0	2713.0
7.5°	5684.9	5362.8	4676.7	3928.9	3206.5	2458.7	1929.1	1504.7	1268.5	1110.5	1105.9
10°	5725.4	5295.1	4341.1	3262.3	2196.8	1267.0	764.4	601.9	543.2	517.7	516.1
12.5°	5778.0	5227.4	3958.9	2476.8	1220.3	601.9	477.0	451.5	440.9	434.9	434.9
15°	5823.3	5131.1	3495.4	1665.7	641.1	451.5	410.9	401.7	400.2	398.8	400.2
17.5°	5833.8	4994.1	2940.1	975.0	465.0	394.2	376.2	368.6	368.6	367.1	367.1
20°	5809.8	4813.6	2326.2	601.9	401.7	362.6	343.1	334.0	332.5	332.5	332.5
22.5°	5760.0	4583.3	1719.8	455.9	365.7	334.0	308.4	299.5	299.5	300.9	302.4
25°	5698.4	4311.1	1181.2	392.7	338.6	304.0	278.4	269.4	272.4	275.4	276.9
27.5°	5620.1	3986.0	773.4	340.1	302.4	273.9	251.3	245.3	251.3	257.3	260.4
30°	5541.8	3629.4	523.7	294.9	261.7	240.8	227.3	225.7	234.7	248.2	249.7
32.5°	5490.8	3263.7	395.7	264.9	230.2	212.2	206.2	209.1	222.7	237.7	240.8
35°	5486.2	2907.1	337.1	240.8	209.1	192.7	189.6	198.7	213.7	225.7	228.7
37.5°	5556.9	2573.0	305.5	222.7	192.7	176.0	171.5	188.0	201.6	213.7	216.7
40°	5699.8	2273.5	284.4	206.2	179.0	159.5	156.5	170.0	183.5	197.1	201.6
42.5°	5878.9	1993.8	260.4	189.6	164.0	141.5	138.4	148.9	162.5	182.0	185.0
45°	6034.0	1733.4	234.7	171.5	147.5	122.0	120.4	132.4	142.9	161.0	164.0
47.5°	6164.9	1516.7	210.7	152.0	126.4	108.3	106.8	112.9	118.9	135.4	138.4
50°	6095.6	1333.2	186.7	124.9	102.2	93.3	91.8	91.8	99.3	115.9	118.9
52.5°	5925.5	1218.8	164.0	103.8	84.2	79.8	75.3	76.7	84.2	91.8	93.3
55°	5788.7	1164.7	144.4	91.8	70.7	66.2	61.7	60.2	61.7	58.7	55.7
56°	5755.6	1158.5	140.0	88.8	67.7	61.7	55.7	52.7	51.2	45.2	43.6
57.5°	5740.5	1158.5	132.4	82.7	63.2	55.7	48.2	42.2	36.2	31.5	31.5
60°	5728.5	1166.2	123.4	72.2	54.2	45.2	34.6	25.5	21.1	21.1	21.1
62.5°	5702.9	1163.2	112.9	60.2	46.7	34.6	21.1	16.5	15.1	16.5	18.0
65°	5415.4	1080.3	99.3	48.2	36.2	24.0	12.0	12.0	13.5	16.5	18.0
67.5°	4363.7	818.6	81.3	37.5	25.5	18.0	10.5	10.5	13.5	16.5	18.0
70°	2397.0	431.9	69.3	27.1	19.5	15.1	10.5	9.1	13.5	16.5	18.0
72.5°	585.3	180.6	63.2	21.1	18.0	13.5	9.1	9.1	13.5	16.5	18.0
75°	144.4	135.4	51.2	16.5	15.1	12.0	9.1	9.1	13.5	16.5	18.0
77.5°	67.7	179.0	34.6	15.1	13.5	10.5	9.1	9.1	13.5	16.5	16.5
80°	40.7	135.4	21.1	13.5	12.0	10.5	9.1	9.1	13.5	16.5	18.0
82.5°	24.0	39.2	15.1	13.5	12.0	9.1	9.1	9.1	13.5	16.5	18.0
85°	21.1	19.5	15.1	13.5	12.0	10.5	9.1	9.1	15.1	18.0	18.0
87.5°	16.5	15.1	13.5	12.0	12.0	10.5	9.1	9.1	13.5	16.5	18.0
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)