

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: P196968

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196968
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-06-D-UNV-AFL-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1200mA 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: 27065 lumens
Efficiency: N/A
Efficacy: 70.9 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): 382
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

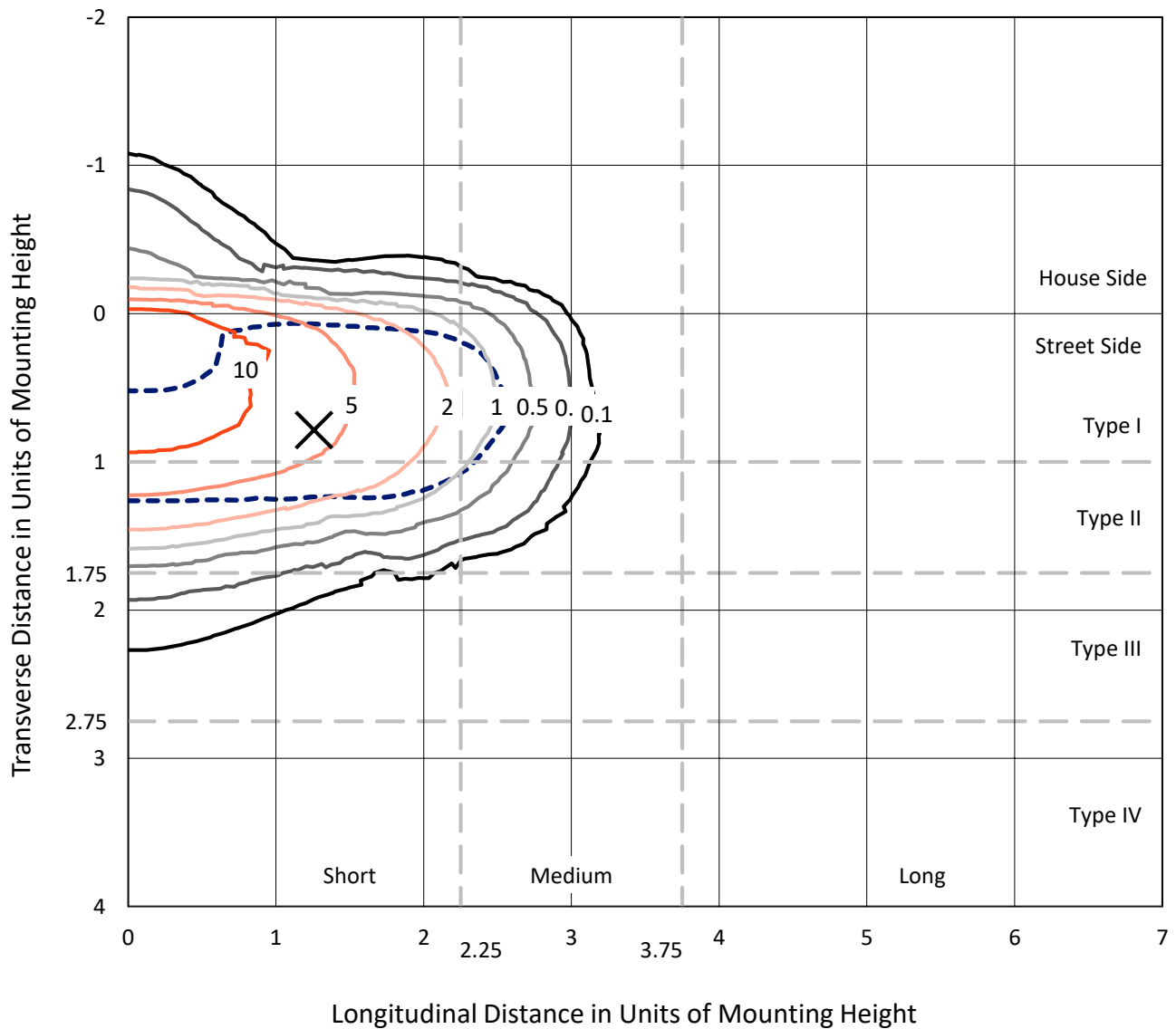


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

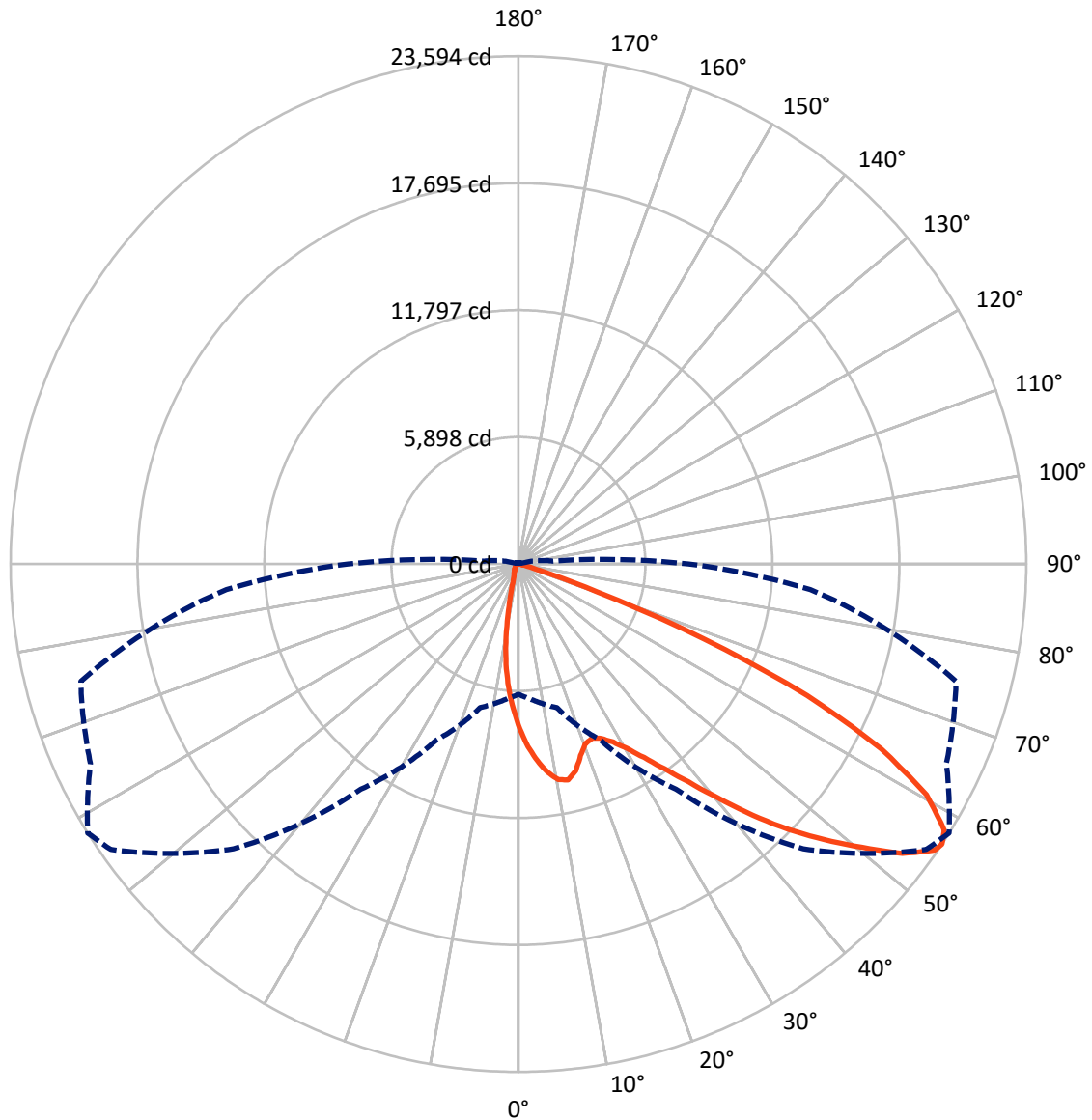


Based on 25 foot mounting height. Maximum calculated value = 15.2 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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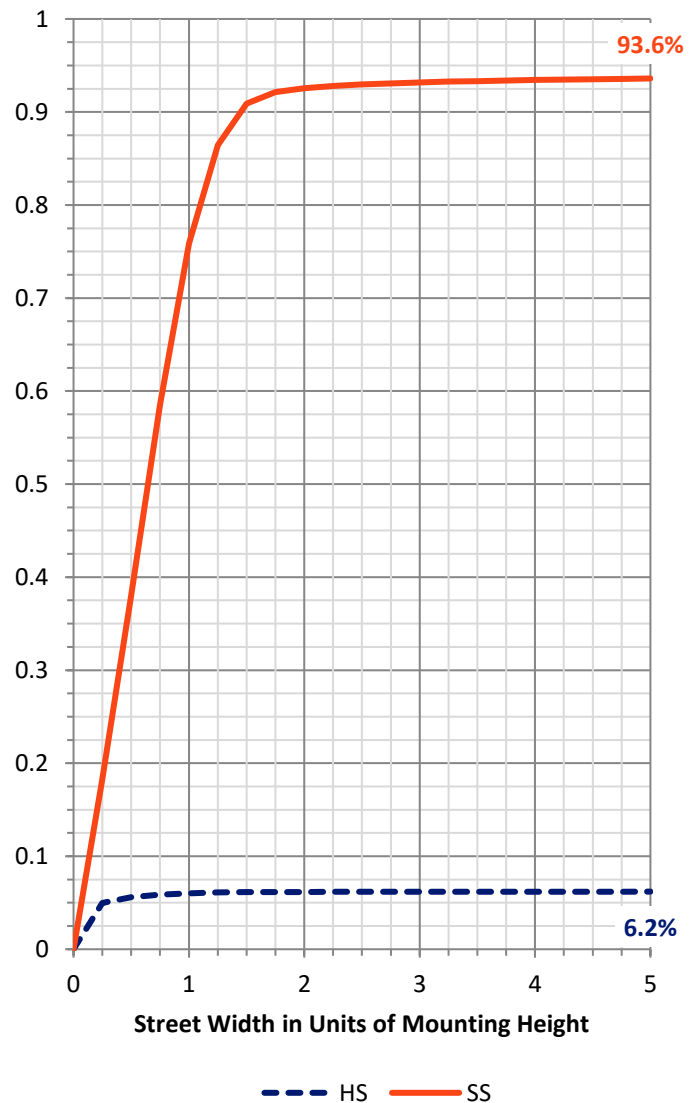
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1689.4	0.0	1689.4
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	25375.6	0.0	25375.6
	% Fixture	93.8	0.0	93.8
Total	Lumens	27065.0	0.0	27065.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	653.7	2.4
10°-20°	1521.0	5.6
20°-30°	2559.4	9.5
30°-40°	4382.7	16.2
40°-50°	6613.6	24.4
50°-60°	6874.6	25.4
60°-70°	3859.3	14.3
70°-80°	528.9	2.0
80°-90°	71.7	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°	27065.0	100.0
0°-180°	27065.0	100.0



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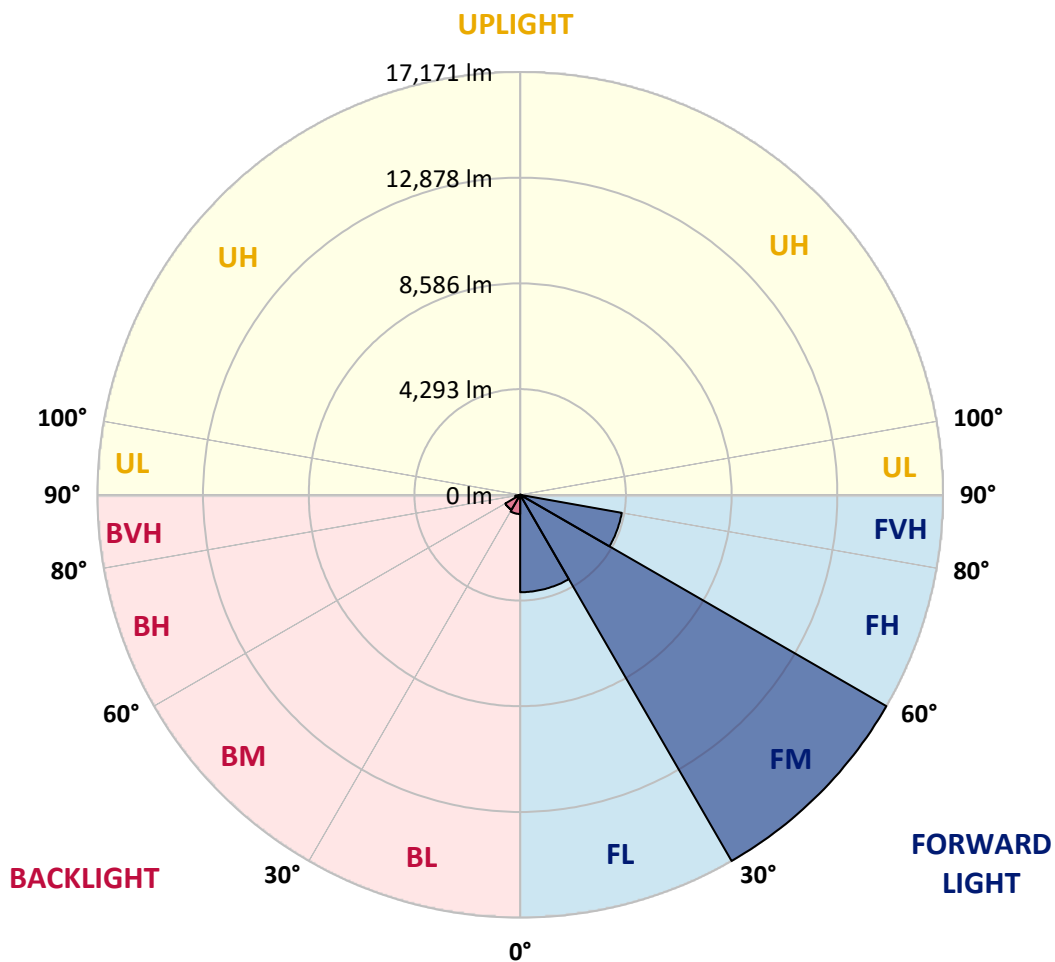
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3954.8	14.6			
FM (30°-60°)	17171.2	63.4			
FH (60°-80°)	4187.9	15.5			G2/5000
FVH (80°-90°)	61.8	0.2			G1/100
BL (0°-30°)	779.3	2.9	B2/1000		
BM (30°-60°)	699.8	2.6	B1/1000		
BH (60°-80°)	200.4	0.7	B1/500		G1/500
BVH (80°-90°)	9.9	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°	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9
2.5°	9219.9	9164.1	9106.3	8998.9	8899.8	8747.0	8536.4	8484.8	8319.6	8047.0	7793.0
5°	10014.9	10004.5	9965.3	9878.6	9771.2	9585.4	9347.9	9188.9	8932.8	8503.3	8014.0
7.5°	9544.1	9630.8	9773.3	9975.6	10111.9	10093.3	9911.6	9773.3	9519.3	8932.8	8230.8
10°	8044.9	8061.4	8257.6	8683.0	9356.2	9983.9	10221.4	10184.2	9950.9	9308.7	8420.7
12.5°	7516.3	7526.6	7572.1	7708.3	8146.1	9021.6	10097.5	10291.6	10273.0	9668.0	8623.1
15°	7557.6	7563.8	7576.2	7619.6	7743.5	8183.3	9469.7	9963.2	10479.5	10008.7	8821.3
17.5°	7883.9	7879.7	7840.5	7799.2	7838.4	7983.0	8829.6	9350.0	10436.1	10295.7	8984.5
20°	8519.9	8540.5	8408.4	8224.6	8129.6	8135.8	8513.7	8903.9	10192.4	10518.7	9106.3
22.5°	9414.0	9428.4	9211.6	8893.6	8614.8	8474.4	8579.7	8786.2	9911.6	10725.2	9205.4
25°	10481.5	10481.5	10178.0	9725.8	9294.2	8986.5	8895.7	8974.1	9804.2	10958.5	9304.5
27.5°	11633.8	11675.1	11278.6	10686.0	10116.0	9665.9	9380.9	9366.5	9886.8	11251.8	9416.0
30°	12887.2	12924.3	12453.5	11728.7	11053.5	10477.4	10039.6	9944.7	10202.8	11646.2	9579.2
32.5°	14134.4	14165.4	13645.0	12905.8	12119.0	11441.7	10865.6	10714.9	10770.6	12222.3	9818.7
35°	15720.2	15726.4	15067.7	14188.1	13347.6	12552.7	11823.7	11675.1	11613.1	12949.1	10163.5
37.5°	16981.9	16932.3	16515.2	15683.1	14718.8	13888.7	13031.7	12837.6	12688.9	13971.3	10698.4
40°	17279.3	17279.3	17217.3	16967.5	16201.4	15402.2	14572.1	14283.1	13954.7	15175.1	11416.9
42.5°	16504.9	16554.5	16963.3	17506.4	17512.6	17000.5	16189.0	15945.3	15367.1	16546.2	12201.6
45°	14772.4	14786.9	15767.7	17233.8	18229.1	18522.3	17923.5	17586.9	16785.7	17971.0	12920.2
47.5°	14148.8	14194.3	14611.4	16403.7	18282.8	19755.1	19587.8	19125.3	18099.0	19271.9	13591.3
50°	13190.7	13246.5	13756.5	15181.3	17799.6	20546.0	21179.9	20684.3	19294.6	20356.0	13923.8
52.5°	10898.7	10985.4	11706.0	13564.5	16591.6	20579.0	22637.7	22340.4	20519.1	20936.2	13884.5
55°	7499.8	7563.8	8404.2	10588.9	14155.0	19569.3	23265.5	23469.9	21611.5	21066.3	13694.6
56°	6050.2	6289.7	6905.1	9021.6	12767.4	18710.2	23120.9	23593.8	21935.7	21045.7	13612.0
57.5°	3999.8	4045.2	4716.3	6537.5	10252.3	16845.6	22468.4	23329.5	22352.8	20940.4	13552.1
60°	1881.1	1901.8	2143.4	3016.8	5548.4	12276.0	20347.7	21776.7	22505.6	20719.4	13550.0
62.5°	1226.6	1230.7	1259.6	1439.2	2269.3	6686.2	16868.3	18925.0	21239.8	20694.6	13510.8
65°	1009.7	1020.1	985.0	1007.7	1187.3	2521.3	11898.1	14753.9	18268.4	20112.3	13068.9
67.5°	890.0	892.0	844.6	817.7	869.3	1106.8	5994.5	9306.6	13663.6	17089.3	10764.4
70°	811.5	809.4	755.8	693.8	695.9	735.1	1953.4	3865.5	7559.7	10147.0	6180.3
72.5°	720.7	724.8	693.8	607.1	578.2	520.4	735.1	1042.8	2572.9	3258.4	1629.2
75°	631.9	623.6	592.6	536.9	483.2	349.0	369.6	444.0	671.1	664.9	351.0
77.5°	479.1	470.8	485.3	458.4	377.9	243.7	202.4	231.3	303.5	282.9	142.5
80°	365.5	361.4	330.4	392.3	344.8	183.8	138.3	142.5	165.2	150.7	70.2
82.5°	264.3	262.2	249.9	241.6	218.9	134.2	105.3	111.5	123.9	105.3	51.6
85°	101.2	101.2	196.2	165.2	150.7	90.9	74.3	80.5	95.0	76.4	35.1
87.5°	16.5	16.5	132.2	109.4	68.1	45.4	47.5	51.6	55.8	45.4	26.8
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°	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9	7662.9
2.5°	7642.3	7503.9	7200.4	6907.2	6651.1	6370.3	6227.8	6062.6	6000.7	5876.8	5889.2
5°	7720.7	7431.6	6822.5	6180.3	5591.8	4993.0	4567.6	4167.0	3944.0	3723.1	3723.1
7.5°	7801.3	7359.4	6417.8	5391.5	4400.3	3374.1	2647.2	2064.9	1740.7	1523.9	1517.7
10°	7857.0	7266.5	5957.3	4476.7	3014.8	1738.7	1049.0	826.0	745.4	710.3	708.3
12.5°	7929.3	7173.5	5432.8	3398.9	1674.7	826.0	654.6	619.5	605.0	596.8	596.8
15°	7991.2	7041.4	4796.8	2285.9	879.7	619.5	563.7	551.3	549.3	547.2	549.3
17.5°	8005.7	6853.5	4034.9	1338.1	638.1	541.0	516.2	505.9	505.9	503.8	503.8
20°	7972.7	6605.7	3192.4	826.0	551.3	497.6	470.8	458.4	456.3	456.3	456.3
22.5°	7904.5	6289.7	2360.2	625.7	501.8	458.4	423.3	410.9	410.9	413.0	415.0
25°	7819.9	5916.0	1621.0	538.9	464.6	417.1	382.0	369.6	373.8	377.9	379.9
27.5°	7712.5	5470.0	1061.4	466.7	415.0	375.8	344.8	336.6	344.8	353.1	357.2
30°	7605.1	4980.6	718.6	404.7	359.3	330.4	311.8	309.7	322.1	340.7	342.8
32.5°	7534.9	4478.8	543.1	363.4	315.9	291.2	282.9	287.0	305.6	326.3	330.4
35°	7528.7	3989.4	462.5	330.4	287.0	264.3	260.2	272.6	293.2	309.7	313.9
37.5°	7625.8	3531.0	419.2	305.6	264.3	241.6	235.4	258.1	276.7	293.2	297.3
40°	7821.9	3120.1	390.3	282.9	245.7	218.9	214.8	233.3	251.9	270.5	276.7
42.5°	8067.6	2736.0	357.2	260.2	225.1	194.1	190.0	204.4	223.0	249.9	254.0
45°	8280.3	2378.8	322.1	235.4	202.4	167.3	165.2	181.7	196.2	220.9	225.1
47.5°	8460.0	2081.4	289.1	208.6	173.5	148.7	146.6	154.9	163.1	185.8	190.0
50°	8365.0	1829.5	256.1	171.4	140.4	128.0	126.0	126.0	136.3	159.0	163.1
52.5°	8131.7	1672.6	225.1	142.5	115.6	109.4	103.2	105.3	115.6	126.0	128.0
55°	7943.7	1598.2	198.2	126.0	97.1	90.9	84.7	82.6	84.7	80.5	76.4
56°	7898.3	1590.0	192.0	121.8	92.9	84.7	76.4	72.3	70.2	61.9	59.9
57.5°	7877.7	1590.0	181.7	113.6	86.7	76.4	66.1	57.8	49.6	43.4	43.4
60°	7861.2	1600.3	169.3	99.1	74.3	61.9	47.5	35.1	28.9	28.9	28.9
62.5°	7826.0	1596.2	154.9	82.6	64.0	47.5	28.9	22.7	20.6	22.7	24.8
65°	7431.6	1482.6	136.3	66.1	49.6	33.0	16.5	16.5	18.6	22.7	24.8
67.5°	5988.3	1123.3	111.5	51.6	35.1	24.8	14.5	14.5	18.6	22.7	24.8
70°	3289.4	592.6	95.0	37.2	26.8	20.6	14.5	12.4	18.6	22.7	24.8
72.5°	803.3	247.8	86.7	28.9	24.8	18.6	12.4	12.4	18.6	22.7	24.8
75°	198.2	185.8	70.2	22.7	20.6	16.5	12.4	12.4	18.6	22.7	24.8
77.5°	92.9	245.7	47.5	20.6	18.6	14.5	12.4	12.4	18.6	22.7	22.7
80°	55.8	185.8	28.9	18.6	16.5	14.5	12.4	12.4	18.6	22.7	24.8
82.5°	33.0	53.7	20.6	18.6	16.5	12.4	12.4	12.4	18.6	22.7	24.8
85°	28.9	26.8	20.6	18.6	16.5	14.5	12.4	12.4	20.6	24.8	24.8
87.5°	22.7	20.6	18.6	16.5	16.5	14.5	12.4	12.4	18.6	22.7	24.8
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)