

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: P196955

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-8030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196955
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-8030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 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: 16640 lumens
Efficiency: N/A
Efficacy: 79.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - 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

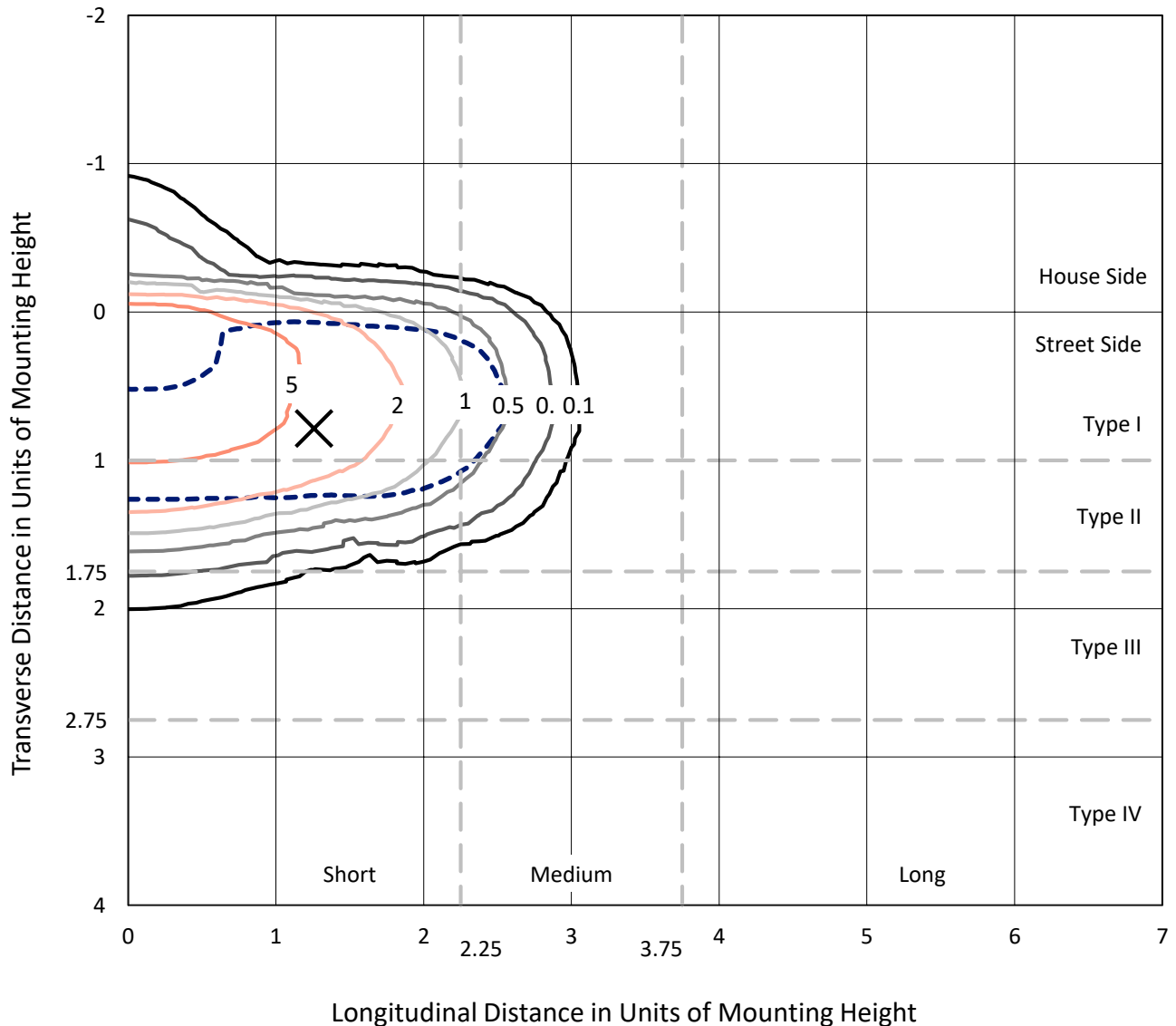


REPORT NUMBER: P196955

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-8030-800-HSS

Iso-Footcandle Lines of Horizontal Illumination

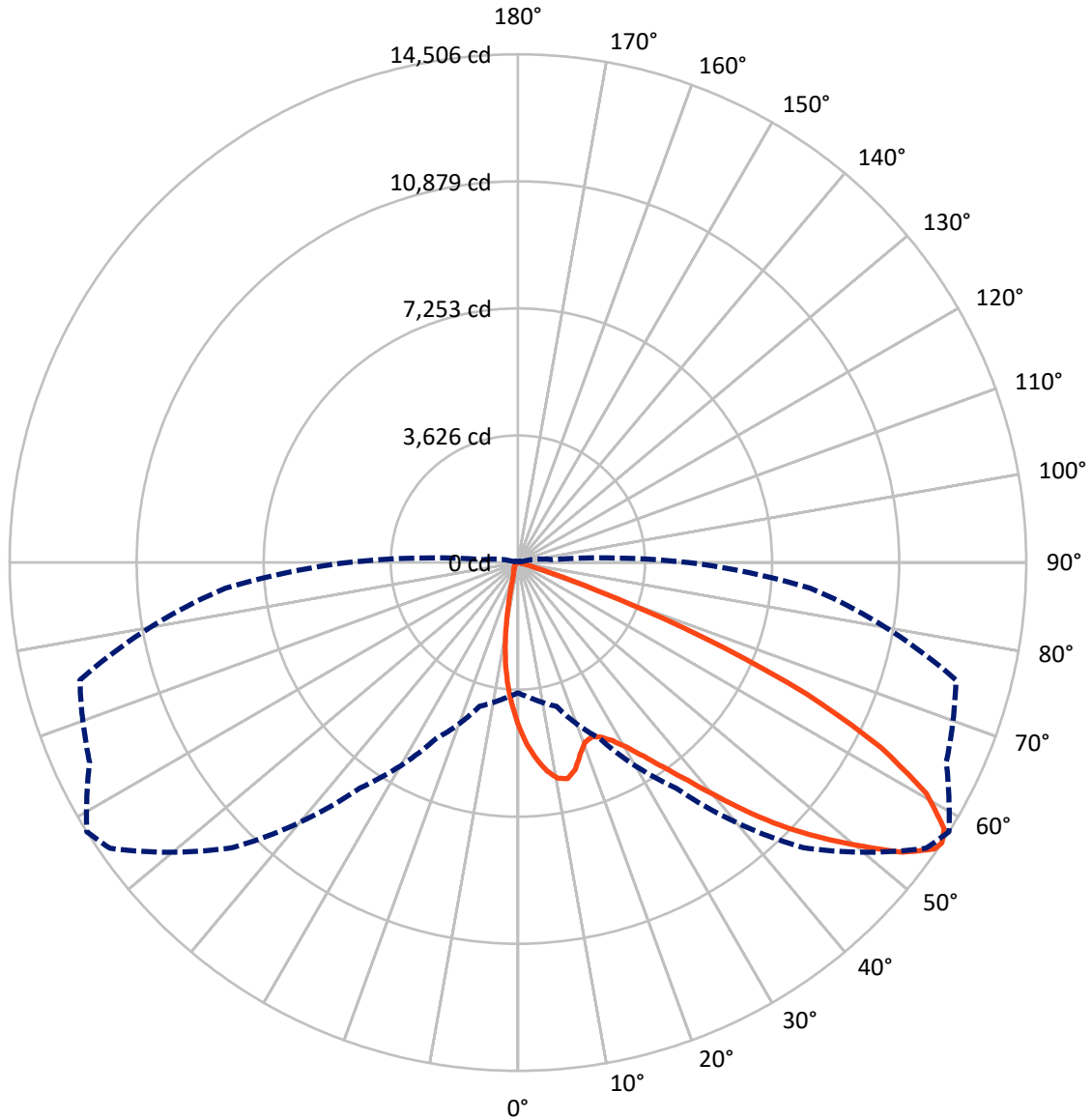
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.4 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P196955
CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-8030-800-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196955

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-8030-800-HSS

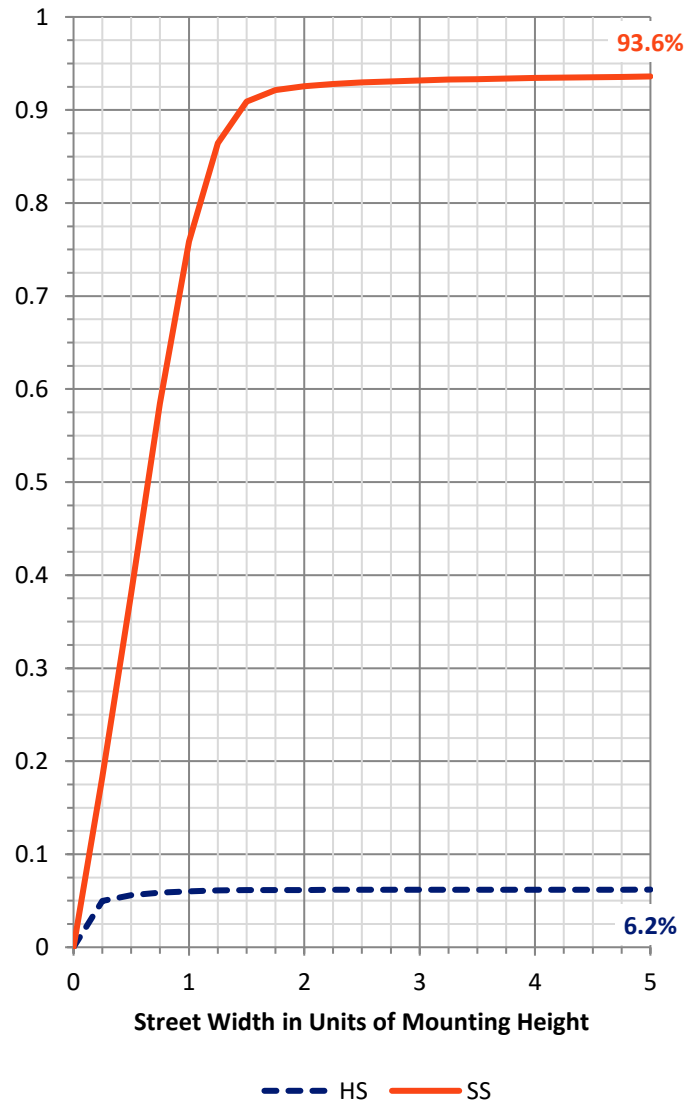
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1038.7	0.0	1038.7
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	15601.3	0.0	15601.3
	% Fixture	93.8	0.0	93.8
Total	Lumens	16640.0	0.0	16640.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	401.9	2.4
10°-20°	935.2	5.6
20°-30°	1573.6	9.5
30°-40°	2694.6	16.2
40°-50°	4066.1	24.4
50°-60°	4226.6	25.4
60°-70°	2372.8	14.3
70°-80°	325.2	2.0
80°-90°	44.1	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°	16640.0	100.0
0°-180°	16640.0	100.0

Coefficient of Utilization



REPORT NUMBER: P196955

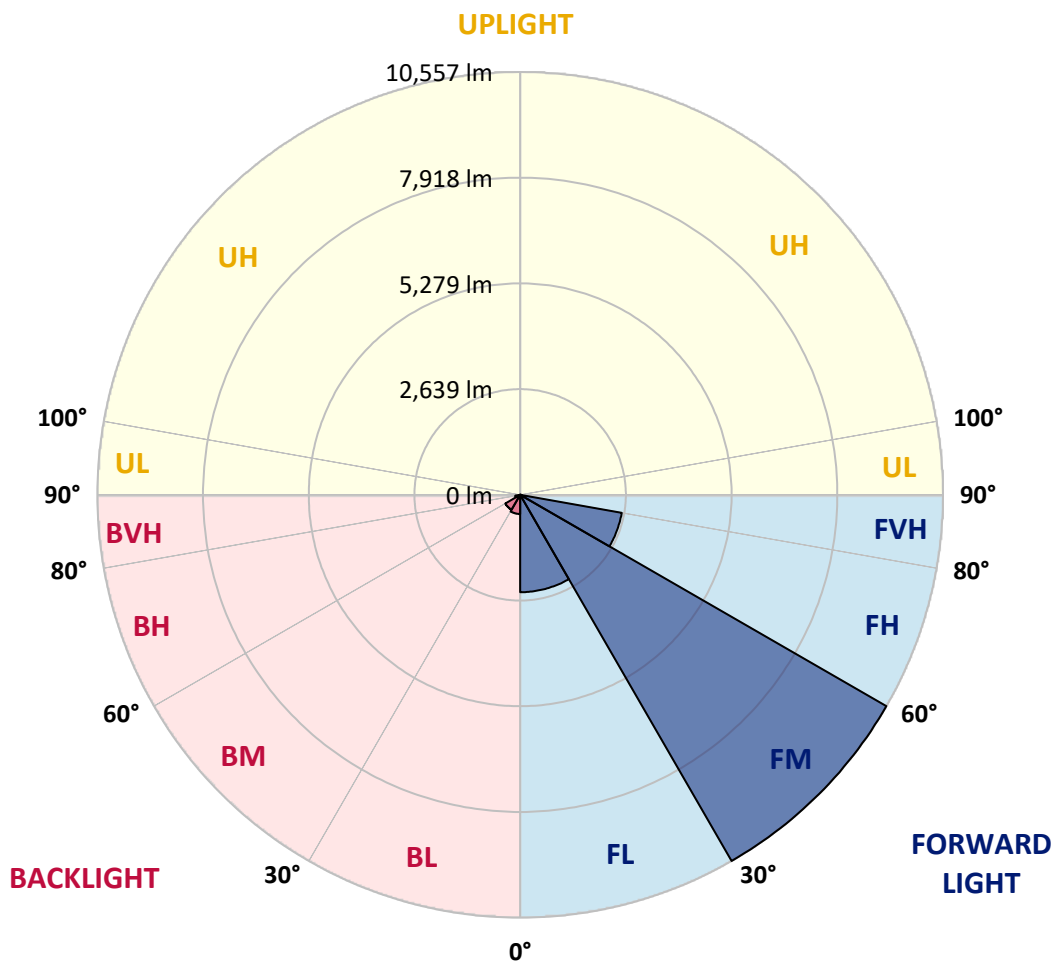
CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-8030-800-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2431.5	14.6			
FM	(30°-60°)	10557.1	63.4			
FH	(60°-80°)	2574.8	15.5			G2/5000
FVH	(80°-90°)	38.0	0.2			G1/100
BL	(0°-30°)	479.1	2.9	B1/500		
BM	(30°-60°)	430.2	2.6	B1/1000		
BH	(60°-80°)	123.2	0.7	B1/500		G1/500
BVH	(80°-90°)	6.1	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-G2

Type II Short





REPORT NUMBER: P196955

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-8030-800-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3
2.5°	5668.5	5634.2	5598.7	5532.7	5471.7	5377.8	5248.3	5216.6	5115.0	4947.4	4791.3
5°	6157.3	6151.0	6126.8	6073.5	6007.5	5893.2	5747.2	5649.5	5492.1	5228.0	4927.1
7.5°	5867.8	5921.2	6008.8	6133.2	6217.0	6205.5	6093.8	6008.8	5852.6	5492.1	5060.4
10°	4946.2	4956.3	5076.9	5338.4	5752.3	6138.3	6284.3	6261.4	6117.9	5723.1	5177.2
12.5°	4621.1	4627.5	4655.4	4739.2	5008.4	5546.6	6208.1	6327.4	6316.0	5944.0	5301.6
15°	4646.5	4650.3	4658.0	4684.6	4760.8	5031.2	5822.1	6125.6	6442.9	6153.5	5423.5
17.5°	4847.1	4844.6	4820.5	4795.1	4819.2	4908.1	5428.6	5748.5	6416.3	6330.0	5523.8
20°	5238.1	5250.8	5169.6	5056.6	4998.2	5002.0	5234.3	5474.3	6266.5	6467.1	5598.7
22.5°	5787.9	5796.7	5663.4	5467.9	5296.5	5210.2	5275.0	5401.9	6093.8	6594.0	5659.6
25°	6444.2	6444.2	6257.6	5979.6	5714.2	5525.1	5469.2	5517.4	6027.8	6737.5	5720.6
27.5°	7152.6	7178.0	6934.3	6569.9	6219.5	5942.7	5767.6	5758.7	6078.6	6917.8	5789.1
30°	7923.2	7946.1	7656.6	7211.0	6795.9	6441.7	6172.5	6114.1	6272.8	7160.2	5889.4
32.5°	8690.0	8709.1	8389.2	7934.7	7451.0	7034.6	6680.4	6587.7	6622.0	7514.4	6036.7
35°	9665.1	9668.9	9263.9	8723.1	8206.3	7717.6	7269.4	7178.0	7139.9	7961.3	6248.7
37.5°	10440.8	10410.3	10153.8	9642.2	9049.3	8539.0	8012.1	7892.8	7801.4	8589.8	6577.5
40°	10623.6	10623.6	10585.5	10431.9	9960.9	9469.5	8959.2	8781.5	8579.6	9329.9	7019.3
42.5°	10147.5	10178.0	10429.3	10763.2	10767.0	10452.2	9953.2	9803.4	9448.0	10172.9	7501.8
45°	9082.3	9091.2	9694.3	10595.6	11207.6	11387.8	11019.7	10812.7	10320.1	11048.9	7943.6
47.5°	8698.9	8726.9	8983.3	10085.3	11240.6	12145.8	12042.9	11758.5	11127.6	11848.7	8356.2
50°	8109.9	8144.1	8457.7	9333.7	10943.5	12632.0	13021.7	12717.0	11862.6	12515.2	8560.6
52.5°	6700.7	6754.0	7197.1	8339.7	10200.8	12652.3	13918.0	13735.2	12615.5	12871.9	8536.4
55°	4611.0	4650.3	5167.1	6510.2	8702.7	12031.5	14304.0	14429.7	13287.1	12951.9	8419.6
56°	3719.8	3867.0	4245.4	5546.6	7849.6	11503.4	14215.1	14505.8	13486.4	12939.2	8368.9
57.5°	2459.1	2487.0	2899.6	4019.4	6303.3	10357.0	13813.9	14343.3	13742.8	12874.5	8332.0
60°	1156.6	1169.3	1317.8	1854.8	3411.3	7547.5	12510.1	13388.6	13836.8	12738.6	8330.8
62.5°	754.1	756.6	774.4	884.9	1395.2	4110.8	10370.9	11635.4	13058.6	12723.4	8306.6
65°	620.8	627.2	605.6	619.5	730.0	1550.1	7315.1	9070.9	11231.7	12365.4	8035.0
67.5°	547.2	548.4	519.2	502.7	534.5	680.5	3685.5	5721.8	8400.6	10506.8	6618.1
70°	498.9	497.7	464.7	426.6	427.8	452.0	1201.0	2376.6	4647.8	6238.6	3799.8
72.5°	443.1	445.6	426.6	373.2	355.5	319.9	452.0	641.1	1581.9	2003.3	1001.7
75°	388.5	383.4	364.4	330.1	297.1	214.6	227.2	273.0	412.6	408.8	215.8
77.5°	294.5	289.5	298.3	281.8	232.3	149.8	124.4	142.2	186.6	173.9	87.6
80°	224.7	222.2	203.1	241.2	212.0	113.0	85.1	87.6	101.6	92.7	43.2
82.5°	162.5	161.2	153.6	148.5	134.6	82.5	64.7	68.6	76.2	64.7	31.7
85°	62.2	62.2	120.6	101.6	92.7	55.9	45.7	49.5	58.4	47.0	21.6
87.5°	10.2	10.2	81.3	67.3	41.9	27.9	29.2	31.7	34.3	27.9	16.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196955

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-8030-800-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3	4711.3
2.5°	4698.6	4613.5	4426.9	4246.6	4089.2	3916.6	3829.0	3727.4	3689.3	3613.1	3620.7
5°	4746.8	4569.1	4194.6	3799.8	3437.9	3069.8	2808.2	2561.9	2424.8	2289.0	2289.0
7.5°	4796.3	4524.7	3945.8	3314.8	2705.4	2074.4	1627.6	1269.5	1070.2	936.9	933.1
10°	4830.6	4467.5	3662.6	2752.4	1853.5	1069.0	644.9	507.8	458.3	436.7	435.5
12.5°	4875.1	4410.4	3340.2	2089.7	1029.6	507.8	402.4	380.9	372.0	366.9	366.9
15°	4913.1	4329.2	2949.2	1405.4	540.8	380.9	346.6	339.0	337.7	336.4	337.7
17.5°	4922.0	4213.6	2480.7	822.7	392.3	332.6	317.4	311.0	311.0	309.8	309.8
20°	4901.7	4061.3	1962.7	507.8	339.0	306.0	289.5	281.8	280.6	280.6	280.6
22.5°	4859.8	3867.0	1451.1	384.7	308.5	281.8	260.3	252.6	252.6	253.9	255.2
25°	4807.8	3637.3	996.6	331.4	285.6	256.4	234.9	227.2	229.8	232.3	233.6
27.5°	4741.8	3363.0	652.5	286.9	255.2	231.1	212.0	206.9	212.0	217.1	219.6
30°	4675.7	3062.1	441.8	248.8	220.9	203.1	191.7	190.4	198.0	209.5	210.7
32.5°	4632.6	2753.6	333.9	223.4	194.2	179.0	173.9	176.5	187.9	200.6	203.1
35°	4628.8	2452.8	284.4	203.1	176.5	162.5	160.0	167.6	180.3	190.4	193.0
37.5°	4688.4	2170.9	257.7	187.9	162.5	148.5	144.7	158.7	170.1	180.3	182.8
40°	4809.0	1918.3	239.9	173.9	151.1	134.6	132.0	143.5	154.9	166.3	170.1
42.5°	4960.1	1682.1	219.6	160.0	138.4	119.3	116.8	125.7	137.1	153.6	156.2
45°	5090.9	1462.5	198.0	144.7	124.4	102.8	101.6	111.7	120.6	135.8	138.4
47.5°	5201.3	1279.7	177.7	128.2	106.6	91.4	90.1	95.2	100.3	114.3	116.8
50°	5142.9	1124.8	157.4	105.4	86.3	78.7	77.4	77.4	83.8	97.8	100.3
52.5°	4999.5	1028.3	138.4	87.6	71.1	67.3	63.5	64.7	71.1	77.4	78.7
55°	4883.9	982.6	121.9	77.4	59.7	55.9	52.1	50.8	52.1	49.5	47.0
56°	4856.0	977.6	118.1	74.9	57.1	52.1	47.0	44.4	43.2	38.1	36.8
57.5°	4843.3	977.6	111.7	69.8	53.3	47.0	40.6	35.5	30.5	26.7	26.7
60°	4833.2	983.9	104.1	60.9	45.7	38.1	29.2	21.6	17.8	17.8	17.8
62.5°	4811.6	981.4	95.2	50.8	39.4	29.2	17.8	14.0	12.7	14.0	15.2
65°	4569.1	911.5	83.8	40.6	30.5	20.3	10.2	10.2	11.4	14.0	15.2
67.5°	3681.7	690.6	68.6	31.7	21.6	15.2	8.9	8.9	11.4	14.0	15.2
70°	2022.4	364.4	58.4	22.9	16.5	12.7	8.9	7.6	11.4	14.0	15.2
72.5°	493.9	152.3	53.3	17.8	15.2	11.4	7.6	7.6	11.4	14.0	15.2
75°	121.9	114.3	43.2	14.0	12.7	10.2	7.6	7.6	11.4	14.0	15.2
77.5°	57.1	151.1	29.2	12.7	11.4	8.9	7.6	7.6	11.4	14.0	14.0
80°	34.3	114.3	17.8	11.4	10.2	8.9	7.6	7.6	11.4	14.0	15.2
82.5°	20.3	33.0	12.7	11.4	10.2	7.6	7.6	7.6	11.4	14.0	15.2
85°	17.8	16.5	12.7	11.4	10.2	8.9	7.6	7.6	12.7	15.2	15.2
87.5°	14.0	12.7	11.4	10.2	10.2	8.9	7.6	7.6	11.4	14.0	15.2
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)