

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: P196469

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196469
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-7030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 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: 16083 lumens
Efficiency: N/A
Efficacy: 99.3 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): 162
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

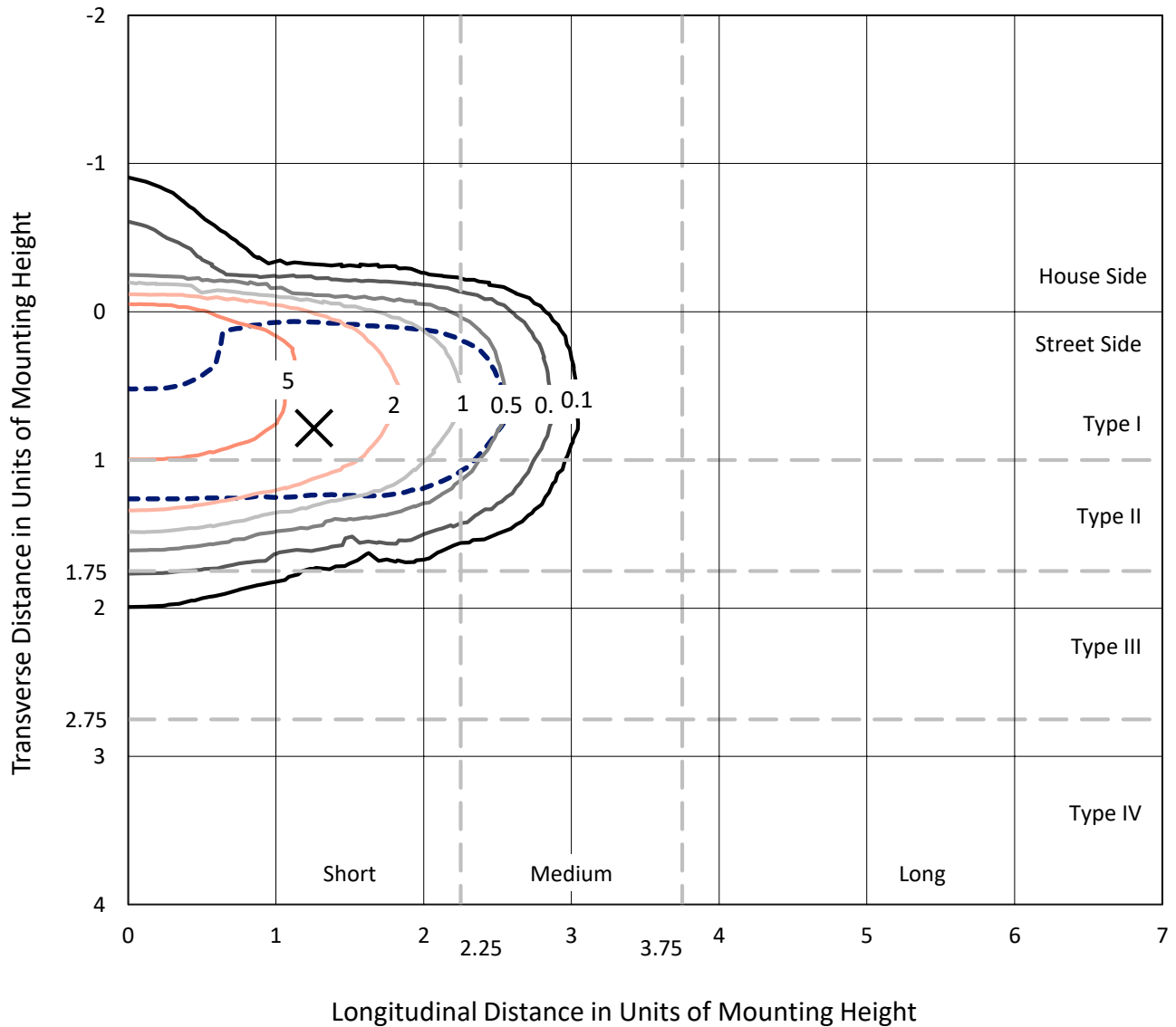


REPORT NUMBER: P196469

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-7030-600-HSS

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

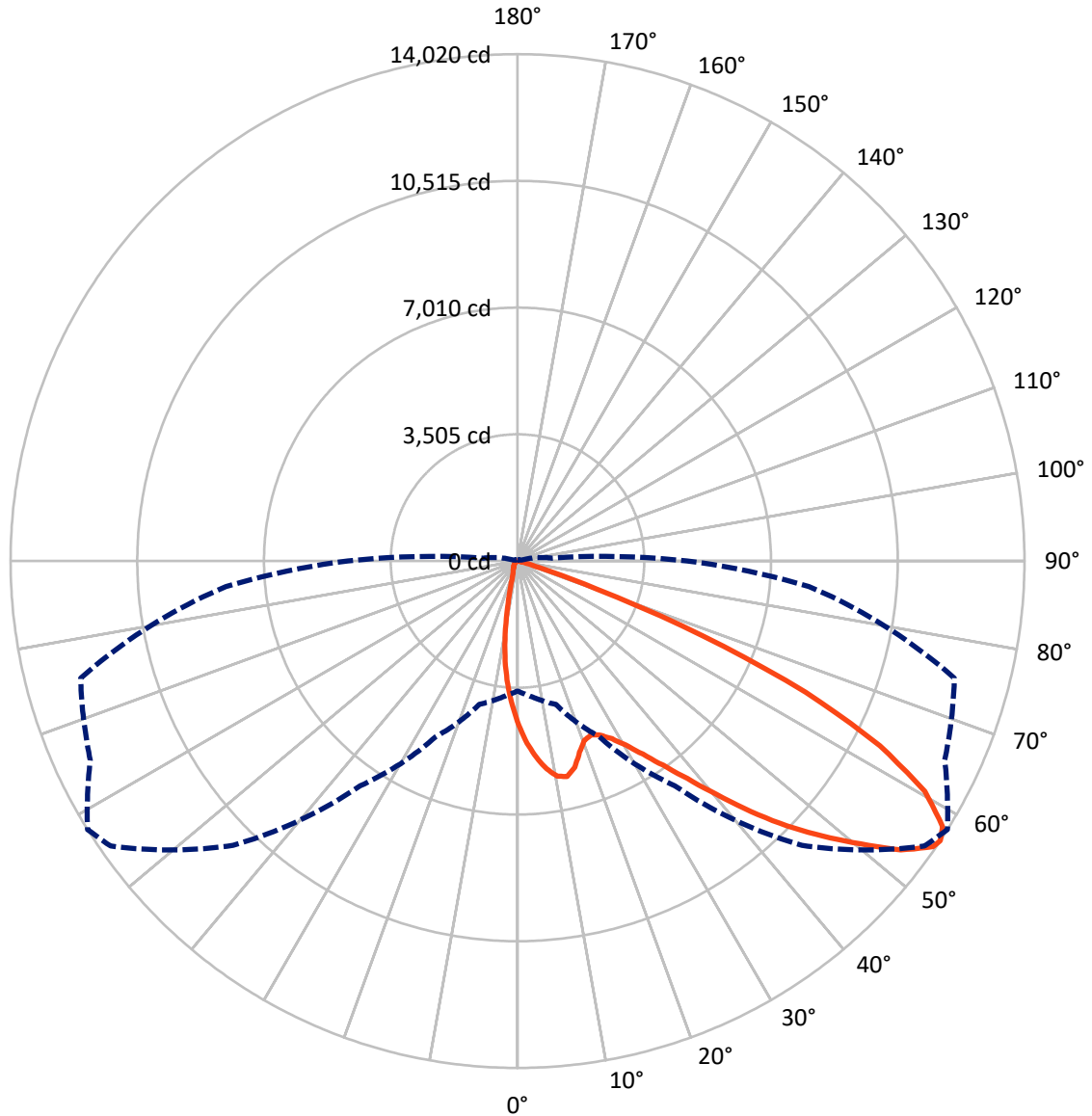


Based on 25 foot mounting height. Maximum calculated value = 9.1 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P196469

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-7030-600-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196469

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-7030-600-HSS

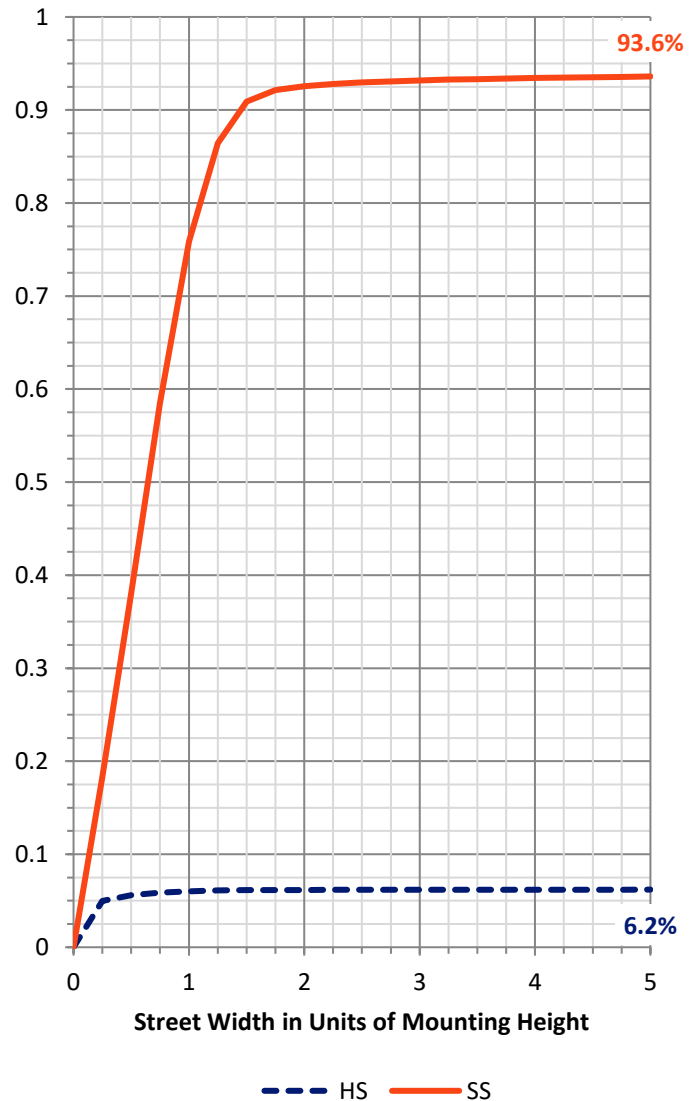
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1003.9	0.0	1003.9
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	15079.1	0.0	15079.1
	% Fixture	93.8	0.0	93.8
Total	Lumens	16083.0	0.0	16083.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	388.4	2.4
10°-20°	903.9	5.6
20°-30°	1520.9	9.5
30°-40°	2604.4	16.2
40°-50°	3930.0	24.4
50°-60°	4085.2	25.4
60°-70°	2293.3	14.3
70°-80°	314.3	2.0
80°-90°	42.6	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°	16083.0	100.0
0°-180°	16083.0	100.0

Coefficient of Utilization



REPORT NUMBER: P196469

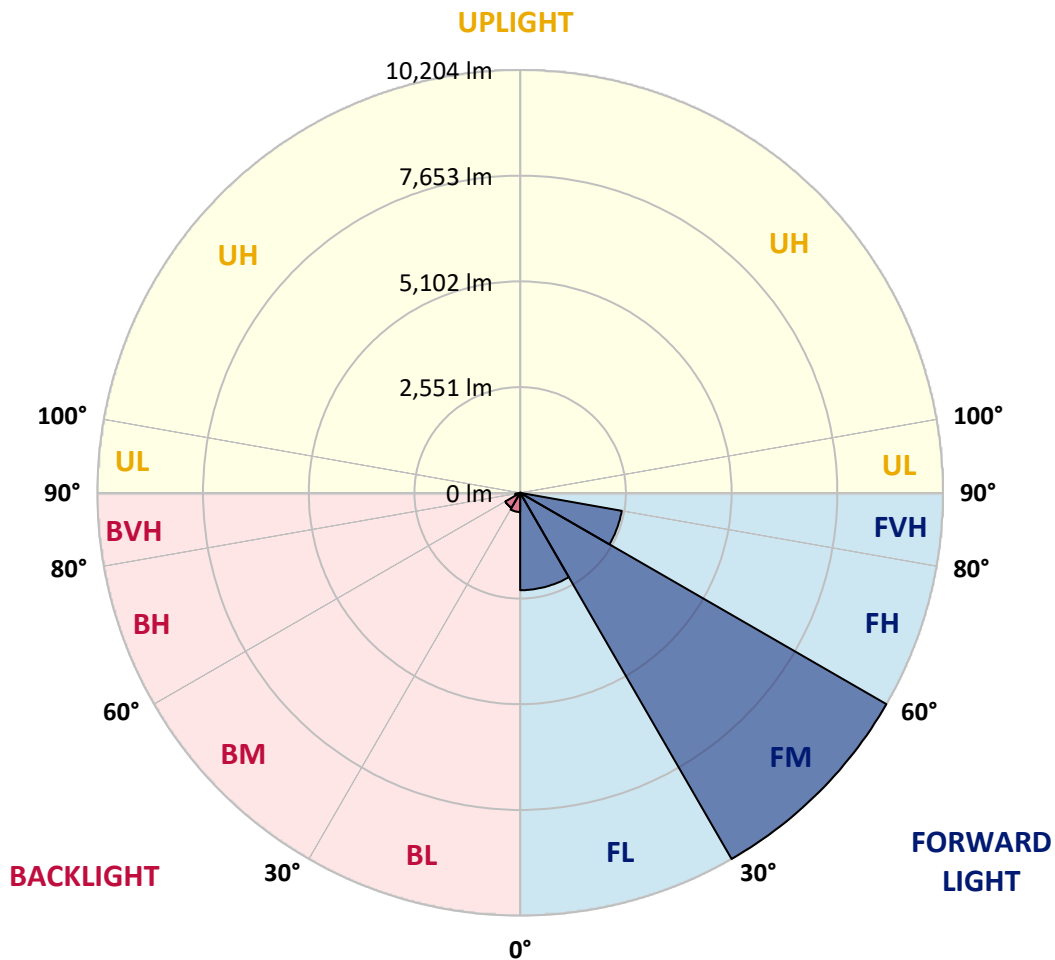
CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-7030-600-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2350.1	14.6			
FM	(30°-60°)	10203.7	63.4			
FH	(60°-80°)	2488.6	15.5			G2/5000
FVH	(80°-90°)	36.7	0.2			G1/100
BL	(0°-30°)	463.1	2.9	B1/500		
BM	(30°-60°)	415.8	2.6	B1/1000		
BH	(60°-80°)	119.1	0.7	B1/500		G1/500
BVH	(80°-90°)	5.9	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





REPORT NUMBER: P196469

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-7030-600-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6
2.5°	5478.8	5445.6	5411.3	5347.4	5288.5	5197.8	5072.6	5042.0	4943.8	4781.8	4630.9
5°	5951.2	5945.1	5921.8	5870.2	5806.4	5695.9	5554.8	5460.3	5308.3	5053.0	4762.2
7.5°	5671.4	5723.0	5807.5	5927.9	6008.8	5997.8	5889.8	5807.5	5656.7	5308.3	4891.0
10°	4780.5	4790.4	4907.0	5159.8	5559.7	5932.8	6073.8	6051.8	5913.1	5531.6	5003.8
12.5°	4466.4	4472.6	4499.7	4580.5	4840.7	5361.1	6000.3	6115.6	6104.6	5745.1	5124.2
15°	4491.0	4494.7	4502.0	4527.8	4601.5	4862.8	5627.3	5920.5	6227.2	5947.5	5241.9
17.5°	4684.8	4682.5	4659.2	4634.6	4657.8	4743.8	5246.8	5556.1	6201.4	6118.1	5338.9
20°	5062.7	5075.1	4996.5	4887.2	4830.9	4834.6	5059.1	5291.0	6056.7	6250.6	5411.3
22.5°	5594.1	5602.7	5473.9	5284.9	5119.3	5035.8	5098.4	5221.1	5889.8	6373.3	5470.2
25°	6228.6	6228.6	6048.1	5779.4	5522.9	5340.1	5286.1	5332.7	5826.0	6512.0	5529.1
27.5°	6913.2	6937.8	6702.2	6349.9	6011.3	5743.8	5574.5	5565.8	5875.1	6686.2	5595.3
30°	7658.0	7680.1	7400.3	6969.6	6568.3	6226.0	5965.9	5909.5	6062.8	6920.6	5692.3
32.5°	8399.1	8417.6	8108.3	7669.0	7201.5	6799.1	6456.6	6367.2	6400.3	7262.9	5834.7
35°	9341.5	9345.2	8953.8	8431.0	7931.6	7459.2	7026.0	6937.8	6901.0	7694.8	6039.6
37.5°	10091.1	10061.8	9813.8	9319.4	8746.4	8253.1	7743.9	7628.6	7540.2	8302.2	6357.4
40°	10267.9	10267.9	10231.1	10082.7	9627.4	9152.5	8659.3	8487.5	8292.3	9017.6	6784.4
42.5°	9807.7	9837.2	10080.1	10402.9	10406.6	10102.3	9620.1	9475.3	9131.7	9832.4	7250.7
45°	8778.3	8786.8	9369.7	10241.0	10832.4	11006.7	10650.8	10450.7	9974.8	10679.0	7677.6
47.5°	8407.7	8434.7	8682.7	9747.7	10864.3	11739.2	11639.8	11364.9	10755.1	11452.0	8076.5
50°	7838.4	7871.5	8174.6	9021.2	10577.2	12209.1	12585.8	12291.3	11465.5	12096.2	8273.9
52.5°	6476.4	6527.9	6956.1	8060.5	9859.3	12228.8	13452.1	13275.4	12193.3	12441.1	8250.7
55°	4456.6	4494.7	4994.1	6292.3	8411.5	11628.7	13825.1	13946.6	12842.4	12518.4	8137.7
56°	3595.2	3737.5	4103.2	5361.1	7586.9	11118.3	13739.3	14020.2	13034.9	12506.1	8088.7
57.5°	2376.8	2403.8	2802.6	3884.8	6092.3	10010.3	13351.5	13863.2	13282.7	12443.5	8053.1
60°	1117.8	1130.1	1273.6	1792.7	3297.1	7294.8	12091.2	12940.4	13373.6	12312.2	8051.9
62.5°	728.9	731.3	748.5	855.3	1348.5	3973.2	10023.8	11245.8	12621.4	12297.4	8028.6
65°	600.1	606.2	585.3	598.8	705.6	1498.3	7070.2	8767.3	10855.7	11951.5	7765.9
67.5°	528.9	530.1	501.8	485.8	516.6	657.7	3562.1	5530.2	8119.4	10155.0	6396.6
70°	482.3	481.0	449.0	412.2	413.5	436.8	1160.8	2297.0	4492.2	6029.7	3672.5
72.5°	428.2	430.7	412.2	360.8	343.6	309.2	436.8	619.6	1528.9	1936.3	968.1
75°	375.6	370.6	352.2	319.0	287.2	207.4	219.6	263.9	398.8	395.1	208.5
77.5°	284.7	279.8	288.3	272.4	224.5	144.8	120.3	137.4	180.4	168.2	84.6
80°	217.2	214.7	196.3	233.2	205.0	109.3	82.2	84.6	98.2	89.6	41.7
82.5°	157.2	155.8	148.5	143.5	130.0	79.8	62.6	66.2	73.6	62.6	30.7
85°	60.1	60.1	116.6	98.2	89.6	54.0	44.1	47.8	56.5	45.5	20.9
87.5°	9.9	9.9	78.5	65.0	40.5	27.0	28.2	30.7	33.1	27.0	16.0
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: P196469

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-7030-600-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6	4553.6
2.5°	4541.3	4459.1	4278.7	4104.5	3952.4	3785.4	3700.8	3602.6	3565.7	3492.2	3499.6
5°	4587.9	4416.2	4054.2	3672.5	3322.8	2967.1	2714.2	2476.2	2343.6	2212.4	2212.4
7.5°	4635.8	4373.2	3813.7	3203.8	2614.8	2005.0	1573.2	1227.1	1034.3	905.5	901.8
10°	4668.8	4317.9	3540.0	2660.3	1791.6	1033.1	623.4	490.8	442.9	422.1	420.8
12.5°	4712.0	4262.8	3228.4	2019.7	995.2	490.8	389.0	368.1	359.6	354.6	354.6
15°	4748.6	4184.2	2850.5	1358.3	522.7	368.1	335.0	327.7	326.3	325.1	326.3
17.5°	4757.2	4072.5	2397.7	795.1	379.1	321.4	306.8	300.6	300.6	299.4	299.4
20°	4737.6	3925.3	1897.1	490.8	327.7	295.8	279.8	272.4	271.2	271.2	271.2
22.5°	4697.2	3737.5	1402.6	371.8	298.2	272.4	251.6	244.2	244.2	245.4	246.6
25°	4646.8	3515.5	963.2	320.2	276.1	247.9	227.0	219.6	222.2	224.5	225.7
27.5°	4583.0	3250.5	630.8	277.3	246.6	223.3	205.0	200.1	205.0	209.8	212.3
30°	4519.2	2959.7	426.9	240.5	213.5	196.3	185.3	184.1	191.4	202.4	203.7
32.5°	4477.5	2661.4	322.8	216.0	187.7	173.0	168.2	170.6	181.6	193.8	196.3
35°	4473.8	2370.7	274.9	196.3	170.6	157.2	154.6	161.9	174.3	184.1	186.5
37.5°	4531.5	2098.3	249.1	181.6	157.2	143.5	139.9	153.4	164.4	174.3	176.7
40°	4648.1	1854.0	231.9	168.2	146.0	130.0	127.7	138.6	149.6	160.7	164.4
42.5°	4794.1	1625.9	212.3	154.6	133.8	115.4	112.9	121.5	132.5	148.5	150.9
45°	4920.5	1413.6	191.4	139.9	120.3	99.4	98.2	107.9	116.6	131.3	133.8
47.5°	5027.2	1236.9	171.7	123.9	103.0	88.4	87.1	92.0	96.9	110.5	112.9
50°	4970.8	1087.1	152.2	101.8	83.5	76.1	74.9	74.9	81.0	94.5	96.9
52.5°	4832.1	993.9	133.8	84.6	68.8	65.0	61.4	62.6	68.8	74.9	76.1
55°	4720.4	949.7	117.8	74.9	57.7	54.0	50.3	49.0	50.3	47.8	45.5
56°	4693.4	944.9	114.0	72.4	55.1	50.3	45.5	42.9	41.7	36.8	35.6
57.5°	4681.2	944.9	107.9	67.5	51.6	45.5	39.3	34.3	29.5	25.7	25.7
60°	4671.4	951.0	100.6	58.9	44.1	36.8	28.2	20.9	17.2	17.2	17.2
62.5°	4650.5	948.5	92.0	49.0	38.0	28.2	17.2	13.5	12.2	13.5	14.7
65°	4416.2	881.0	81.0	39.3	29.5	19.6	9.9	9.9	11.0	13.5	14.7
67.5°	3558.5	667.5	66.2	30.7	20.9	14.7	8.6	8.6	11.0	13.5	14.7
70°	1954.6	352.2	56.5	22.1	16.0	12.2	8.6	7.3	11.0	13.5	14.7
72.5°	477.4	147.3	51.6	17.2	14.7	11.0	7.3	7.3	11.0	13.5	14.7
75°	117.8	110.5	41.7	13.5	12.2	9.9	7.3	7.3	11.0	13.5	14.7
77.5°	55.1	146.0	28.2	12.2	11.0	8.6	7.3	7.3	11.0	13.5	13.5
80°	33.1	110.5	17.2	11.0	9.9	8.6	7.3	7.3	11.0	13.5	14.7
82.5°	19.6	31.9	12.2	11.0	9.9	7.3	7.3	7.3	11.0	13.5	14.7
85°	17.2	16.0	12.2	11.0	9.9	8.6	7.3	7.3	12.2	14.7	14.7
87.5°	13.5	12.2	11.0	9.9	9.9	8.6	7.3	7.3	11.0	13.5	14.7
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)