

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: P196467

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-7030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196467
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-7030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 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: 9688.1 lumens
Efficiency: N/A
Efficacy: 100.9 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

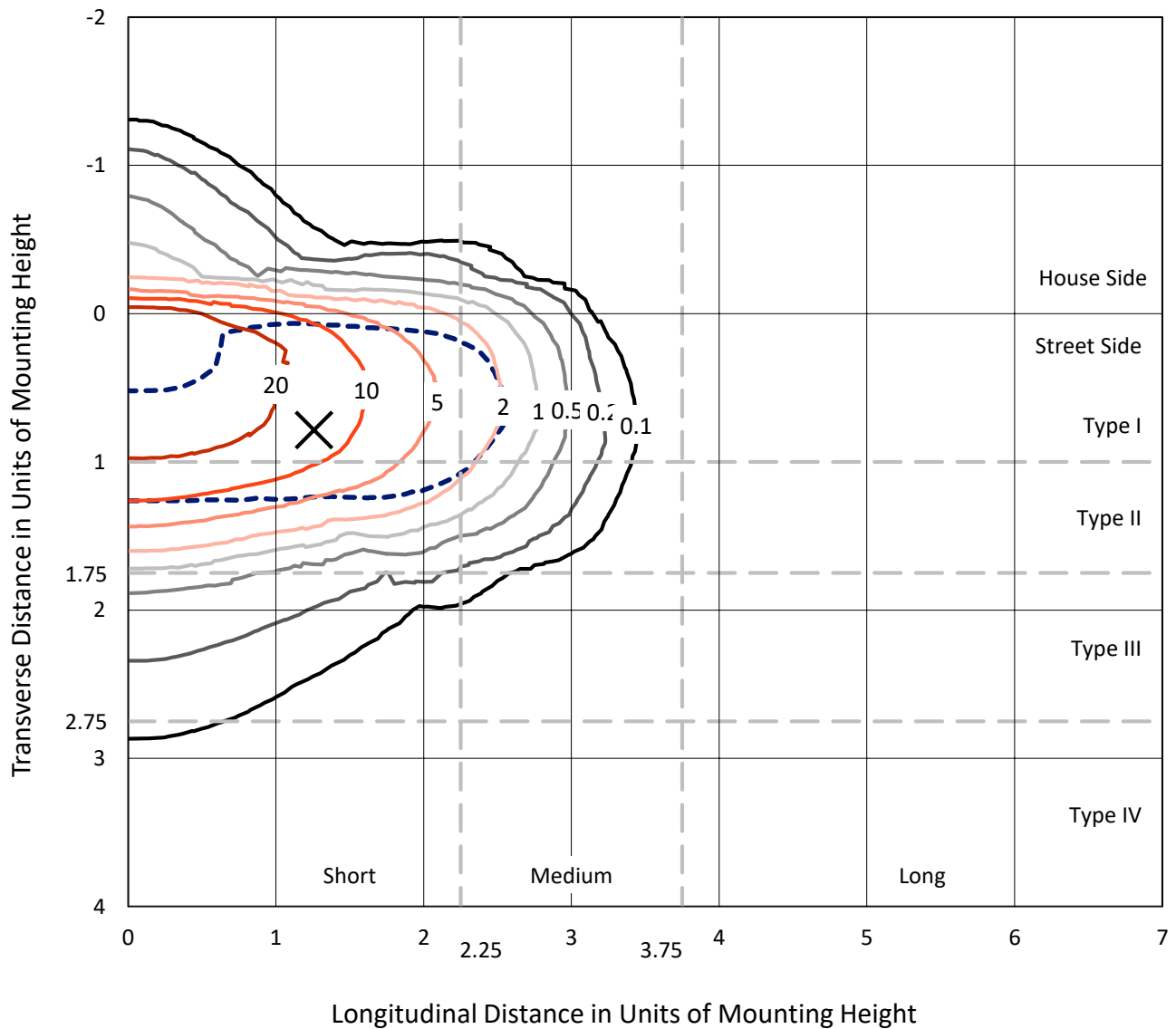


REPORT NUMBER: P196467

CATALOG NUMBER: NAV-AF-03-D-UNV-AFL-7030-600-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

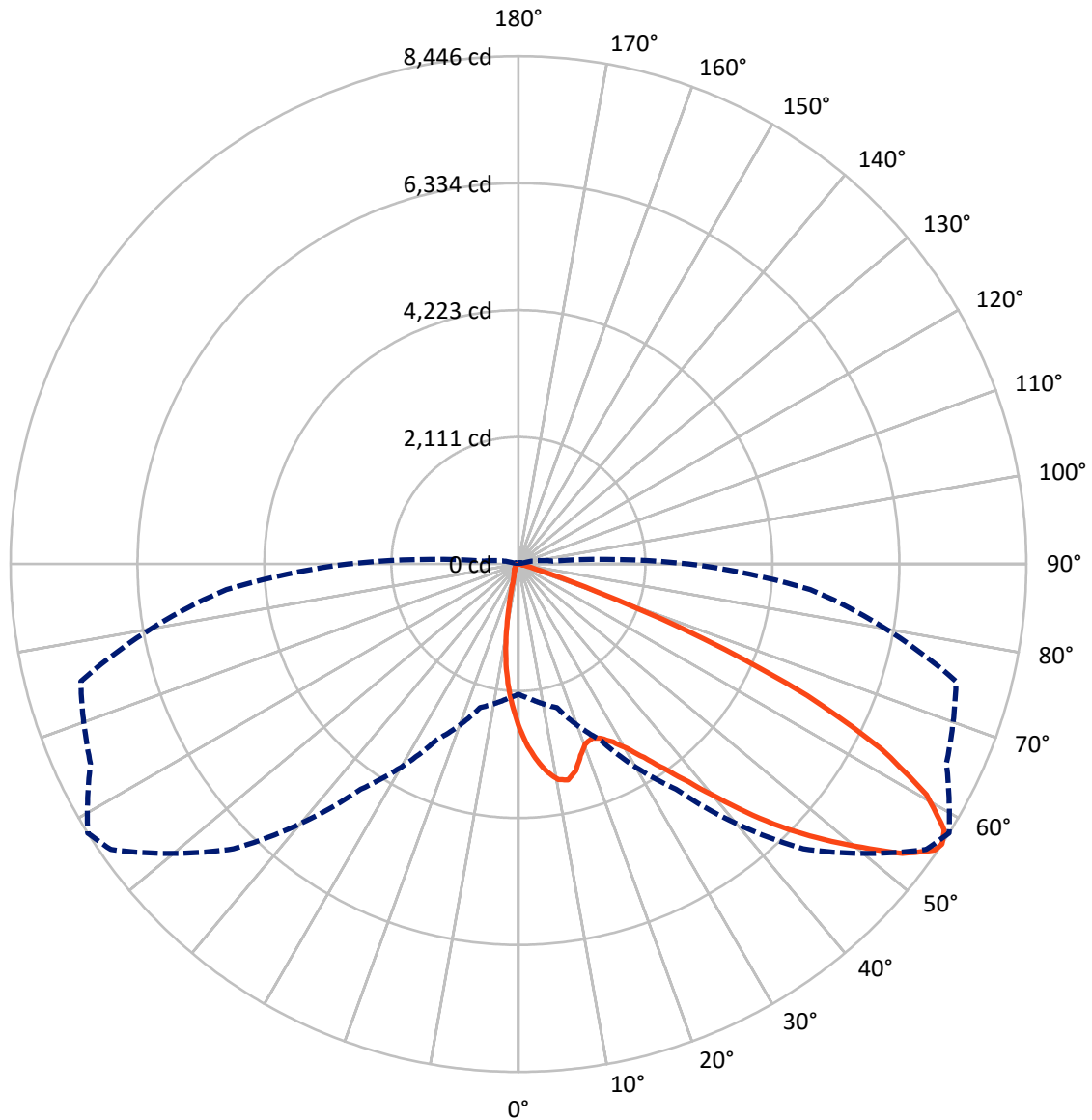


Based on 10 foot mounting height. Maximum calculated value = 34.1 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P196467

CATALOG NUMBER: NAV-AF-03-D-UNV-AFL-7030-600-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196467

CATALOG NUMBER: NAV-AF-03-D-UNV-AFL-7030-600-HSS

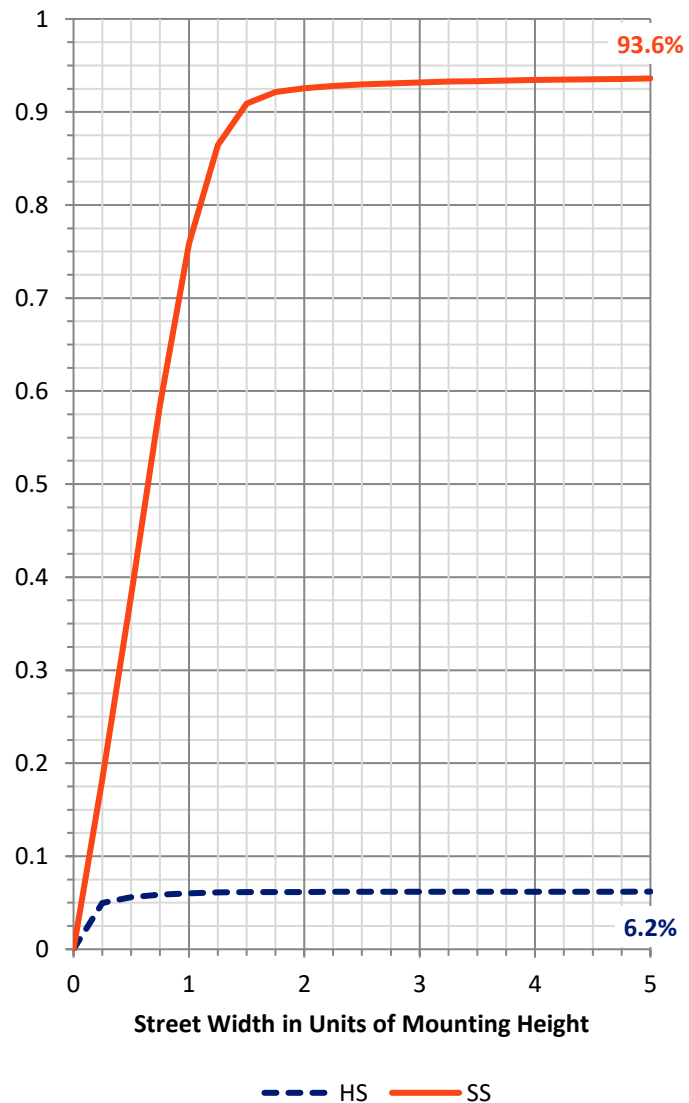
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	604.7	0.0	604.7
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	9083.3	0.0	9083.3
	% Fixture	93.8	0.0	93.8
Total	Lumens	9688.1	0.0	9688.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.0	2.4
10°-20°	544.5	5.6
20°-30°	916.2	9.5
30°-40°	1568.8	16.2
40°-50°	2367.4	24.4
50°-60°	2460.8	25.4
60°-70°	1381.5	14.3
70°-80°	189.3	2.0
80°-90°	25.7	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°	9688.1	100.0
0°-180°	9688.1	100.0

Coefficient of Utilization



REPORT NUMBER: P196467

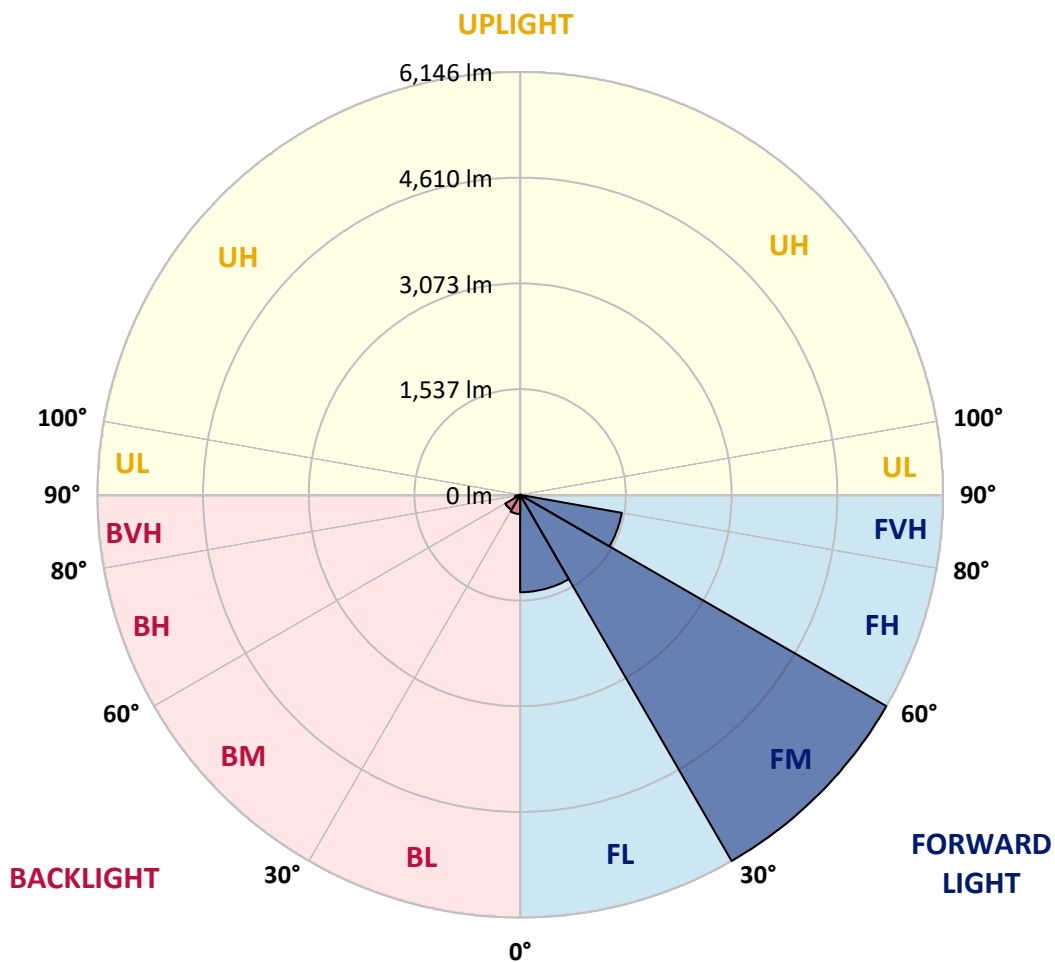
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1415.6	14.6			
FM	(30°-60°)	6146.5	63.4			
FH	(60°-80°)	1499.1	15.5			G1/1800
FVH	(80°-90°)	22.1	0.2			G1/100
BL	(0°-30°)	279.0	2.9	B1/500		
BM	(30°-60°)	250.5	2.6	B1/1000		
BH	(60°-80°)	71.7	0.7	B0/110		G0/110
BVH	(80°-90°)	3.5	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





REPORT NUMBER: P196467

CATALOG NUMBER: NAV-AF-03-D-UNV-AFL-7030-600-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0
2.5°	3300.2	3280.3	3259.6	3221.2	3185.7	3131.1	3055.7	3037.2	2978.0	2880.4	2789.5
5°	3584.9	3581.2	3567.1	3536.0	3497.6	3431.1	3346.1	3289.2	3197.6	3043.9	2868.6
7.5°	3416.3	3447.3	3498.4	3570.8	3619.6	3612.9	3547.8	3498.4	3407.5	3197.6	2946.2
10°	2879.7	2885.6	2955.8	3108.1	3349.2	3573.8	3658.8	3645.4	3562.0	3332.1	3014.3
12.5°	2690.5	2694.3	2710.4	2759.3	2915.9	3229.3	3614.4	3683.9	3677.2	3460.7	3086.7
15°	2705.3	2707.5	2712.0	2727.4	2771.8	2929.2	3389.8	3566.3	3751.2	3582.6	3157.6
17.5°	2822.0	2820.5	2806.6	2791.8	2805.8	2857.5	3160.6	3346.8	3735.7	3685.5	3216.0
20°	3049.8	3057.1	3009.8	2944.0	2910.0	2912.2	3047.5	3187.2	3648.3	3765.2	3259.6
22.5°	3369.8	3374.9	3297.3	3183.5	3083.8	3033.5	3071.2	3145.0	3547.8	3839.2	3295.2
25°	3751.9	3751.9	3643.2	3481.3	3327.0	3216.8	3184.3	3212.3	3509.5	3922.6	3330.6
27.5°	4164.3	4179.1	4037.2	3825.0	3621.1	3459.9	3358.0	3352.7	3539.0	4027.7	3370.5
30°	4613.0	4626.4	4457.8	4198.4	3956.6	3750.5	3593.7	3559.7	3652.1	4168.8	3428.9
32.5°	5059.5	5070.5	4884.3	4619.7	4338.0	4095.6	3889.4	3835.4	3855.4	4375.0	3514.7
35°	5627.1	5629.4	5393.6	5078.7	4777.8	4493.3	4232.3	4179.1	4157.0	4635.3	3638.2
37.5°	6078.7	6061.0	5911.7	5613.8	5268.6	4971.6	4664.8	4595.2	4542.0	5001.1	3829.5
40°	6185.1	6185.1	6163.0	6073.6	5799.4	5513.3	5216.1	5112.7	4995.2	5432.0	4086.8
42.5°	5907.9	5925.7	6072.1	6266.4	6268.7	6085.4	5794.9	5707.7	5500.7	5922.7	4367.6
45°	5287.8	5293.1	5644.2	6168.9	6525.2	6630.2	6415.8	6295.3	6008.5	6432.7	4624.8
47.5°	5064.6	5080.9	5230.2	5871.8	6544.4	7071.4	7011.5	6845.9	6478.6	6898.4	4865.1
50°	4721.6	4741.7	4924.2	5434.2	6371.5	7354.5	7581.4	7404.1	6906.6	7286.5	4984.1
52.5°	3901.2	3932.2	4190.2	4855.5	5939.0	7366.4	8103.2	7996.8	7344.9	7494.2	4969.9
55°	2684.6	2707.5	3008.4	3790.3	5066.9	7004.9	8328.0	8401.2	7735.9	7540.7	4902.0
56°	2165.7	2251.4	2471.7	3229.3	4570.1	6697.4	8276.2	8445.5	7851.9	7533.4	4872.4
57.5°	1431.8	1448.0	1688.2	2340.2	3669.9	6029.9	8042.7	8350.9	8001.3	7495.7	4851.0
60°	673.4	680.8	767.2	1079.9	1986.2	4394.2	7283.6	7795.0	8055.9	7416.6	4850.2
62.5°	439.0	440.6	450.9	515.1	812.4	2393.4	6038.1	6774.3	7602.8	7407.7	4836.3
65°	361.4	365.2	352.6	360.7	425.0	902.5	4258.9	5281.1	6539.2	7199.3	4678.1
67.5°	318.6	319.4	302.3	292.7	311.2	396.2	2145.8	3331.4	4890.9	6117.2	3853.1
70°	290.5	289.7	270.5	248.3	249.1	263.1	699.3	1383.7	2706.1	3632.3	2212.3
72.5°	258.0	259.5	248.3	217.3	206.9	186.3	263.1	373.2	920.9	1166.4	583.2
75°	226.1	223.2	212.2	192.2	172.9	124.9	132.3	158.9	240.3	237.9	125.6
77.5°	171.4	168.5	173.7	164.1	135.3	87.2	72.4	82.8	108.6	101.3	51.1
80°	130.8	129.4	118.2	140.4	123.5	65.8	49.5	51.1	59.1	54.0	25.1
82.5°	94.6	93.9	89.5	86.6	78.3	48.1	37.7	39.9	44.4	37.7	18.5
85°	36.2	36.2	70.3	59.1	54.0	32.6	26.7	28.9	34.0	27.4	12.6
87.5°	5.9	5.9	47.3	39.3	24.4	16.3	17.1	18.5	20.0	16.3	9.7
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: P196467

CATALOG NUMBER: NAV-AF-03-D-UNV-AFL-7030-600-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0	2743.0
2.5°	2735.7	2686.0	2577.4	2472.4	2380.8	2280.2	2229.2	2170.1	2147.9	2103.6	2108.0
5°	2763.7	2660.1	2442.2	2212.3	2001.6	1787.3	1634.9	1491.6	1411.7	1332.6	1332.6
7.5°	2792.4	2634.3	2297.2	1929.9	1575.1	1207.8	947.6	739.1	623.1	545.5	543.2
10°	2812.5	2601.0	2132.4	1602.5	1079.2	622.3	375.6	295.6	266.8	254.2	253.5
12.5°	2838.3	2567.8	1944.7	1216.6	599.4	295.6	234.4	221.8	216.6	213.6	213.6
15°	2860.5	2520.5	1717.0	818.3	314.8	221.8	201.8	197.3	196.6	195.9	196.6
17.5°	2865.7	2453.2	1444.3	479.0	228.4	193.6	184.7	181.1	181.1	180.4	180.4
20°	2853.9	2364.5	1142.8	295.6	197.3	178.1	168.5	164.1	163.4	163.4	163.4
22.5°	2829.5	2251.4	844.8	224.0	179.6	164.1	151.6	147.1	147.1	147.8	148.6
25°	2799.1	2117.7	580.2	193.0	166.3	149.3	136.8	132.3	133.8	135.3	136.0
27.5°	2760.8	1958.0	379.9	167.0	148.6	134.5	123.5	120.5	123.5	126.4	127.9
30°	2722.3	1782.8	257.2	144.9	128.6	118.2	111.7	110.9	115.3	122.0	122.7
32.5°	2697.2	1603.2	194.4	130.1	113.1	104.3	101.3	102.7	109.4	116.8	118.2
35°	2694.9	1428.0	165.5	118.2	102.7	94.6	93.1	97.6	105.0	110.9	112.3
37.5°	2729.7	1263.9	150.0	109.4	94.6	86.6	84.2	92.5	99.1	105.0	106.4
40°	2799.9	1116.8	139.8	101.3	88.0	78.3	76.9	83.5	90.1	96.8	99.1
42.5°	2887.8	979.4	127.9	93.1	80.6	69.5	68.0	73.2	79.9	89.5	90.9
45°	2963.9	851.4	115.3	84.2	72.4	59.9	59.1	65.0	70.3	79.1	80.6
47.5°	3028.2	745.0	103.5	74.7	62.1	53.2	52.5	55.4	58.4	66.5	68.0
50°	2994.2	654.9	91.7	61.4	50.3	45.8	45.2	45.2	48.7	57.0	58.4
52.5°	2910.7	598.7	80.6	51.1	41.4	39.3	36.9	37.7	41.4	45.2	45.8
55°	2843.5	572.1	70.9	45.2	34.8	32.6	30.3	29.6	30.3	28.9	27.4
56°	2827.2	569.1	68.8	43.6	33.3	30.3	27.4	25.9	25.1	22.2	21.5
57.5°	2819.9	569.1	65.0	40.7	31.0	27.4	23.6	20.6	17.7	15.6	15.6
60°	2814.0	572.8	60.6	35.5	26.7	22.2	17.1	12.6	10.4	10.4	10.4
62.5°	2801.4	571.3	55.4	29.6	23.0	17.1	10.4	8.0	7.4	8.0	8.8
65°	2660.1	530.7	48.7	23.6	17.7	11.8	5.9	5.9	6.7	8.0	8.8
67.5°	2143.5	402.1	39.9	18.5	12.6	8.8	5.1	5.1	6.7	8.0	8.8
70°	1177.5	212.2	34.0	13.3	9.7	7.4	5.1	4.5	6.7	8.0	8.8
72.5°	287.6	88.7	31.0	10.4	8.8	6.7	4.5	4.5	6.7	8.0	8.8
75°	70.9	66.5	25.1	8.0	7.4	5.9	4.5	4.5	6.7	8.0	8.8
77.5°	33.3	88.0	17.1	7.4	6.7	5.1	4.5	4.5	6.7	8.0	8.0
80°	20.0	66.5	10.4	6.7	5.9	5.1	4.5	4.5	6.7	8.0	8.8
82.5°	11.8	19.2	7.4	6.7	5.9	4.5	4.5	4.5	6.7	8.0	8.8
85°	10.4	9.7	7.4	6.7	5.9	5.1	4.5	4.5	7.4	8.8	8.8
87.5°	8.0	7.4	6.7	5.9	5.9	5.1	4.5	4.5	6.7	8.0	8.8
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)