

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: P270515

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270515
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-04-D-UNV-SL3-7027-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11855.3 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 129
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

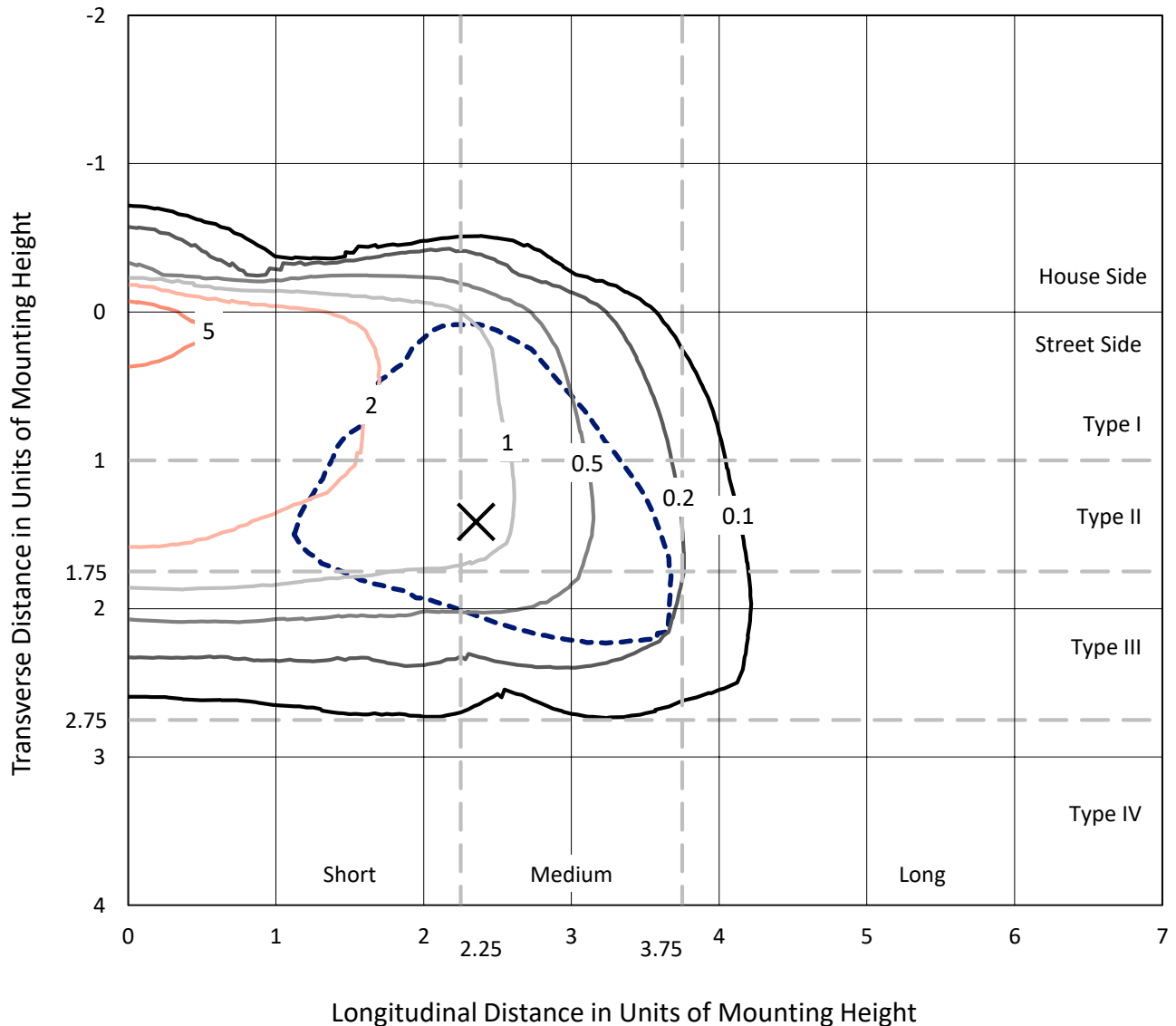


REPORT NUMBER: P270515

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-600-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

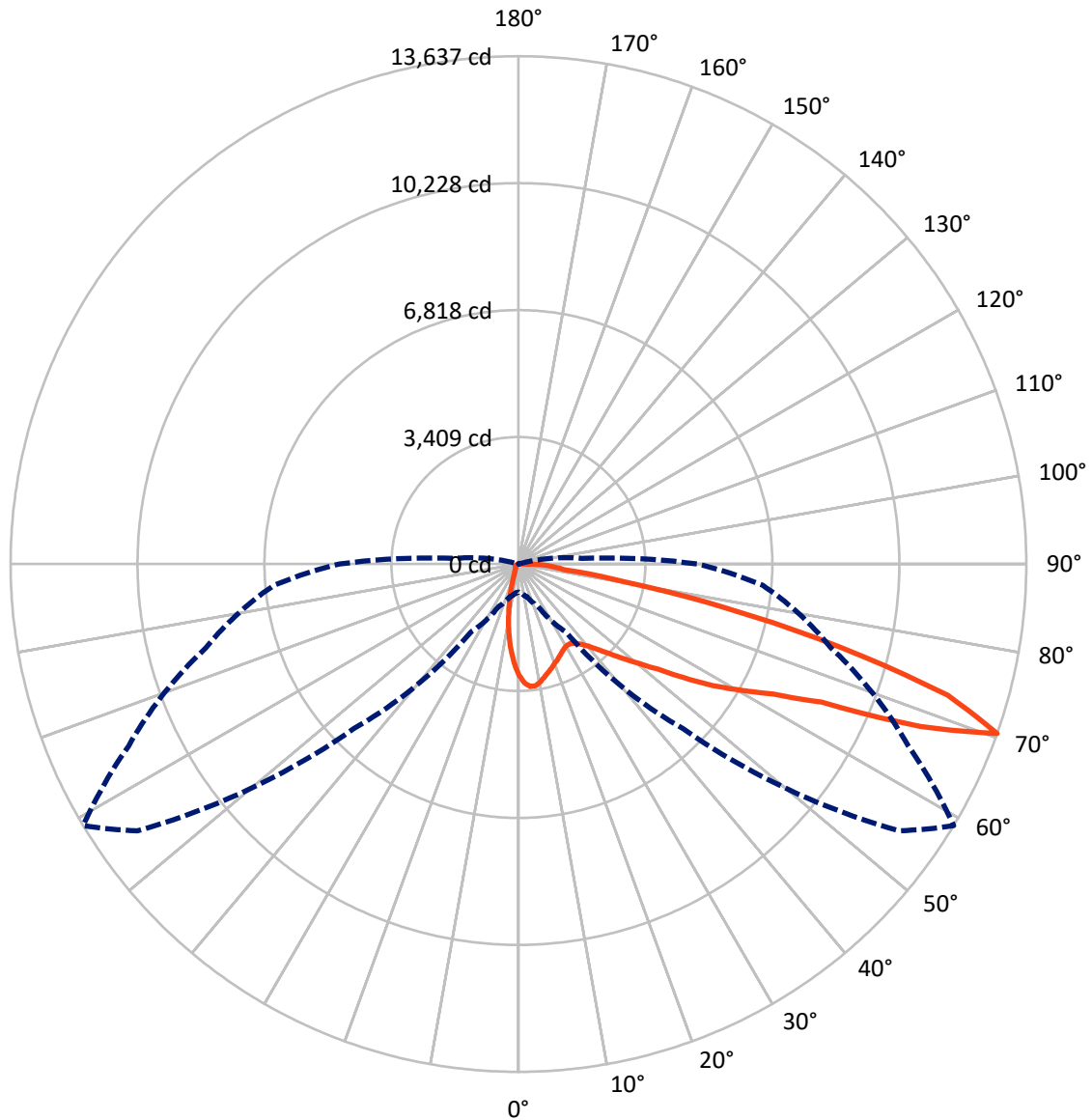


Based on 20 foot mounting height. Maximum calculated value = 8 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P270515

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-600-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P270515

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-600-HSS

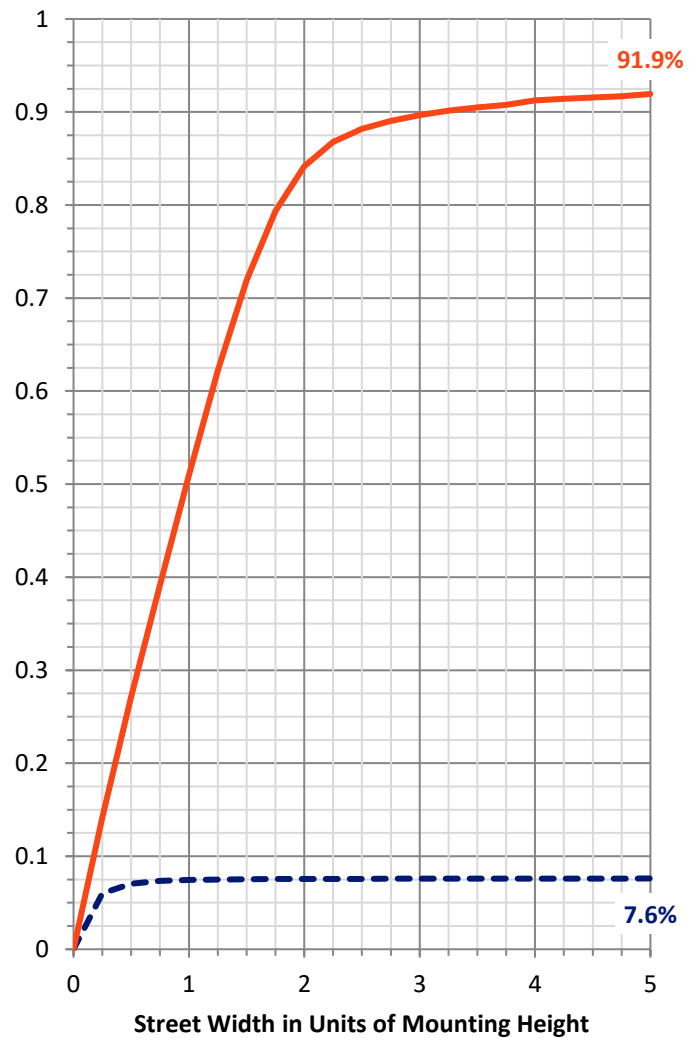
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	911.4	0.0	911.4
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	10944.0	0.0	10944.0
	% Fixture	92.3	0.0	92.3
Total	Lumens	11855.3	0.0	11855.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	246.5	2.1
10°-20°	517.0	4.4
20°-30°	699.9	5.9
30°-40°	1010.1	8.5
40°-50°	1677.5	14.1
50°-60°	2565.9	21.6
60°-70°	3191.4	26.9
70°-80°	1764.2	14.9
80°-90°	182.9	1.5
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°	11855.3	100.0
0°-180°	11855.3	100.0



--- HS — SS

REPORT NUMBER: P270515

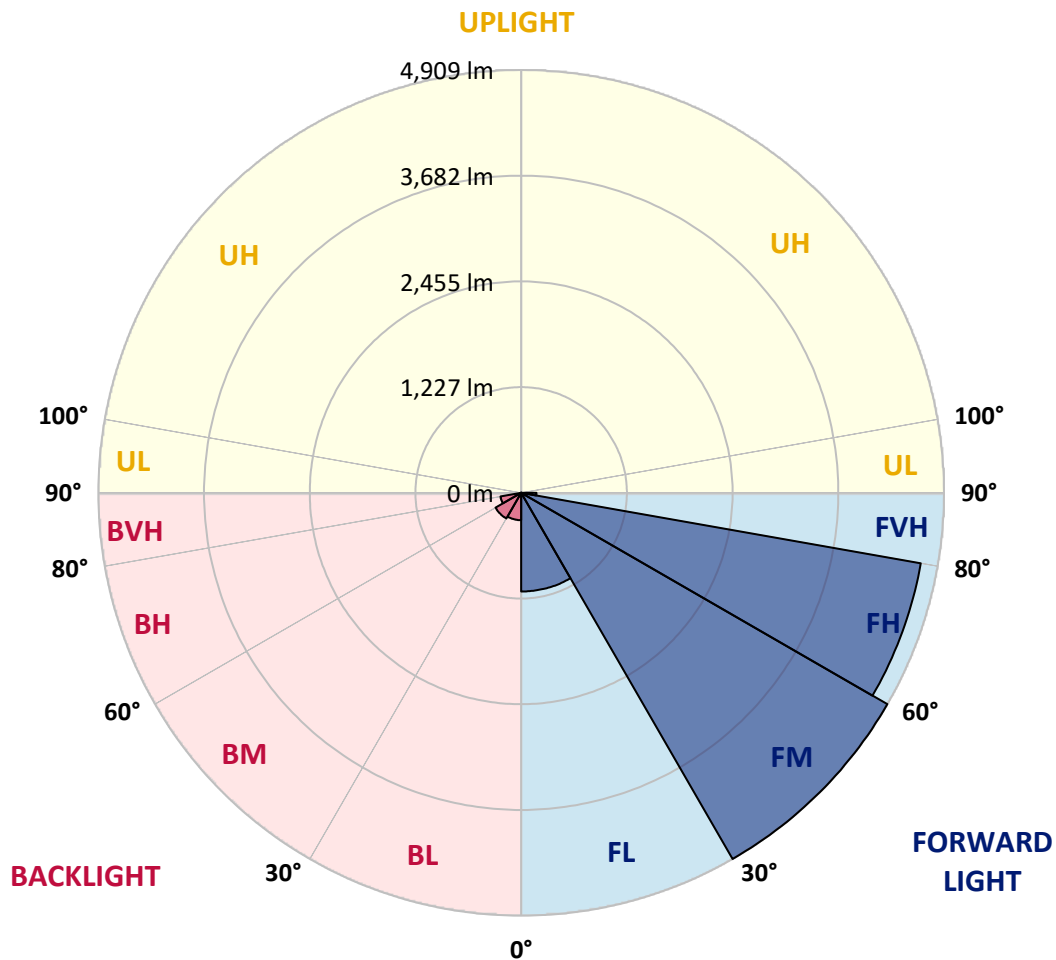
CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-600-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1145.9	9.7			
FM	(30°-60°)	4909.4	41.4			
FH	(60°-80°)	4711.1	39.7			G2/5000
FVH	(80°-90°)	177.6	1.5			G2/225
BL	(0°-30°)	317.6	2.7	B1/500		
BM	(30°-60°)	344.0	2.9	B1/1000		
BH	(60°-80°)	244.5	2.1	B1/500		G1/500
BVH	(80°-90°)	5.3	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 III Medium





REPORT NUMBER: P270515

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-600-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7
2.5°	3388.5	3383.2	3360.9	3356.3	3331.4	3281.2	3223.2	3199.9	3152.5	3077.4	2994.2
5°	3444.9	3447.7	3449.4	3439.6	3435.9	3394.9	3330.5	3302.8	3239.3	3115.9	2963.8
7.5°	3233.9	3241.1	3263.5	3273.2	3316.2	3332.3	3318.9	3300.9	3250.8	3105.1	2891.4
10°	3011.2	3024.7	3048.8	3064.8	3117.6	3160.5	3215.2	3219.5	3208.8	3069.2	2810.0
12.5°	2819.8	2832.4	2859.1	2891.4	2945.1	3000.5	3081.8	3110.6	3146.3	3046.1	2751.9
15°	2655.3	2658.9	2684.8	2725.0	2795.6	2871.7	2968.3	3010.3	3080.1	3037.1	2707.1
17.5°	2511.3	2512.2	2529.2	2565.7	2651.6	2751.9	2864.5	2920.0	3008.6	3024.7	2667.7
20°	2416.5	2415.6	2416.5	2436.2	2512.2	2631.1	2767.9	2826.1	2939.7	3009.4	2627.5
22.5°	2384.3	2379.8	2359.2	2352.1	2400.5	2505.1	2668.7	2744.7	2877.9	3004.9	2598.0
25°	2423.6	2420.9	2377.2	2336.0	2340.4	2405.8	2567.6	2660.6	2829.7	3021.0	2590.8
27.5°	2550.6	2545.3	2478.2	2397.7	2346.7	2358.3	2492.4	2590.0	2791.3	3060.3	2600.8
30°	2717.0	2717.8	2646.2	2548.9	2428.9	2362.8	2452.3	2544.4	2765.3	3119.5	2622.2
32.5°	2902.1	2901.2	2850.2	2737.6	2584.7	2445.0	2470.1	2548.0	2768.8	3206.2	2663.4
35°	3093.5	3083.6	3066.6	2967.5	2788.5	2589.1	2551.5	2608.8	2806.3	3320.7	2733.1
37.5°	3314.3	3310.9	3327.9	3223.2	3040.8	2801.1	2694.6	2733.1	2901.2	3489.6	2845.7
40°	3665.9	3646.2	3654.2	3512.1	3325.0	3086.3	2895.0	2904.8	3052.4	3713.2	3023.8
42.5°	4335.7	4256.1	4106.7	3840.3	3638.1	3402.9	3157.0	3139.9	3266.1	3984.3	3258.1
45°	5136.1	5044.9	4668.4	4202.5	3951.1	3742.8	3480.8	3435.1	3529.0	4307.1	3560.3
47.5°	5804.2	5705.9	5206.8	4580.7	4269.6	4093.3	3839.4	3785.6	3843.8	4681.7	3923.3
50°	6032.2	5977.7	5539.5	4895.6	4590.6	4486.9	4289.1	4199.8	4214.0	5086.1	4347.3
52.5°	5927.6	5908.8	5615.5	5111.0	4887.5	4921.5	4781.9	4688.1	4671.9	5527.8	4816.0
55°	5706.8	5697.8	5554.7	5230.9	5149.5	5319.5	5473.3	5391.8	5239.9	5997.4	5203.3
57.5°	5391.0	5425.0	5527.8	5461.6	5471.4	5739.8	6115.4	6157.4	5930.3	6371.1	5490.4
60°	4547.7	4638.8	5110.2	5709.4	6168.2	6439.1	6803.1	6881.8	6515.1	6626.9	5822.1
62.5°	3361.7	3492.3	4164.1	5264.8	6551.9	7769.0	7718.1	7683.2	7073.3	6969.5	6425.8
65°	1974.7	2127.5	2695.5	4113.9	5973.2	8624.0	9426.3	8943.3	7923.7	7681.3	7387.1
67.5°	983.7	984.6	1241.3	2171.5	4414.5	8027.4	11919.6	11640.5	9732.1	8730.4	7766.3
70°	756.6	777.2	918.4	1261.8	2232.3	6252.3	12491.0	13636.7	11549.2	8683.9	6589.3
72.5°	641.2	654.7	817.4	1098.3	1668.8	3432.5	10813.3	12053.7	11020.8	7337.0	4857.0
75°	461.5	472.1	723.6	996.3	1536.5	1702.7	7417.6	8939.8	8269.0	5161.1	2673.1
77.5°	114.4	113.5	252.2	808.5	1374.5	1418.5	4256.1	5732.7	4744.4	2113.4	686.8
80°	50.9	49.1	57.2	169.9	1278.8	1338.8	1871.8	2895.0	1820.0	342.6	210.2
82.5°	35.8	34.0	35.8	62.6	427.6	1242.3	1131.3	1254.8	666.3	117.1	89.4
85°	11.6	10.7	19.7	52.8	119.8	716.4	1103.6	937.2	495.4	50.0	59.9
87.5°	1.7	1.7	7.1	28.7	34.9	238.8	647.5	649.3	222.7	29.6	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



REPORT NUMBER: P270515

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-600-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7	2997.7
2.5°	2952.2	2899.4	2825.2	2751.0	2683.9	2615.1	2559.6	2533.6	2522.0	2505.9	2471.0
5°	2884.2	2788.5	2625.7	2465.7	2316.3	2173.2	2050.7	1980.9	1905.8	1902.3	1865.6
7.5°	2775.1	2639.2	2382.5	2133.8	1905.8	1687.6	1499.8	1378.2	1294.9	1243.2	1207.3
10°	2653.5	2479.1	2139.3	1789.6	1479.1	1187.6	946.3	788.8	693.1	644.9	617.0
12.5°	2556.8	2337.7	1899.6	1459.6	1070.5	736.0	511.6	397.1	346.0	326.4	317.6
15°	2473.8	2208.2	1675.1	1164.5	714.5	423.0	296.0	258.4	250.4	250.4	249.5
17.5°	2389.6	2082.9	1456.8	874.7	449.8	277.2	233.4	228.1	229.0	231.7	231.7
20°	2310.0	1964.0	1246.7	623.3	295.2	221.8	212.0	210.2	212.9	216.4	215.6
22.5°	2245.7	1859.3	1049.8	428.4	227.1	201.2	194.9	192.2	194.0	196.8	195.9
25°	2200.0	1769.9	869.3	298.6	197.6	183.3	176.2	172.7	170.8	172.7	171.8
27.5°	2172.3	1694.7	699.4	224.4	177.1	165.5	156.6	149.4	144.8	144.8	143.1
30°	2154.4	1624.0	548.2	185.9	160.1	147.5	135.0	125.3	118.0	116.3	115.3
32.5°	2153.5	1563.3	409.5	164.6	144.0	129.6	114.4	102.0	94.0	92.2	91.2
35°	2176.0	1514.2	301.4	148.5	129.6	112.6	95.7	82.3	75.1	75.1	74.2
37.5°	2234.1	1485.4	228.1	136.0	118.0	98.4	80.5	68.0	61.8	63.5	63.5
40°	2342.2	1480.0	185.9	126.1	108.2	85.9	65.2	55.4	52.8	55.4	55.4
42.5°	2507.7	1508.8	165.5	118.9	99.3	73.3	54.5	47.4	46.5	49.1	49.1
45°	2723.2	1565.0	153.8	112.6	89.4	60.8	45.6	41.1	40.2	43.7	43.7
47.5°	2984.3	1641.2	143.1	105.6	79.6	50.0	38.4	34.9	34.9	38.4	39.3
50°	3293.8	1743.9	132.4	98.4	71.5	42.0	32.2	29.6	30.5	34.0	34.9
52.5°	3649.8	1870.0	122.4	92.2	62.6	34.0	26.8	25.1	26.0	29.6	30.5
55°	3956.6	1980.0	110.9	85.9	50.9	27.7	22.4	21.5	22.4	26.8	26.8
57.5°	4223.9	2085.5	100.3	76.0	40.2	22.4	17.8	17.8	19.7	24.2	25.1
60°	4578.9	2252.0	91.2	64.4	30.5	17.0	14.4	15.2	17.8	21.5	22.4
62.5°	5207.7	2534.5	79.6	53.7	22.4	13.5	11.6	12.5	16.1	20.7	21.5
65°	5994.7	2802.0	66.1	44.7	17.0	9.8	9.0	11.6	16.1	20.7	21.5
67.5°	5914.3	2437.0	51.8	35.8	12.5	8.1	7.1	10.7	15.2	20.7	21.5
70°	4796.3	1708.1	38.4	24.2	9.8	7.1	7.1	10.7	15.2	19.7	20.7
72.5°	3327.0	950.6	29.6	16.1	9.0	7.1	6.3	9.8	14.4	19.7	20.7
75°	1583.0	291.6	23.3	11.6	8.1	6.3	5.4	9.8	14.4	19.7	20.7
77.5°	304.0	74.2	18.8	9.8	7.1	6.3	5.4	9.0	14.4	18.8	19.7
80°	102.9	33.1	15.2	9.0	7.1	6.3	5.4	9.0	13.5	17.8	18.8
82.5°	56.4	18.8	13.5	8.1	7.1	5.4	4.5	8.1	12.5	17.8	18.8
85°	43.7	13.5	10.7	8.1	7.1	5.4	4.5	8.1	12.5	17.0	17.8
87.5°	22.4	9.8	9.0	8.1	7.1	5.4	4.5	7.1	11.6	16.1	17.8
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)