

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: P195585

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-7050-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195585
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
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-SL2-7050-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11938 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

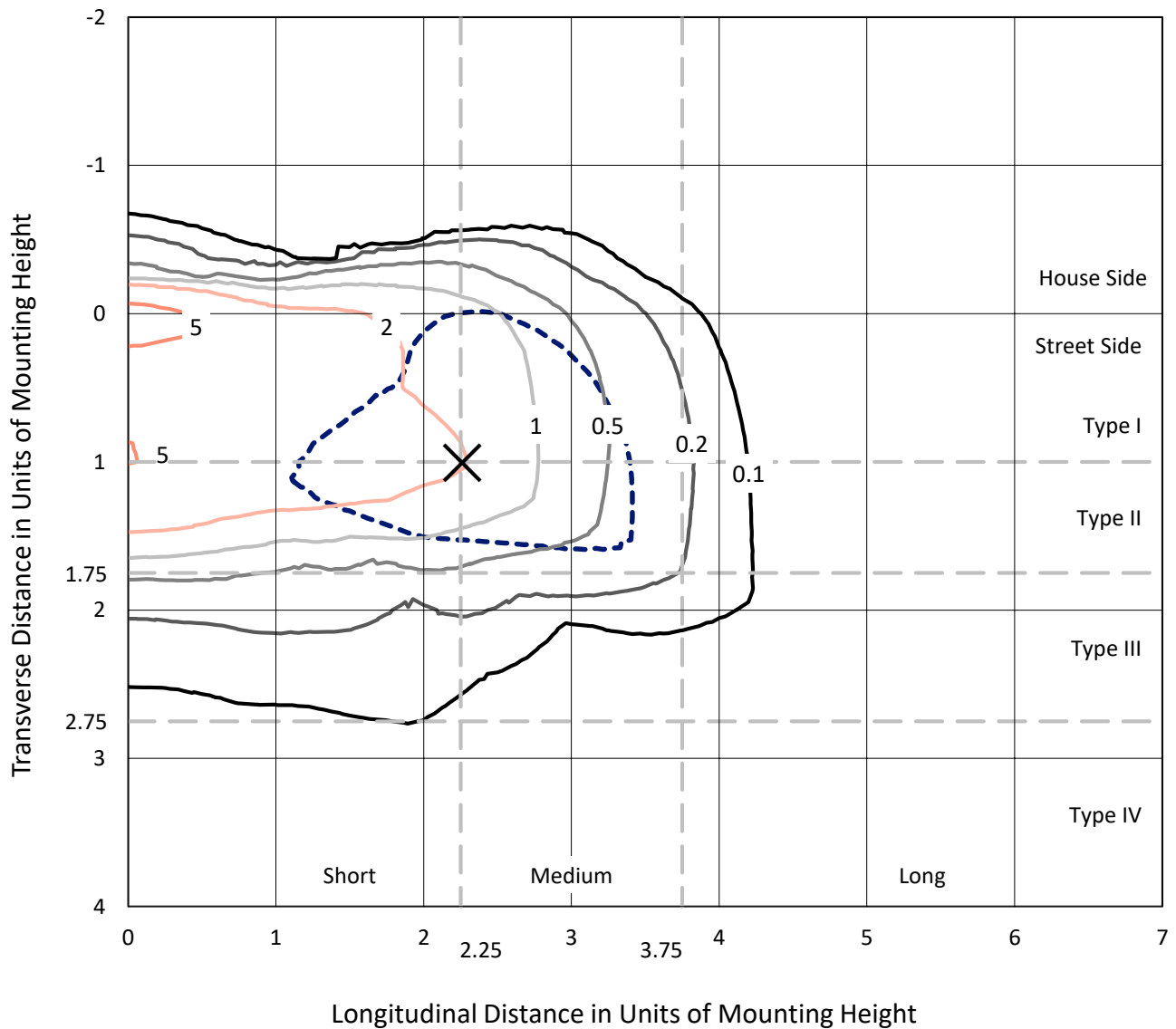
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

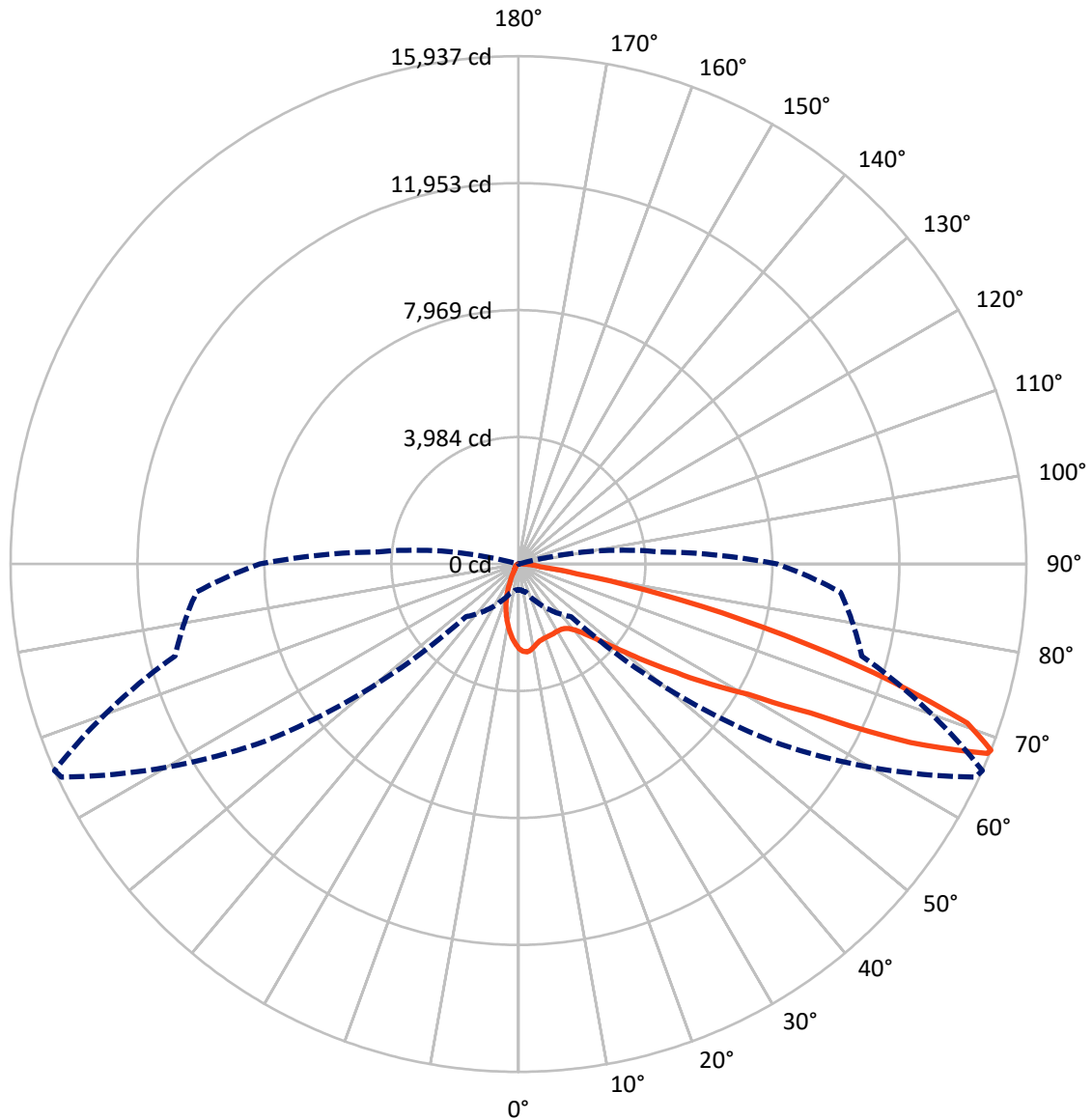


Based on 20 foot mounting height. Maximum calculated value = 6.6 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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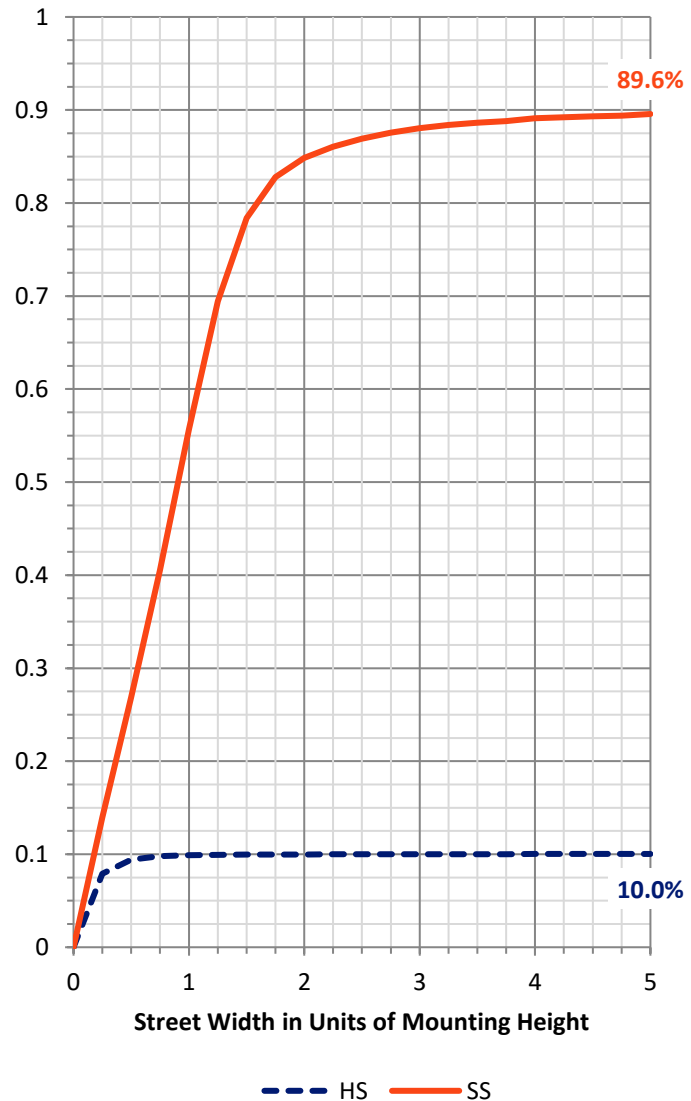
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1209.2	0.0	1209.2
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	10728.8	0.0	10728.8
	% Fixture	89.9	0.0	89.9
Total	Lumens	11938.0	0.0	11938.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.0	1.8
10°-20°	469.1	3.9
20°-30°	679.8	5.7
30°-40°	1040.7	8.7
40°-50°	1780.0	14.9
50°-60°	2784.4	23.3
60°-70°	3206.2	26.9
70°-80°	1604.4	13.4
80°-90°	155.4	1.3
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°	11938.0	100.0
0°-180°	11938.0	100.0



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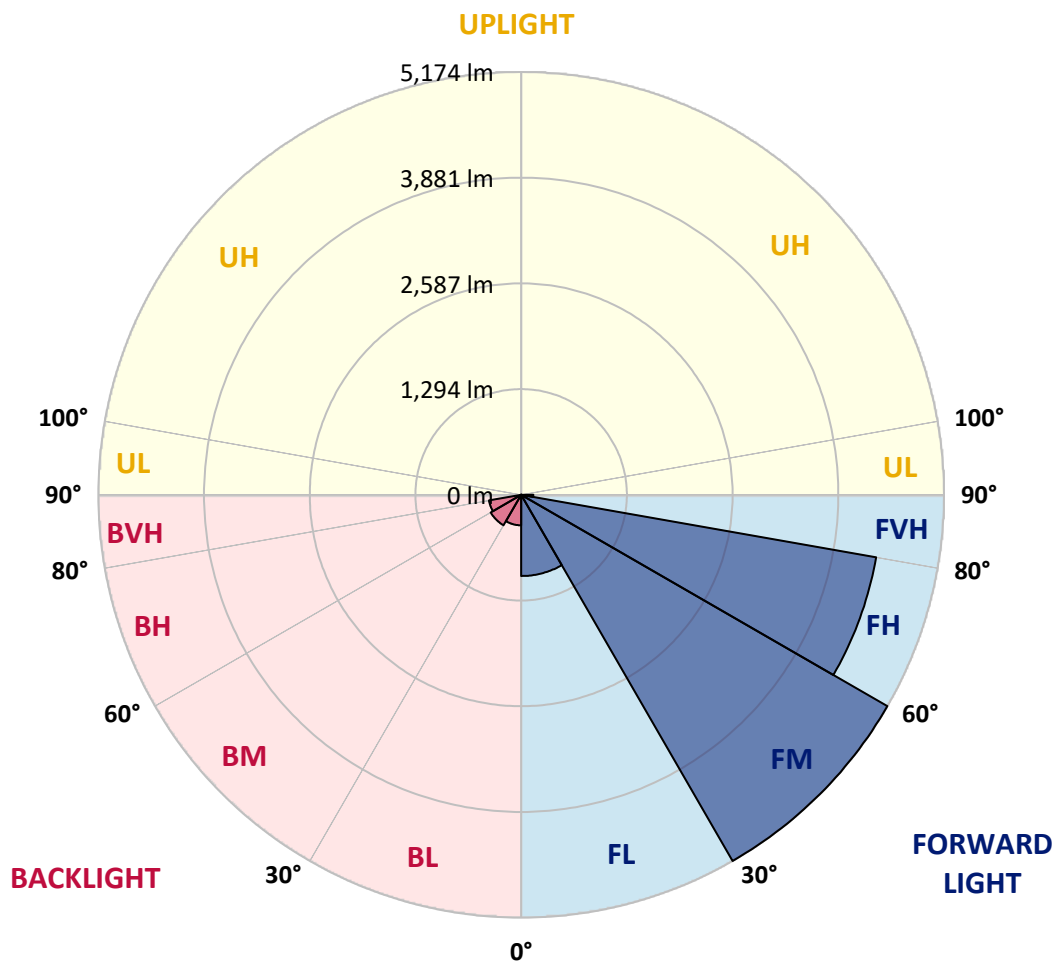
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	993.8	8.3			
FM (30°-60°)	5174.5	43.3			
FH (60°-80°)	4411.1	36.9			G2/5000
FVH (80°-90°)	149.5	1.3			G2/225
BL (0°-30°)	373.2	3.1	B1/500		
BM (30°-60°)	430.6	3.6	B1/1000		
BH (60°-80°)	399.5	3.3	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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7
2.5°	2797.4	2799.3	2798.4	2801.2	2799.3	2785.3	2770.3	2738.4	2741.2	2700.0	2654.1
5°	2600.6	2616.6	2632.5	2648.4	2686.9	2720.6	2760.9	2770.3	2770.3	2734.6	2667.2
7.5°	2400.1	2401.0	2418.8	2440.4	2491.9	2553.8	2647.5	2731.8	2733.7	2743.1	2669.0
10°	2249.2	2253.9	2266.1	2289.5	2341.0	2402.0	2506.9	2639.1	2649.4	2718.7	2650.3
12.5°	2132.0	2137.7	2150.8	2178.0	2224.8	2287.6	2398.2	2549.1	2563.1	2695.3	2644.7
15°	2042.1	2049.6	2059.9	2087.1	2137.7	2204.2	2325.1	2489.1	2506.0	2685.9	2662.5
17.5°	2004.6	2004.6	2003.7	2022.4	2073.0	2140.5	2267.0	2457.2	2478.8	2693.4	2692.5
20°	2020.5	2017.7	1998.0	1993.3	2024.3	2091.8	2221.1	2436.6	2461.0	2707.5	2729.0
22.5°	2104.9	2099.2	2055.2	2018.7	2009.3	2054.3	2190.2	2422.6	2451.6	2736.5	2777.8
25°	2283.9	2267.0	2206.1	2123.6	2049.6	2044.9	2168.6	2415.1	2446.0	2770.3	2831.2
27.5°	2516.3	2511.6	2414.1	2303.6	2161.1	2075.8	2162.0	2409.5	2440.4	2794.6	2874.3
30°	2804.9	2806.8	2694.3	2550.0	2334.5	2163.0	2182.7	2406.6	2438.5	2796.5	2893.0
32.5°	3103.0	3104.8	3011.1	2856.5	2571.6	2312.9	2240.8	2419.8	2448.8	2789.0	2892.1
35°	3389.7	3392.5	3336.3	3211.7	2888.3	2521.0	2350.4	2464.7	2485.4	2793.7	2890.2
37.5°	3752.4	3763.7	3694.3	3578.1	3285.7	2826.5	2529.4	2555.6	2572.5	2832.1	2904.3
40°	4370.9	4355.9	4157.3	3960.5	3716.8	3198.5	2788.1	2712.2	2717.8	2931.5	2957.7
42.5°	5091.6	5072.9	4732.7	4393.4	4160.1	3647.4	3118.9	2952.1	2951.1	3098.3	3073.9
45°	5712.0	5700.8	5342.8	4890.1	4651.1	4143.2	3526.6	3297.9	3286.6	3386.9	3285.7
47.5°	6152.5	6143.1	5872.3	5418.7	5219.1	4688.6	4035.4	3769.3	3745.8	3764.6	3629.6
50°	6195.6	6185.3	6090.6	5799.2	5882.6	5489.0	4664.3	4386.9	4356.9	4327.8	4149.8
52.5°	5792.6	5791.7	5841.3	5822.6	6347.4	6518.9	5435.6	5150.7	5115.0	5041.0	4863.9
55°	4968.8	4964.2	5152.5	5426.2	6337.1	7581.7	6611.7	6059.7	6012.8	5864.8	5632.4
57.5°	3630.6	3606.2	3999.8	4579.9	5892.0	8046.5	8479.5	7189.0	7111.2	6641.7	6283.7
60°	2004.6	2014.0	2520.0	3207.0	4837.6	7954.7	10198.2	8505.7	8301.4	7311.8	6951.0
62.5°	1123.7	1147.1	1523.8	2084.3	3084.2	7209.6	11120.4	10771.8	10279.8	8093.4	7794.4
65°	850.0	864.1	1053.4	1608.2	1944.6	5038.2	11267.5	13940.3	13515.8	9277.9	9137.4
67.5°	800.3	811.6	904.4	1333.6	1771.2	2612.8	10159.8	15814.7	15868.1	10893.6	10177.6
68°	806.0	820.0	912.8	1283.0	1768.4	2337.3	9687.5	15824.0	15937.4	11154.1	10142.0
70°	740.4	744.1	965.3	1258.6	1714.1	1841.5	7008.1	14739.7	14943.1	11464.3	9206.7
72.5°	283.0	284.0	433.0	1089.9	1795.6	1851.8	3530.3	11649.9	11660.2	9977.1	7177.7
75°	147.1	123.7	135.9	341.1	1715.0	1805.0	1771.2	7954.7	7905.0	6747.6	4398.1
77.5°	101.2	86.2	90.9	118.1	713.2	1804.0	1279.2	4574.3	4564.0	2870.5	1254.9
80°	57.2	49.7	54.4	99.3	250.2	1693.5	1192.1	1966.2	1852.8	504.2	203.4
82.5°	29.1	24.4	29.1	83.4	155.6	1065.6	1159.3	771.3	686.9	120.0	132.1
85°	7.5	7.5	14.1	58.1	96.5	349.6	1039.3	556.7	500.4	52.5	93.7
87.5°	1.9	0.9	5.6	21.6	34.7	75.9	576.4	310.2	267.1	27.2	54.4
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°	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7	2659.7
2.5°	2635.3	2609.1	2557.5	2499.4	2458.2	2413.2	2387.0	2355.1	2330.7	2309.2	2325.1
5°	2625.9	2575.3	2461.0	2332.6	2224.8	2121.7	2044.9	1971.8	1916.5	1881.8	1895.9
7.5°	2601.6	2526.6	2341.0	2140.5	1964.3	1798.4	1663.5	1542.6	1448.9	1398.2	1414.2
10°	2560.3	2454.4	2205.1	1926.8	1680.3	1446.0	1245.5	1065.6	929.7	865.9	880.9
12.5°	2530.3	2390.7	2064.6	1720.6	1396.4	1063.7	797.5	591.4	485.5	421.7	427.3
15°	2517.2	2341.0	1933.4	1503.2	1086.2	683.2	431.1	312.1	275.5	262.4	263.3
17.5°	2519.1	2301.7	1808.7	1277.4	773.2	392.7	264.3	238.0	232.4	229.6	229.6
20°	2523.8	2262.3	1679.4	1042.1	494.8	253.0	220.2	211.8	209.0	205.2	206.2
22.5°	2537.8	2232.3	1549.1	806.0	304.6	206.2	194.9	187.4	182.7	177.1	178.1
25°	2559.4	2209.8	1420.7	580.1	214.6	179.9	169.6	159.3	150.9	144.3	145.3
27.5°	2572.5	2178.0	1283.9	395.5	178.1	157.4	143.4	129.3	120.0	114.3	113.4
30°	2563.1	2126.4	1128.3	259.6	157.4	135.9	119.0	103.1	93.7	89.0	89.0
32.5°	2537.8	2059.9	956.8	189.3	139.6	117.1	96.5	82.5	75.9	73.1	74.0
35°	2508.8	1990.5	774.1	160.3	125.6	99.3	78.7	67.5	64.7	63.7	63.7
37.5°	2492.9	1930.6	598.8	145.3	112.5	82.5	64.7	58.1	55.3	55.3	55.3
40°	2510.7	1884.6	443.3	134.0	99.3	68.4	54.4	49.7	48.7	48.7	48.7
42.5°	2586.6	1868.7	324.3	124.6	86.2	57.2	46.9	43.1	42.2	43.1	43.1
45°	2734.6	1903.4	245.5	115.3	74.0	46.9	40.3	37.5	37.5	38.4	38.4
47.5°	2985.8	1992.4	201.5	105.9	61.9	39.4	34.7	32.8	32.8	33.7	33.7
50°	3375.7	2157.4	180.9	95.6	51.5	33.7	29.1	28.1	28.1	29.1	30.0
52.5°	3968.0	2471.3	170.6	85.3	42.2	28.1	24.4	23.4	24.4	25.3	25.3
55°	4626.8	2873.3	158.4	75.0	35.6	23.4	19.7	19.7	20.6	22.5	22.5
57.5°	5240.6	3261.3	147.1	61.9	30.9	18.7	15.9	15.9	17.8	19.7	19.7
60°	5889.1	3641.8	132.1	49.7	26.2	15.0	13.1	13.1	15.9	17.8	18.7
62.5°	6690.4	4084.2	112.5	39.4	20.6	11.2	9.4	12.2	15.0	17.8	17.8
65°	7848.8	4634.3	88.1	30.9	15.9	8.4	7.5	11.2	14.1	16.9	17.8
67.5°	8269.5	4564.0	66.5	25.3	12.2	6.6	6.6	10.3	14.1	16.9	16.9
68°	8115.8	4410.3	63.7	24.4	11.2	6.6	6.6	10.3	14.1	16.9	16.9
70°	7071.8	3605.3	52.5	18.7	9.4	5.6	5.6	9.4	14.1	15.9	16.9
72.5°	5295.0	2395.4	45.0	12.2	8.4	5.6	4.7	9.4	13.1	15.9	15.9
75°	3037.4	994.3	38.4	9.4	7.5	4.7	4.7	8.4	13.1	15.9	15.9
77.5°	858.4	232.4	30.9	7.5	6.6	4.7	3.7	8.4	12.2	15.0	15.0
80°	157.4	69.4	24.4	6.6	5.6	4.7	3.7	8.4	12.2	15.0	15.0
82.5°	104.0	32.8	17.8	6.6	5.6	4.7	3.7	7.5	11.2	14.1	14.1
85°	77.8	23.4	11.2	6.6	5.6	4.7	3.7	7.5	11.2	14.1	14.1
87.5°	43.1	10.3	8.4	7.5	6.6	4.7	3.7	6.6	10.3	13.1	13.1
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)