

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: P270360

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270360
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-02-D-UNV-SL3-7027-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1050mA 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: 8983.5 lumens
Efficiency: N/A
Efficacy: 79.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 113
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

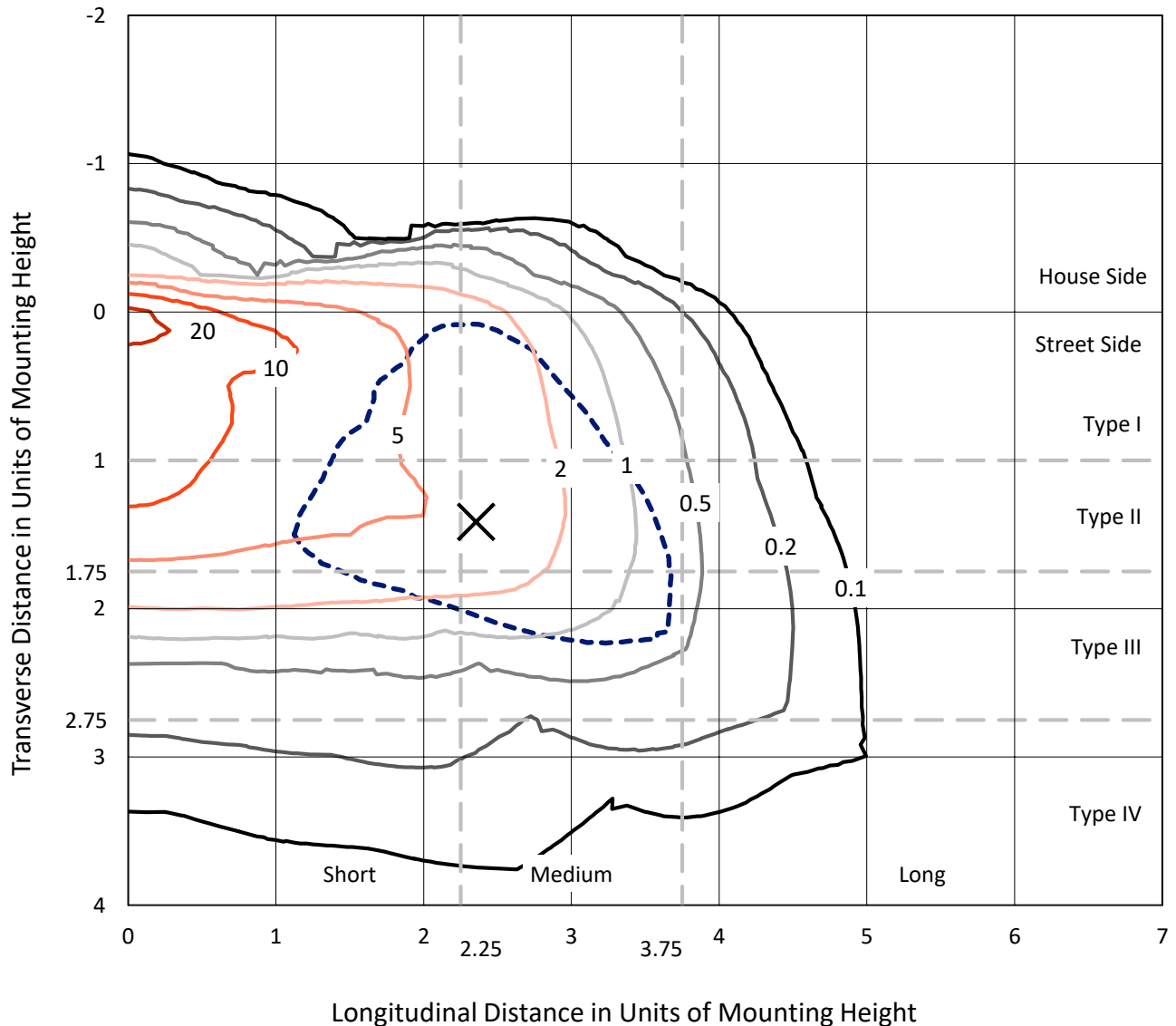


REPORT NUMBER: P270360

CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-7027-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

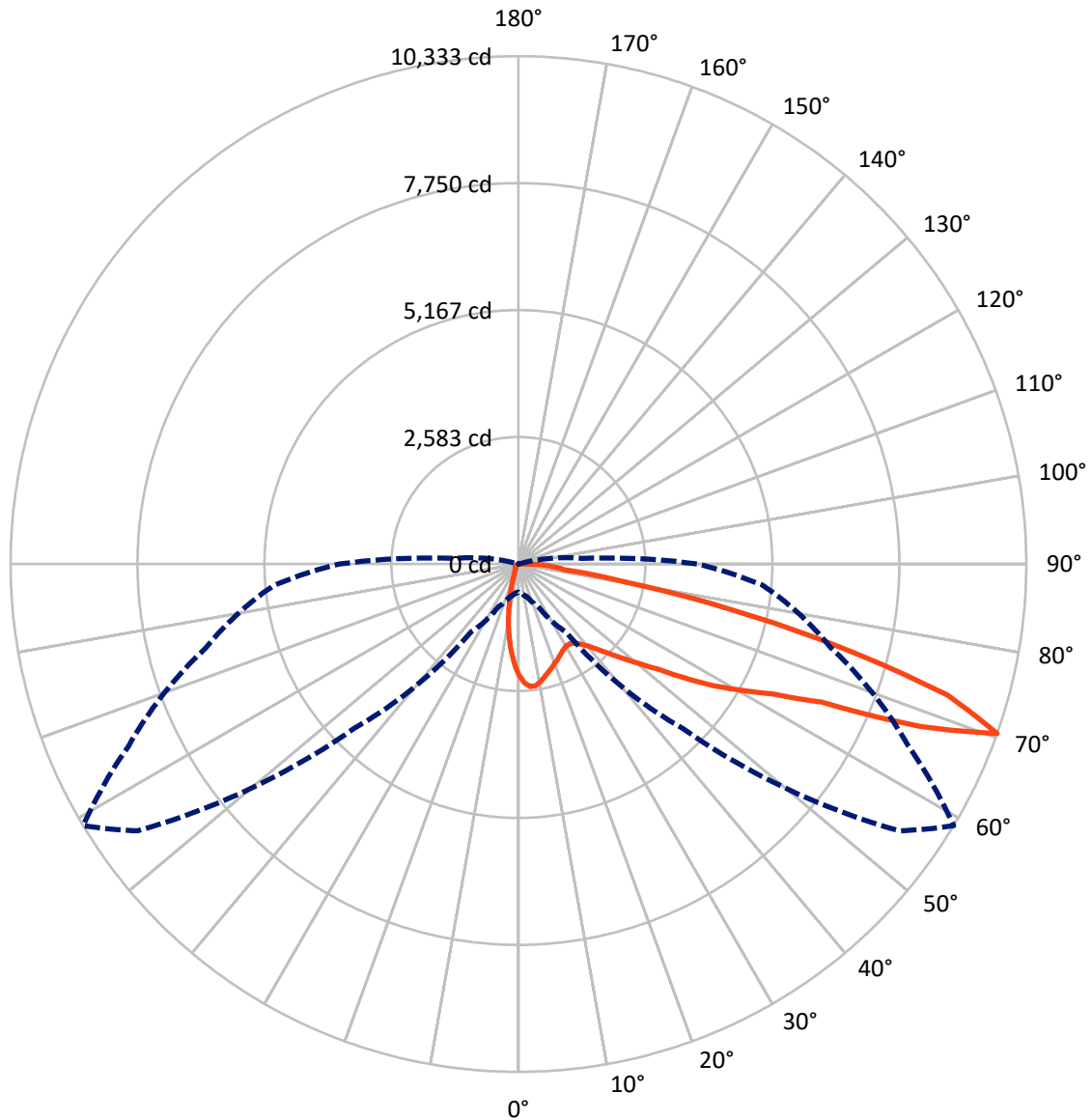


Based on 10 foot mounting height. Maximum calculated value = 24.2 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P270360

CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-7027-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P270360

CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-7027-HSS

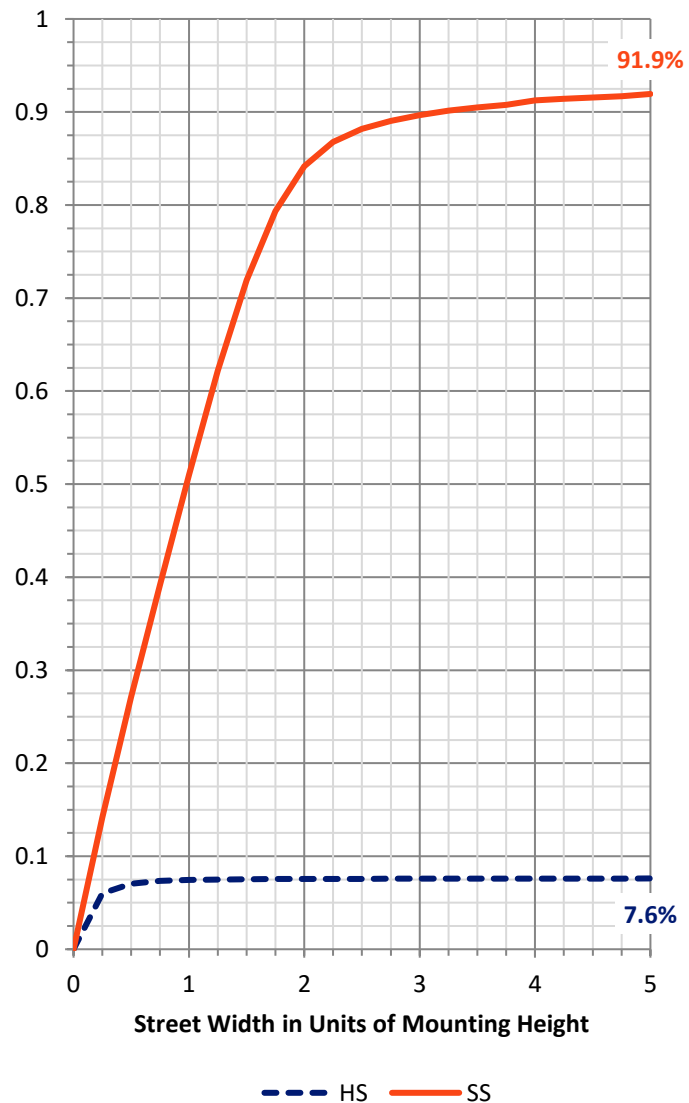
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	690.6	0.0	690.6
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	8292.9	0.0	8292.9
	% Fixture	92.3	0.0	92.3
Total	Lumens	8983.5	0.0	8983.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.8	2.1
10°-20°	391.8	4.4
20°-30°	530.4	5.9
30°-40°	765.4	8.5
40°-50°	1271.1	14.1
50°-60°	1944.3	21.6
60°-70°	2418.3	26.9
70°-80°	1336.8	14.9
80°-90°	138.6	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°	8983.5	100.0
0°-180°	8983.5	100.0



REPORT NUMBER: P270360

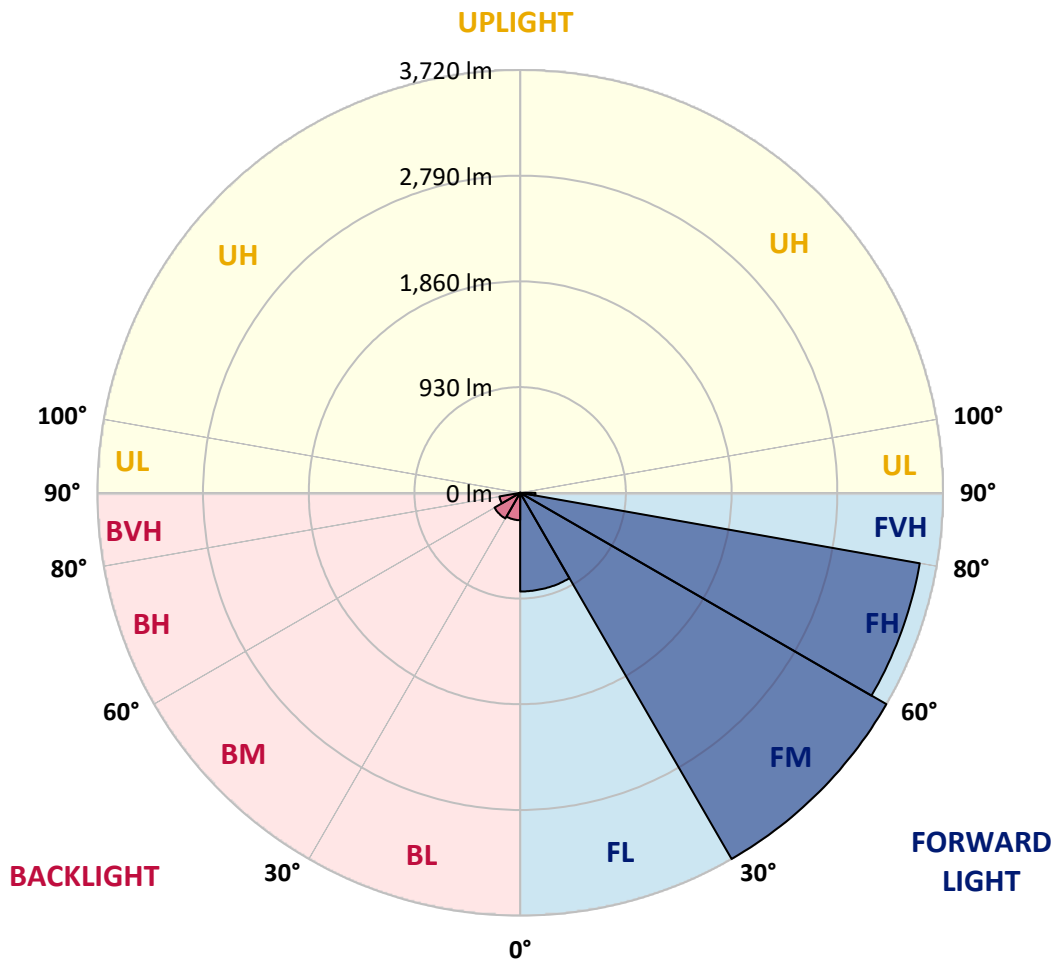
CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-7027-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	868.3	9.7			
FM	(30°-60°)	3720.2	41.4			
FH	(60°-80°)	3569.9	39.7			G2/5000
FVH	(80°-90°)	134.6	1.5			G2/225
BL	(0°-30°)	240.6	2.7	B1/500		
BM	(30°-60°)	260.7	2.9	B1/1000		
BH	(60°-80°)	185.3	2.1	B1/500		G1/500
BVH	(80°-90°)	4.0	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: P270360

CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-7027-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6
2.5°	2567.7	2563.8	2546.8	2543.3	2524.3	2486.4	2442.4	2424.7	2388.9	2331.9	2268.8
5°	2610.5	2612.5	2613.9	2606.4	2603.6	2572.4	2523.7	2502.7	2454.6	2361.0	2245.9
7.5°	2450.4	2456.0	2472.9	2480.3	2512.9	2525.0	2514.8	2501.3	2463.4	2352.9	2191.0
10°	2281.8	2291.9	2310.3	2322.4	2362.5	2394.9	2436.3	2439.6	2431.5	2325.8	2129.3
12.5°	2136.8	2146.2	2166.5	2191.0	2231.6	2273.6	2335.4	2357.1	2384.1	2308.1	2085.2
15°	2012.1	2014.8	2034.4	2064.9	2118.5	2176.1	2249.3	2281.1	2333.9	2301.4	2051.4
17.5°	1902.9	1903.6	1916.5	1944.3	2009.4	2085.2	2170.7	2212.6	2279.8	2291.9	2021.5
20°	1831.1	1830.4	1831.1	1845.9	1903.6	1993.8	2097.5	2141.5	2227.5	2280.3	1991.1
22.5°	1806.8	1803.3	1787.7	1782.2	1818.9	1898.2	2022.3	2079.8	2180.7	2277.1	1968.6
25°	1836.6	1834.5	1801.3	1770.1	1773.6	1823.0	1945.5	2016.2	2144.3	2289.2	1963.2
27.5°	1932.8	1928.8	1877.8	1816.9	1778.3	1787.1	1888.6	1962.5	2115.1	2319.1	1970.7
30°	2058.8	2059.5	2005.2	1931.4	1840.5	1790.4	1858.2	1928.0	2095.3	2363.8	1987.1
32.5°	2199.1	2198.4	2159.7	2074.4	1958.6	1852.8	1871.8	1930.7	2098.1	2429.5	2018.1
35°	2344.0	2336.6	2323.7	2248.5	2113.1	1961.9	1933.4	1976.8	2126.6	2516.2	2071.0
37.5°	2511.5	2508.7	2521.6	2442.4	2304.2	2122.5	2041.8	2071.0	2198.4	2644.3	2156.4
40°	2777.7	2762.9	2769.0	2661.3	2519.7	2338.6	2193.8	2201.1	2313.0	2813.8	2291.2
42.5°	3285.5	3225.2	3112.0	2910.0	2756.8	2578.6	2392.2	2379.3	2474.9	3019.2	2468.8
45°	3891.9	3822.8	3537.5	3184.4	2994.1	2836.0	2637.6	2603.0	2674.2	3263.7	2697.9
47.5°	4398.2	4323.6	3945.4	3471.1	3235.2	3101.8	2909.3	2868.6	2912.8	3547.6	2973.0
50°	4570.9	4529.7	4197.6	3709.6	3478.5	3399.9	3250.2	3182.4	3193.2	3854.0	3294.3
52.5°	4491.7	4477.5	4255.2	3873.0	3703.5	3729.4	3623.7	3552.4	3540.2	4188.7	3649.4
55°	4324.4	4317.6	4209.1	3963.9	3902.1	4030.9	4147.5	4085.9	3970.6	4544.5	3942.8
57.5°	4085.1	4110.9	4188.7	4138.6	4146.0	4349.5	4634.0	4665.8	4493.7	4827.9	4160.3
60°	3446.1	3515.2	3872.4	4326.3	4674.1	4879.4	5155.2	5214.8	4936.9	5021.6	4411.8
62.5°	2547.5	2646.3	3155.2	3989.6	4964.8	5887.0	5848.4	5822.1	5359.7	5281.2	4869.2
65°	1496.3	1612.2	2042.6	3117.4	4526.3	6534.9	7142.9	6776.9	6004.4	5820.7	5597.7
67.5°	745.5	746.1	940.6	1645.4	3345.1	6083.0	9032.2	8820.7	7374.5	6615.6	5885.1
70°	573.3	588.8	695.9	956.2	1691.5	4737.8	9465.3	10333.4	8751.6	6580.4	4993.1
72.5°	486.0	496.0	619.4	832.2	1264.5	2601.0	8193.9	9133.8	8351.2	5559.7	3680.5
75°	349.7	357.9	548.2	754.9	1164.3	1290.3	5620.8	6774.2	6265.9	3911.0	2025.6
77.5°	86.7	86.1	191.1	612.6	1041.7	1074.8	3225.2	4343.9	3595.1	1601.4	520.5
80°	38.6	37.3	43.4	128.7	969.1	1014.5	1418.5	2193.8	1379.1	259.6	159.3
82.5°	27.0	25.7	27.0	47.4	323.8	941.3	857.3	950.8	504.8	88.8	67.7
85°	8.9	8.2	14.9	40.0	90.8	542.8	836.2	710.2	375.4	38.0	45.5
87.5°	1.3	1.3	5.4	21.6	26.4	181.0	490.7	492.0	168.7	22.4	20.3
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: P270360

CATALOG NUMBER: NAV-AF-02-D-UNV-SL3-7027-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6	2271.6
2.5°	2237.0	2197.1	2140.8	2084.5	2033.8	1981.5	1939.5	1919.9	1911.1	1898.8	1872.4
5°	2185.5	2113.1	1989.7	1868.4	1755.2	1646.8	1554.0	1501.1	1444.1	1441.4	1413.7
7.5°	2102.8	1999.8	1805.4	1616.9	1444.1	1278.7	1136.4	1044.3	981.3	942.1	914.8
10°	2010.6	1878.5	1621.0	1356.0	1120.8	899.9	716.9	597.7	525.1	488.6	467.6
12.5°	1937.6	1771.5	1439.4	1106.1	811.2	557.8	387.7	300.9	262.2	247.4	240.6
15°	1874.5	1673.3	1269.3	882.3	541.5	320.5	224.2	195.8	189.7	189.7	189.1
17.5°	1810.8	1578.3	1103.9	662.8	340.8	210.1	176.8	172.8	173.6	175.4	175.4
20°	1750.4	1488.2	944.7	472.4	223.7	168.1	160.5	159.3	161.2	164.0	163.3
22.5°	1701.7	1408.9	795.5	324.6	172.1	152.5	147.7	145.7	147.1	149.1	148.4
25°	1667.2	1341.1	658.6	226.4	149.7	138.9	133.5	130.9	129.4	130.9	130.2
27.5°	1646.1	1284.1	529.9	170.0	134.1	125.4	118.5	113.1	109.9	109.9	108.4
30°	1632.5	1230.7	415.5	140.9	121.4	111.7	102.3	95.0	89.4	88.2	87.5
32.5°	1632.0	1184.5	310.4	124.7	109.1	98.3	86.7	77.3	71.1	69.8	69.1
35°	1648.7	1147.3	228.3	112.5	98.3	85.3	72.6	62.3	57.0	57.0	56.2
37.5°	1692.9	1125.7	172.8	103.0	89.4	74.6	60.9	51.6	46.7	48.1	48.1
40°	1774.8	1121.5	140.9	95.6	81.9	65.0	49.4	42.0	40.0	42.0	42.0
42.5°	1900.3	1143.3	125.4	90.1	75.2	55.5	41.3	35.9	35.3	37.3	37.3
45°	2063.5	1185.9	116.6	85.3	67.7	46.2	34.6	31.3	30.5	33.1	33.1
47.5°	2261.5	1243.6	108.4	79.9	60.4	38.0	29.1	26.4	26.4	29.1	29.9
50°	2495.9	1321.4	100.3	74.6	54.2	31.9	24.4	22.4	23.0	25.7	26.4
52.5°	2765.6	1417.0	92.9	69.8	47.4	25.7	20.3	19.0	19.7	22.4	23.0
55°	2998.2	1500.3	84.0	65.0	38.6	21.0	17.0	16.3	17.0	20.3	20.3
57.5°	3200.8	1580.4	75.8	57.6	30.5	17.0	13.6	13.6	14.9	18.2	19.0
60°	3469.8	1706.4	69.1	48.8	23.0	12.8	10.8	11.5	13.6	16.3	17.0
62.5°	3946.2	1920.5	60.4	40.7	17.0	10.2	8.9	9.5	12.1	15.6	16.3
65°	4542.5	2123.2	50.1	33.9	12.8	7.5	6.7	8.9	12.1	15.6	16.3
67.5°	4481.6	1846.6	39.3	27.0	9.5	6.1	5.4	8.2	11.5	15.6	16.3
70°	3634.5	1294.4	29.1	18.2	7.5	5.4	5.4	8.2	11.5	14.9	15.6
72.5°	2521.1	720.4	22.4	12.1	6.7	5.4	4.8	7.5	10.8	14.9	15.6
75°	1199.4	221.0	17.6	8.9	6.1	4.8	4.0	7.5	10.8	14.9	15.6
77.5°	230.4	56.2	14.3	7.5	5.4	4.8	4.0	6.7	10.8	14.3	14.9
80°	78.0	25.1	11.5	6.7	5.4	4.8	4.0	6.7	10.2	13.6	14.3
82.5°	42.7	14.3	10.2	6.1	5.4	4.0	3.5	6.1	9.5	13.6	14.3
85°	33.1	10.2	8.2	6.1	5.4	4.0	3.5	6.1	9.5	12.8	13.6
87.5°	17.0	7.5	6.7	6.1	5.4	4.0	3.5	5.4	8.9	12.1	13.6
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)