

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: P197084

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197084
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-SL3-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 1200mA 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: 9256 lumens
Efficiency: N/A
Efficacy: 71.8 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): 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

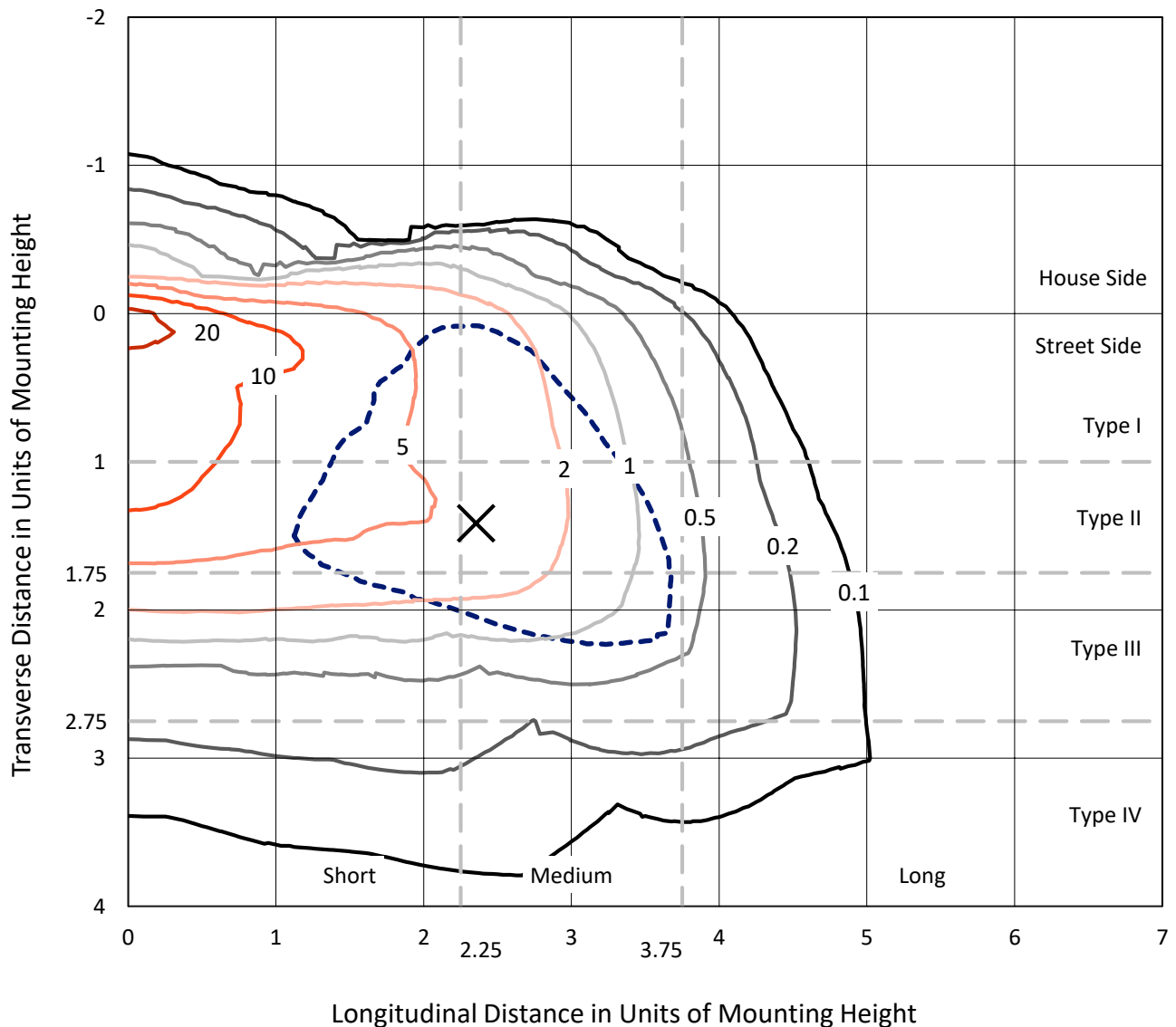


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

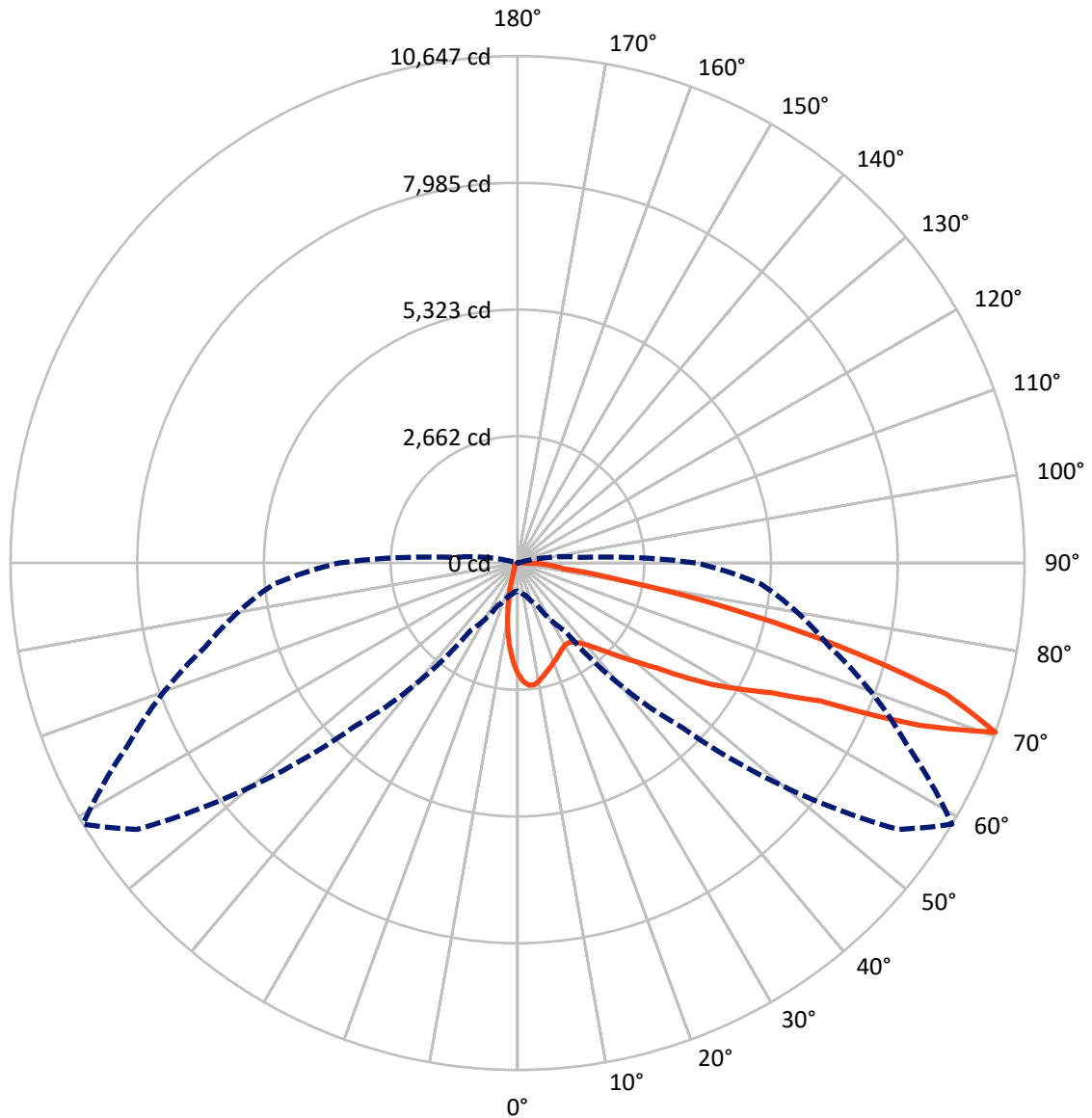


Based on 10 foot mounting height. Maximum calculated value = 24.9 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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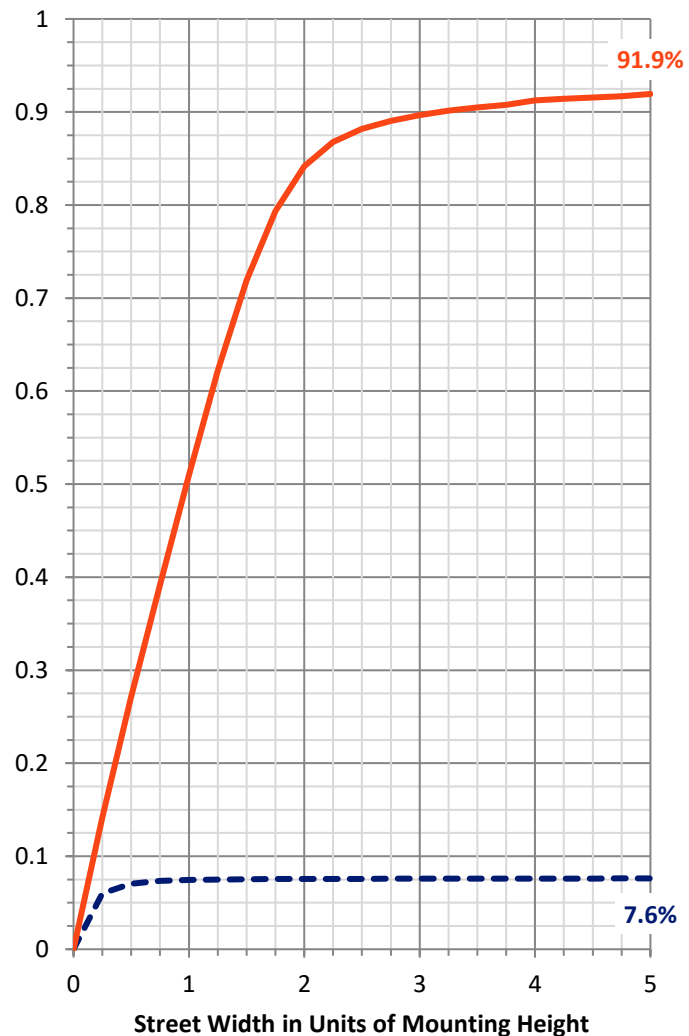
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	711.6	0.0	711.6
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	8544.5	0.0	8544.5
	% Fixture	92.3	0.0	92.3
Total	Lumens	9256.0	0.0	9256.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.5	2.1
10°-20°	403.7	4.4
20°-30°	546.4	5.9
30°-40°	788.6	8.5
40°-50°	1309.7	14.1
50°-60°	2003.3	21.6
60°-70°	2491.7	26.9
70°-80°	1377.4	14.9
80°-90°	142.8	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°	9256.0	100.0
0°-180°	9256.0	100.0



--- HS — SS

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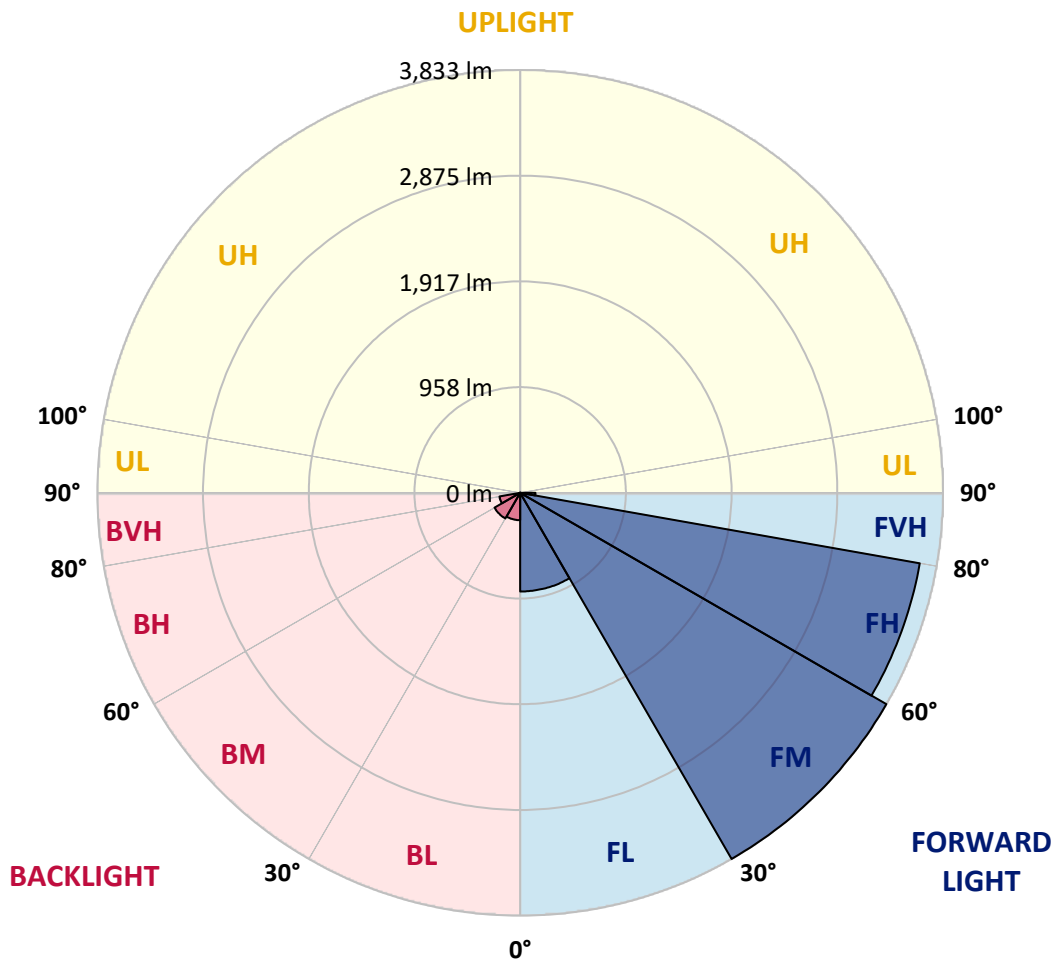
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	894.6	9.7			
FM	(30°-60°)	3833.0	41.4			
FH	(60°-80°)	3678.1	39.7			G2/5000
FVH	(80°-90°)	138.7	1.5			G2/225
BL	(0°-30°)	248.0	2.7	B1/500		
BM	(30°-60°)	268.6	2.9	B1/1000		
BH	(60°-80°)	190.9	2.1	B1/500		G1/500
BVH	(80°-90°)	4.1	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5
2.5°	2645.6	2641.5	2624.0	2620.5	2601.0	2561.9	2516.5	2498.3	2461.3	2402.7	2337.7
5°	2689.6	2691.7	2693.1	2685.4	2682.6	2650.5	2600.3	2578.6	2529.0	2432.7	2314.0
7.5°	2524.8	2530.4	2547.9	2555.6	2589.1	2601.7	2591.2	2577.2	2538.1	2424.3	2257.4
10°	2351.0	2361.5	2380.3	2392.9	2434.1	2467.6	2510.2	2513.7	2505.3	2396.4	2193.9
12.5°	2201.6	2211.3	2232.3	2257.4	2299.3	2342.6	2406.1	2428.5	2456.4	2378.2	2148.5
15°	2073.1	2075.9	2096.1	2127.5	2182.7	2242.1	2317.5	2350.3	2404.7	2371.2	2113.6
17.5°	1960.7	1961.4	1974.6	2003.3	2070.3	2148.5	2236.5	2279.8	2348.9	2361.5	2082.9
20°	1886.7	1886.0	1886.7	1902.0	1961.4	2054.2	2161.1	2206.4	2295.1	2349.6	2051.4
22.5°	1861.5	1858.0	1842.0	1836.4	1874.1	1955.8	2083.6	2142.9	2246.9	2346.1	2028.4
25°	1892.2	1890.1	1855.9	1823.8	1827.3	1878.3	2004.7	2077.3	2209.2	2358.7	2022.8
27.5°	1991.4	1987.2	1934.8	1872.0	1832.2	1841.3	1946.0	2022.1	2179.2	2389.4	2030.5
30°	2121.3	2122.0	2066.1	1990.0	1896.4	1844.8	1914.6	1986.5	2159.0	2435.5	2047.2
32.5°	2265.8	2265.1	2225.3	2137.3	2017.9	1909.0	1928.5	1989.3	2161.8	2503.2	2079.4
35°	2415.2	2407.5	2394.3	2316.8	2177.1	2021.4	1992.1	2036.8	2191.1	2592.6	2133.8
37.5°	2587.7	2584.9	2598.2	2516.5	2374.0	2186.9	2103.8	2133.8	2265.1	2724.5	2221.8
40°	2862.1	2846.7	2853.0	2742.0	2596.1	2409.6	2260.2	2267.9	2383.1	2899.1	2360.8
42.5°	3385.1	3322.9	3206.3	2998.3	2840.5	2656.8	2464.8	2451.5	2550.0	3110.7	2543.7
45°	4010.0	3938.8	3644.8	3281.0	3084.8	2922.1	2717.6	2681.9	2755.3	3362.7	2779.7
47.5°	4531.6	4454.8	4065.2	3576.4	3333.4	3195.9	2997.6	2955.7	3001.0	3655.3	3063.2
50°	4709.6	4667.1	4324.9	3822.2	3584.1	3503.1	3348.8	3278.9	3290.1	3970.9	3394.2
52.5°	4628.0	4613.3	4384.3	3990.5	3815.9	3842.4	3733.5	3660.2	3647.6	4315.8	3760.0
55°	4455.5	4448.5	4336.8	4084.0	4020.5	4153.1	4273.2	4209.7	4091.0	4682.4	4062.4
57.5°	4209.0	4235.5	4315.8	4264.2	4271.8	4481.3	4774.6	4807.4	4630.0	4974.3	4286.5
60°	3550.6	3621.8	3989.8	4457.6	4815.8	5027.3	5311.5	5373.0	5086.7	5174.0	4545.6
62.5°	2624.7	2726.6	3251.0	4110.6	5115.3	6065.6	6025.8	5998.6	5522.4	5441.4	5016.9
65°	1541.7	1661.1	2104.5	3211.9	4663.6	6733.2	7359.5	6982.4	6186.4	5997.2	5767.5
67.5°	768.1	768.8	969.2	1695.3	3446.5	6267.4	9306.2	9088.3	7598.3	6816.2	6063.5
70°	590.7	606.8	717.1	985.2	1742.8	4881.4	9752.4	10646.8	9017.1	6779.9	5144.7
72.5°	500.6	511.1	638.2	857.4	1302.9	2679.9	8442.5	9410.9	8604.4	5728.4	3792.2
75°	360.3	368.7	564.9	777.8	1199.6	1329.5	5791.2	6979.6	6456.0	4029.6	2087.0
77.5°	89.4	88.7	196.9	631.2	1073.2	1107.4	3322.9	4475.7	3704.2	1649.9	536.3
80°	39.8	38.4	44.7	132.7	998.5	1045.3	1461.4	2260.2	1420.9	267.4	164.1
82.5°	27.9	26.5	27.9	48.9	333.8	969.9	883.3	979.6	520.2	91.5	69.8
85°	9.1	8.4	15.4	41.2	93.6	559.3	861.6	731.8	386.8	39.1	46.8
87.5°	1.4	1.4	5.6	22.3	27.2	186.4	505.5	506.9	173.9	23.0	20.9
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°	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5	2340.5
2.5°	2304.9	2263.7	2205.7	2147.8	2095.4	2041.7	1998.4	1978.1	1969.0	1956.5	1929.2
5°	2251.8	2177.1	2050.0	1925.1	1808.4	1696.7	1601.1	1546.6	1488.0	1485.2	1456.5
7.5°	2166.6	2060.5	1860.1	1666.0	1488.0	1317.6	1171.0	1076.0	1011.1	970.6	942.6
10°	2071.7	1935.5	1670.2	1397.2	1154.9	927.3	738.7	615.9	541.1	503.4	481.8
12.5°	1996.3	1825.2	1483.1	1139.5	835.8	574.7	399.4	310.0	270.2	254.9	247.9
15°	1931.3	1724.0	1307.8	909.1	557.9	330.3	231.1	201.8	195.5	195.5	194.8
17.5°	1865.7	1626.2	1137.4	682.9	351.2	216.5	182.2	178.1	178.8	180.8	180.8
20°	1803.6	1533.3	973.4	486.7	230.4	173.2	165.5	164.1	166.2	169.0	168.3
22.5°	1753.3	1451.6	819.7	334.5	177.4	157.1	152.2	150.1	151.5	153.6	152.9
25°	1717.7	1381.8	678.7	233.2	154.3	143.1	137.6	134.8	133.4	134.8	134.1
27.5°	1696.0	1323.2	546.0	175.3	138.3	129.2	122.2	116.6	113.1	113.1	111.7
30°	1682.1	1268.0	428.0	145.2	125.0	115.2	105.4	97.8	92.2	90.8	90.1
32.5°	1681.4	1220.5	319.8	128.5	112.4	101.2	89.4	79.6	73.3	71.9	71.2
35°	1698.8	1182.1	235.3	115.9	101.2	88.0	74.7	64.2	58.7	58.7	58.0
37.5°	1744.2	1159.8	178.1	106.1	92.2	76.8	62.8	53.1	48.2	49.6	49.6
40°	1828.7	1155.6	145.2	98.5	84.5	67.0	51.0	43.3	41.2	43.3	43.3
42.5°	1957.9	1177.9	129.2	92.9	77.5	57.3	42.6	37.0	36.3	38.4	38.4
45°	2126.1	1221.9	120.1	88.0	69.8	47.5	35.6	32.1	31.4	34.2	34.2
47.5°	2330.0	1281.3	111.7	82.4	62.1	39.1	30.0	27.2	27.2	30.0	30.7
50°	2571.6	1361.6	103.3	76.8	55.9	32.8	25.1	23.0	23.7	26.5	27.2
52.5°	2849.5	1460.0	95.7	71.9	48.9	26.5	20.9	19.6	20.2	23.0	23.7
55°	3089.0	1545.9	86.6	67.0	39.8	21.6	17.5	16.8	17.5	20.9	20.9
57.5°	3297.8	1628.3	78.2	59.4	31.4	17.5	14.0	14.0	15.4	18.9	19.6
60°	3575.0	1758.2	71.2	50.3	23.7	13.3	11.2	11.9	14.0	16.8	17.5
62.5°	4065.9	1978.8	62.1	41.9	17.5	10.5	9.1	9.8	12.6	16.1	16.8
65°	4680.3	2187.6	51.7	34.9	13.3	7.7	7.0	9.1	12.6	16.1	16.8
67.5°	4617.5	1902.7	40.5	27.9	9.8	6.3	5.6	8.4	11.9	16.1	16.8
70°	3744.7	1333.6	30.0	18.9	7.7	5.6	5.6	8.4	11.9	15.4	16.1
72.5°	2597.5	742.2	23.0	12.6	7.0	5.6	4.9	7.7	11.2	15.4	16.1
75°	1235.9	227.6	18.2	9.1	6.3	4.9	4.2	7.7	11.2	15.4	16.1
77.5°	237.4	58.0	14.7	7.7	5.6	4.9	4.2	7.0	11.2	14.7	15.4
80°	80.3	25.8	11.9	7.0	5.6	4.9	4.2	7.0	10.5	14.0	14.7
82.5°	44.0	14.7	10.5	6.3	5.6	4.2	3.5	6.3	9.8	14.0	14.7
85°	34.2	10.5	8.4	6.3	5.6	4.2	3.5	6.3	9.8	13.3	14.0
87.5°	17.5	7.7	7.0	6.3	5.6	4.2	3.5	5.6	9.1	12.6	14.0
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)