

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: P270351

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270351
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-02-D-UNV-SL2-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1200mA 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: 9470.3 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

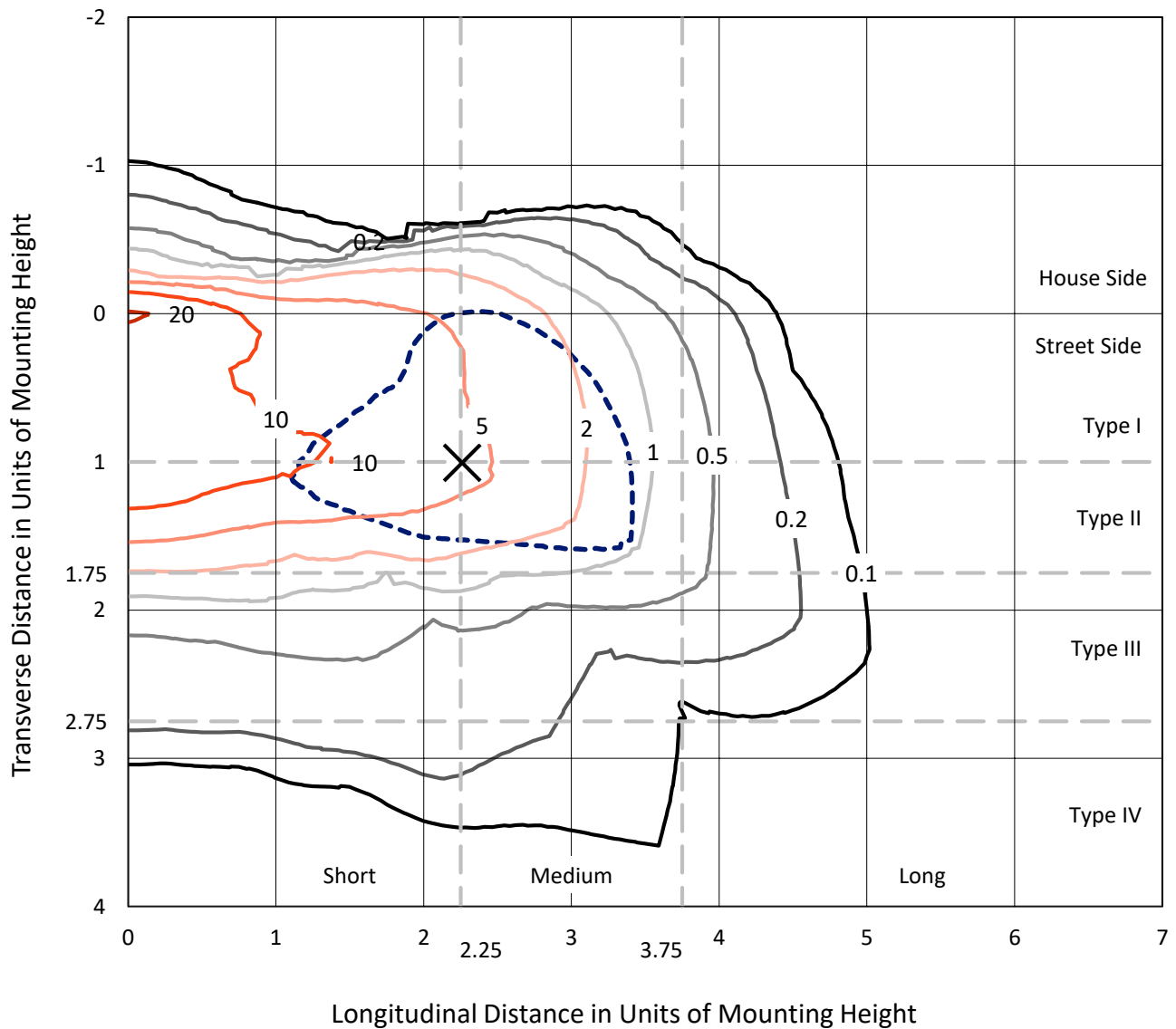
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

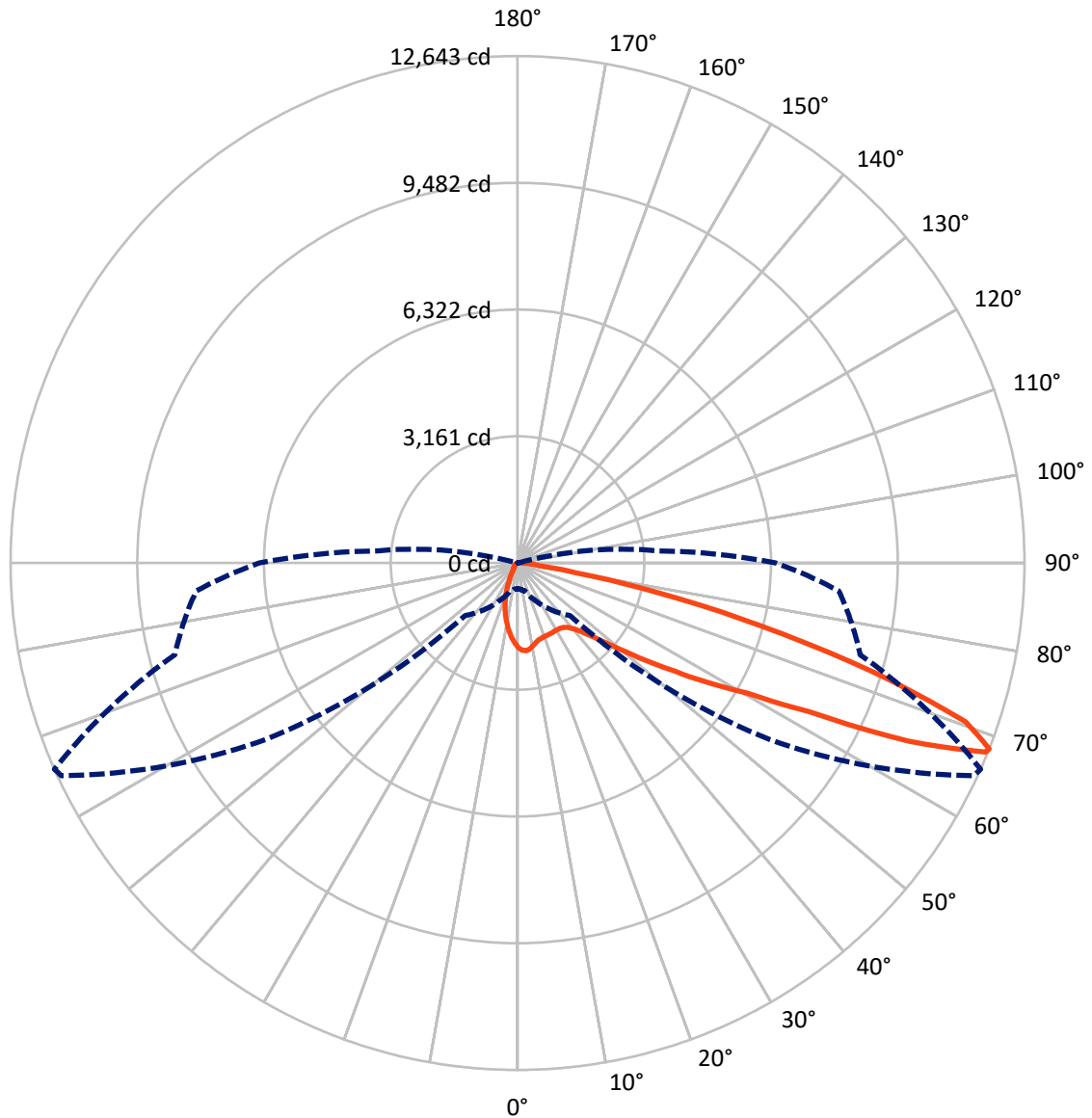


Based on 10 foot mounting height. Maximum calculated value = 21.1 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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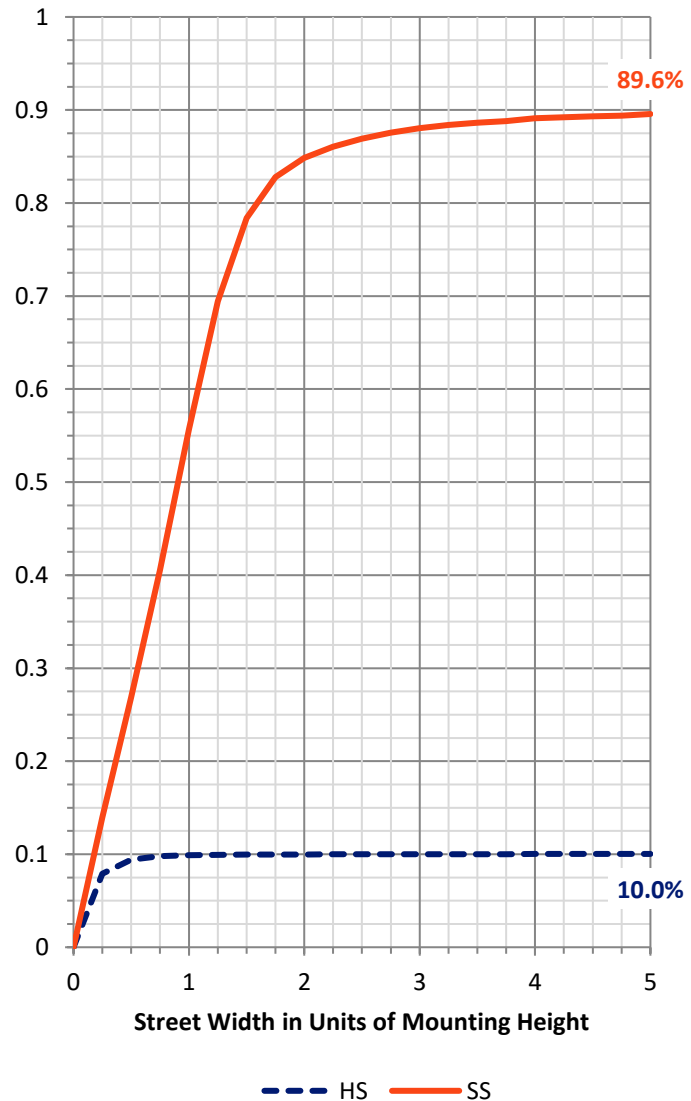
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	959.3	0.0	959.3
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	8511.1	0.0	8511.1
	% Fixture	89.9	0.0	89.9
Total	Lumens	9470.3	0.0	9470.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.0	1.8
10°-20°	372.2	3.9
20°-30°	539.3	5.7
30°-40°	825.6	8.7
40°-50°	1412.0	14.9
50°-60°	2208.9	23.3
60°-70°	2543.4	26.9
70°-80°	1272.8	13.4
80°-90°	123.3	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°	9470.3	100.0
0°-180°	9470.3	100.0



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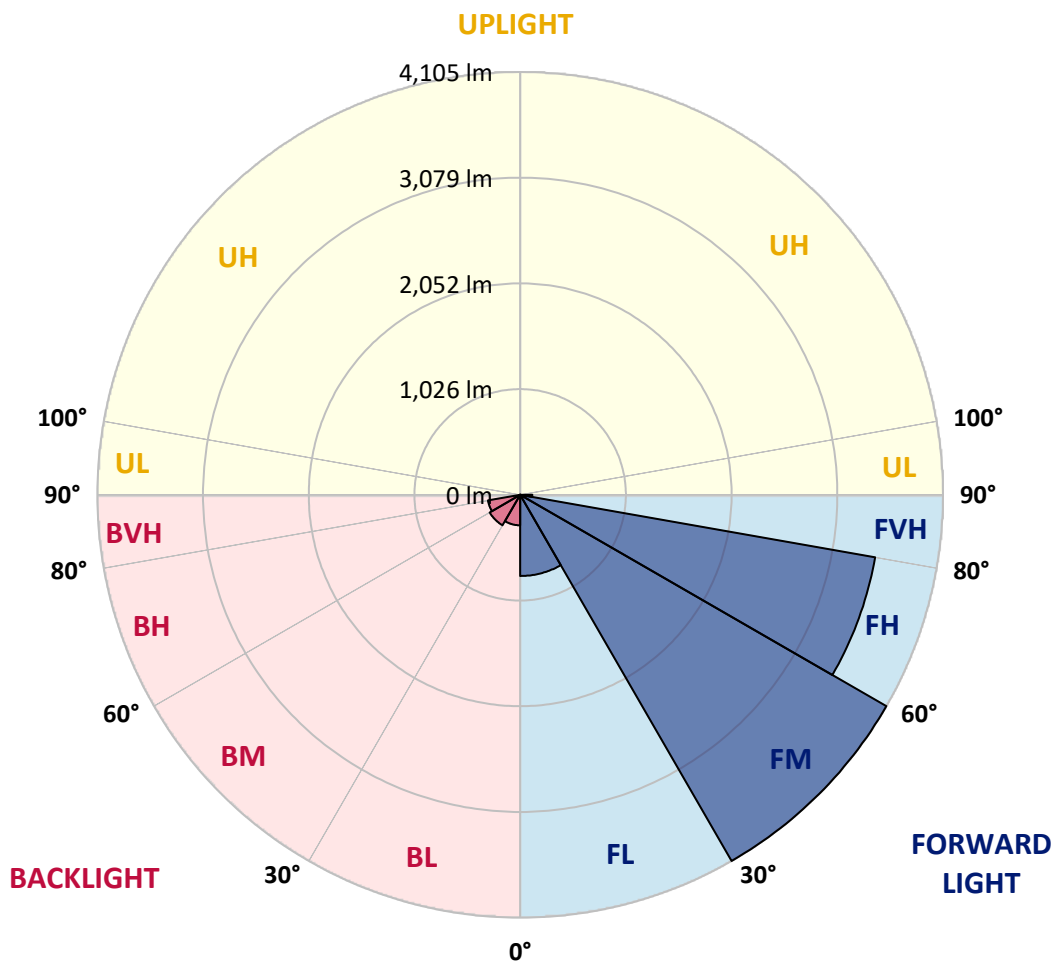
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	788.3	8.3			
FM (30°-60°)	4104.9	43.3			
FH (60°-80°)	3499.3	36.9			G2/5000
FVH (80°-90°)	118.6	1.3			G2/225
BL (0°-30°)	296.1	3.1	B1/500		
BM (30°-60°)	341.6	3.6	B1/1000		
BH (60°-80°)	316.9	3.3	B1/500		G1/500
BVH (80°-90°)	4.7	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°	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8
2.5°	2219.3	2220.7	2219.9	2222.1	2220.7	2209.6	2197.7	2172.3	2174.5	2141.9	2105.4
5°	2063.0	2075.8	2088.3	2101.0	2131.5	2158.2	2190.2	2197.7	2197.7	2169.3	2115.9
7.5°	1904.0	1904.6	1918.8	1935.9	1976.8	2025.9	2100.2	2167.2	2168.6	2176.1	2117.3
10°	1784.3	1787.9	1797.7	1816.3	1857.2	1905.5	1988.7	2093.5	2101.8	2156.7	2102.5
12.5°	1691.2	1695.8	1706.2	1727.8	1764.9	1814.8	1902.5	2022.2	2033.4	2138.1	2098.0
15°	1620.0	1625.9	1634.0	1655.7	1695.8	1748.6	1844.5	1974.6	1987.9	2130.7	2112.2
17.5°	1590.2	1590.2	1589.6	1604.4	1644.4	1698.1	1798.3	1949.3	1966.4	2136.7	2135.9
20°	1602.8	1600.6	1585.0	1581.2	1605.8	1659.3	1761.9	1933.0	1952.2	2147.8	2164.9
22.5°	1669.8	1665.3	1630.3	1601.4	1594.0	1629.6	1737.4	1921.8	1944.8	2170.8	2203.5
25°	1811.8	1798.3	1750.1	1684.6	1625.9	1622.2	1720.3	1915.8	1940.3	2197.7	2245.9
27.5°	1996.2	1992.4	1915.0	1827.4	1714.3	1646.8	1715.1	1911.5	1935.9	2216.9	2280.2
30°	2225.1	2226.5	2137.3	2023.0	1851.9	1715.9	1731.6	1909.2	1934.4	2218.5	2295.0
32.5°	2461.5	2463.1	2388.8	2266.1	2040.1	1834.8	1777.6	1919.6	1942.7	2212.4	2294.4
35°	2689.0	2691.2	2646.6	2547.9	2291.2	1999.8	1864.5	1955.3	1971.6	2216.2	2292.7
37.5°	2976.8	2985.6	2930.7	2838.5	2606.5	2242.2	2006.5	2027.4	2040.8	2246.8	2304.0
40°	3467.5	3455.5	3297.9	3141.8	2948.4	2537.4	2211.7	2151.5	2156.0	2325.5	2346.4
42.5°	4039.0	4024.2	3754.3	3485.2	3300.2	2893.5	2474.2	2341.8	2341.2	2457.9	2438.4
45°	4531.3	4522.3	4238.4	3879.3	3689.7	3286.8	2797.6	2616.1	2607.3	2686.8	2606.5
47.5°	4880.8	4873.2	4658.4	4298.6	4140.3	3719.4	3201.3	2990.2	2971.6	2986.4	2879.3
50°	4914.8	4906.7	4831.7	4600.4	4666.6	4354.4	3700.1	3480.0	3456.3	3433.2	3292.0
52.5°	4595.2	4594.6	4633.8	4619.1	5035.4	5171.5	4312.0	4086.0	4057.7	3999.0	3858.5
55°	3941.8	3938.0	4087.5	4304.6	5027.2	6014.4	5245.1	4807.1	4769.9	4652.5	4468.1
57.5°	2880.1	2860.8	3173.1	3633.3	4674.1	6383.3	6726.7	5703.0	5641.3	5268.7	4984.9
60°	1590.2	1597.6	1999.1	2544.1	3837.6	6310.4	8090.1	6747.4	6585.5	5800.4	5514.2
62.5°	891.4	910.0	1208.8	1653.4	2446.7	5719.2	8821.7	8545.1	8154.9	6420.4	6183.3
65°	674.3	685.4	835.7	1275.8	1542.7	3996.7	8938.5	11058.8	10722.0	7360.2	7248.7
67.5°	634.9	643.8	717.4	1057.9	1405.0	2072.7	8059.8	12545.5	12587.9	8641.9	8073.7
68°	639.4	650.6	724.2	1017.8	1402.9	1854.1	7685.0	12553.0	12643.0	8848.5	8045.6
70°	587.3	590.2	765.7	998.5	1359.8	1460.9	5559.5	11692.9	11854.3	9094.6	7303.6
72.5°	224.5	225.2	343.5	864.6	1424.4	1469.1	2800.6	9241.8	9249.9	7914.6	5694.0
75°	116.7	98.2	107.7	270.6	1360.6	1431.9	1405.0	6310.4	6271.0	5352.8	3488.9
77.5°	80.3	68.5	72.1	93.7	565.8	1431.1	1014.7	3628.8	3620.6	2277.2	995.5
80°	45.4	39.3	43.1	78.8	198.4	1343.4	945.6	1559.7	1469.7	399.9	161.3
82.5°	23.0	19.4	23.0	66.1	123.3	845.2	919.7	611.8	544.9	95.2	104.8
85°	6.0	6.0	11.1	46.2	76.5	277.2	824.5	441.5	397.1	41.6	74.3
87.5°	1.4	0.8	4.4	17.1	27.5	60.2	457.1	246.0	211.9	21.6	43.1
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°	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8
2.5°	2090.5	2069.8	2028.8	1982.7	1950.0	1914.4	1893.5	1868.3	1848.9	1831.9	1844.5
5°	2083.1	2042.9	1952.2	1850.4	1764.9	1683.2	1622.2	1564.2	1520.3	1492.9	1504.0
7.5°	2063.8	2004.3	1857.2	1698.1	1558.3	1426.7	1319.6	1223.8	1149.4	1109.1	1121.9
10°	2031.1	1947.0	1749.3	1528.6	1332.9	1147.1	988.0	845.2	737.5	686.9	698.8
12.5°	2007.4	1896.5	1637.8	1365.0	1107.7	843.8	632.6	469.2	385.2	334.6	339.0
15°	1996.9	1857.2	1533.8	1192.5	861.7	541.9	342.0	247.6	218.6	208.1	208.9
17.5°	1998.4	1826.0	1434.9	1013.3	613.4	311.5	209.7	188.9	184.4	182.1	182.1
20°	2002.1	1794.6	1332.2	826.7	392.5	200.7	174.7	168.1	165.7	162.9	163.5
22.5°	2013.2	1770.9	1228.9	639.4	241.6	163.5	154.7	148.7	144.9	140.6	141.3
25°	2030.3	1753.0	1127.1	460.2	170.3	142.7	134.6	126.4	119.7	114.5	115.3
27.5°	2040.8	1727.8	1018.5	313.8	141.3	125.0	113.7	102.5	95.2	90.6	90.0
30°	2033.4	1686.8	895.2	205.9	125.0	107.7	94.4	81.7	74.3	70.6	70.6
32.5°	2013.2	1634.0	759.1	150.1	110.9	93.0	76.5	65.4	60.2	58.0	58.7
35°	1990.3	1579.1	614.1	127.1	99.6	78.8	62.4	53.4	51.4	50.6	50.6
37.5°	1977.6	1531.5	475.1	115.3	89.2	65.4	51.4	46.2	43.8	43.8	43.8
40°	1991.7	1495.0	351.6	106.3	78.8	54.3	43.1	39.3	38.6	38.6	38.6
42.5°	2051.9	1482.5	257.3	98.9	68.5	45.4	37.2	34.1	33.4	34.1	34.1
45°	2169.3	1510.0	194.8	91.4	58.7	37.2	32.0	29.7	29.7	30.5	30.5
47.5°	2368.7	1580.6	159.9	84.0	49.0	31.3	27.5	26.1	26.1	26.8	26.8
50°	2677.8	1711.5	143.5	75.8	41.0	26.8	23.0	22.3	22.3	23.0	23.7
52.5°	3147.8	1960.6	135.4	67.6	33.4	22.3	19.4	18.5	19.4	20.1	20.1
55°	3670.4	2279.4	125.7	59.5	28.2	18.5	15.6	15.6	16.3	17.8	17.8
57.5°	4157.4	2587.2	116.7	49.0	24.6	14.8	12.7	12.7	14.2	15.6	15.6
60°	4671.8	2888.9	104.8	39.3	20.8	11.9	10.4	10.4	12.7	14.2	14.8
62.5°	5307.5	3239.9	89.2	31.3	16.3	9.0	7.5	9.6	11.9	14.2	14.2
65°	6226.3	3676.4	69.9	24.6	12.7	6.6	6.0	9.0	11.1	13.4	14.2
67.5°	6560.1	3620.6	52.8	20.1	9.6	5.2	5.2	8.2	11.1	13.4	13.4
68°	6438.2	3498.7	50.6	19.4	9.0	5.2	5.2	8.2	11.1	13.4	13.4
70°	5610.1	2860.1	41.6	14.8	7.5	4.4	4.4	7.5	11.1	12.7	13.4
72.5°	4200.5	1900.3	35.8	9.6	6.6	4.4	3.8	7.5	10.4	12.7	12.7
75°	2409.6	788.8	30.5	7.5	6.0	3.8	3.8	6.6	10.4	12.7	12.7
77.5°	680.9	184.4	24.6	6.0	5.2	3.8	3.0	6.6	9.6	11.9	11.9
80°	125.0	55.1	19.4	5.2	4.4	3.8	3.0	6.6	9.6	11.9	11.9
82.5°	82.6	26.1	14.2	5.2	4.4	3.8	3.0	6.0	9.0	11.1	11.1
85°	61.8	18.5	9.0	5.2	4.4	3.8	3.0	6.0	9.0	11.1	11.1
87.5°	34.1	8.2	6.6	6.0	5.2	3.8	3.0	5.2	8.2	10.4	10.4
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)