

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: P196327

Luminaire Tested: **NAV-AF-01-D-UNV-T3R-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196327
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-T3R-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5136.2 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 44
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

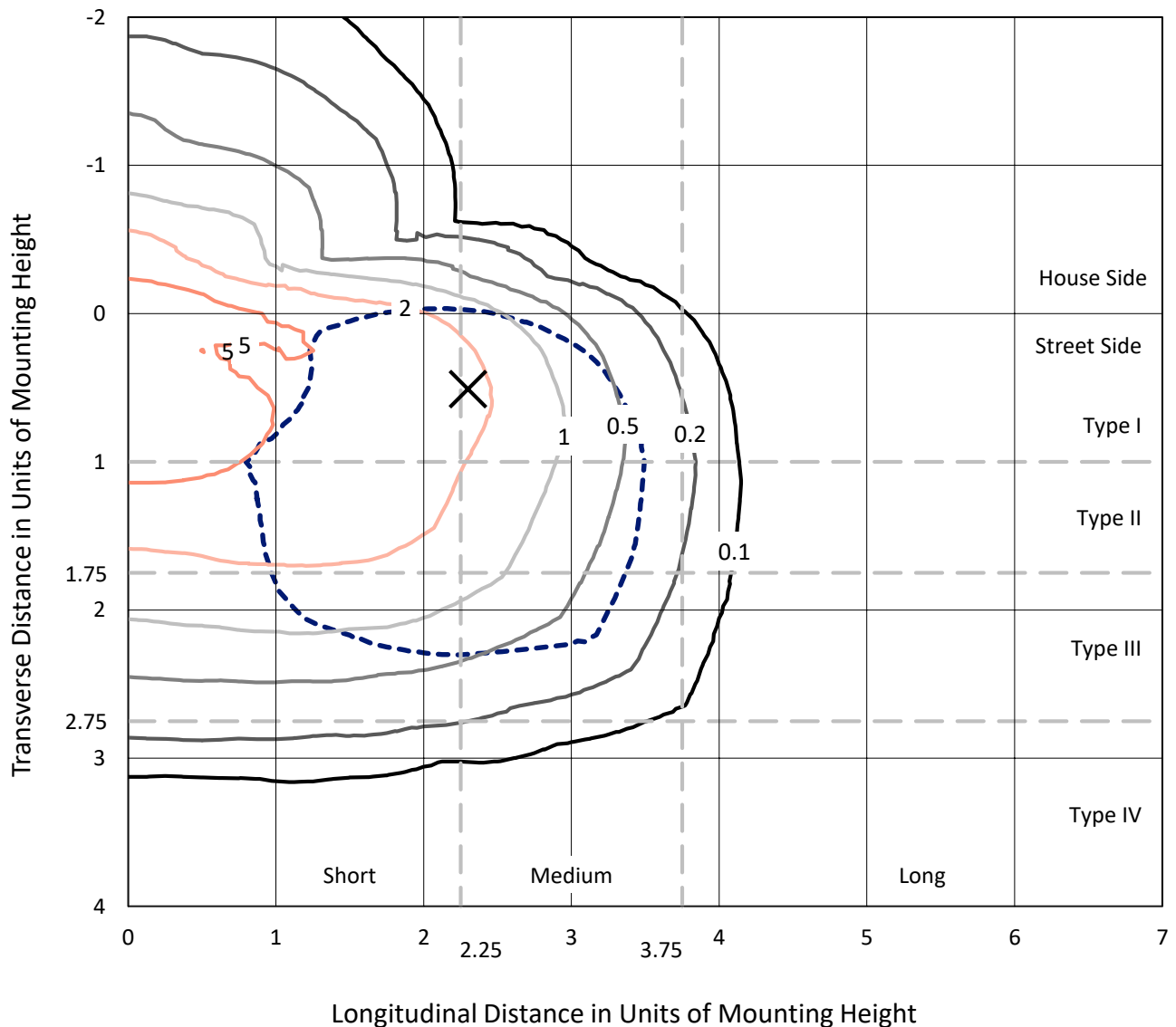


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Iso-Footcandle Lines of Horizontal Illumination

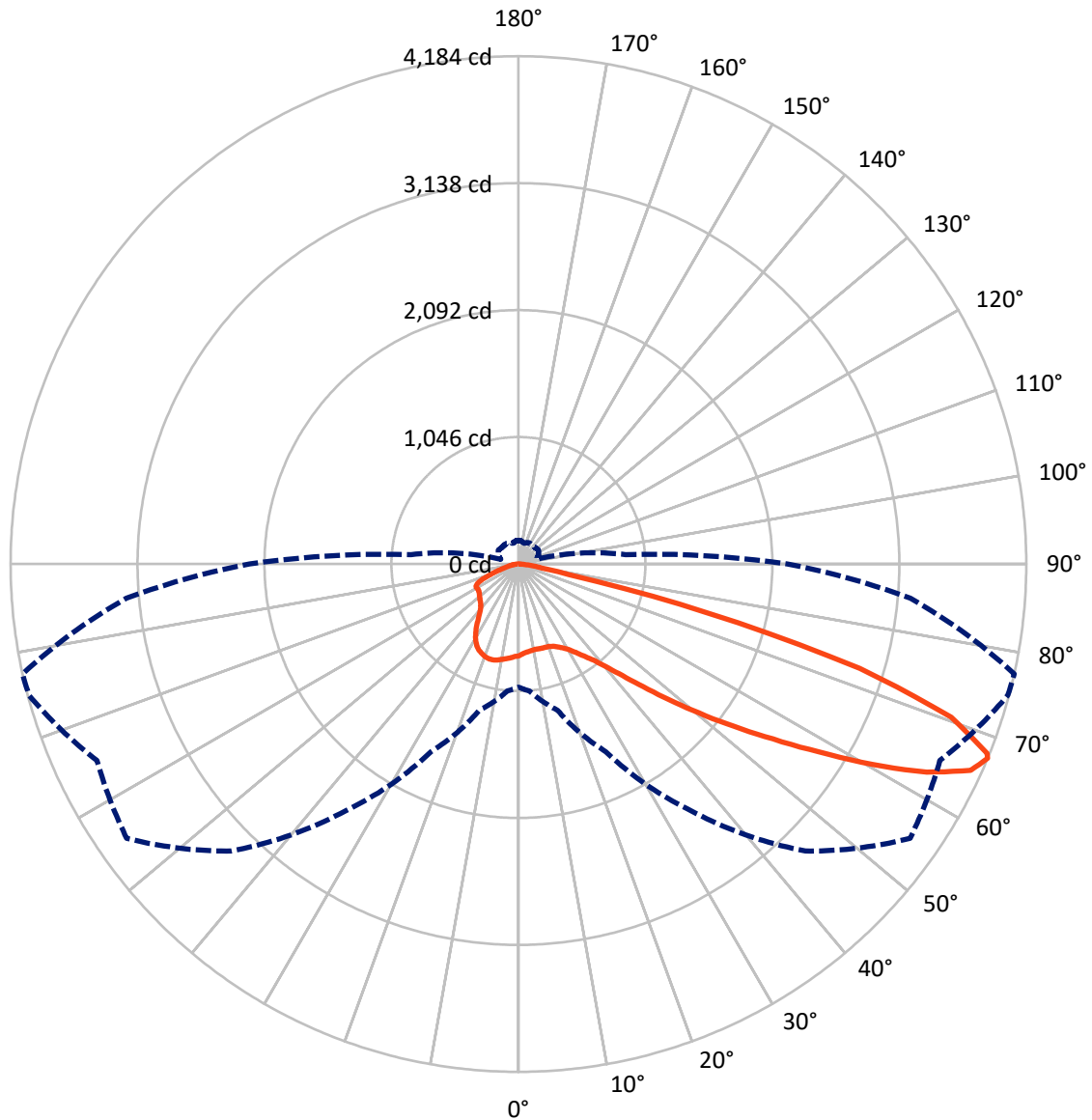
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.1 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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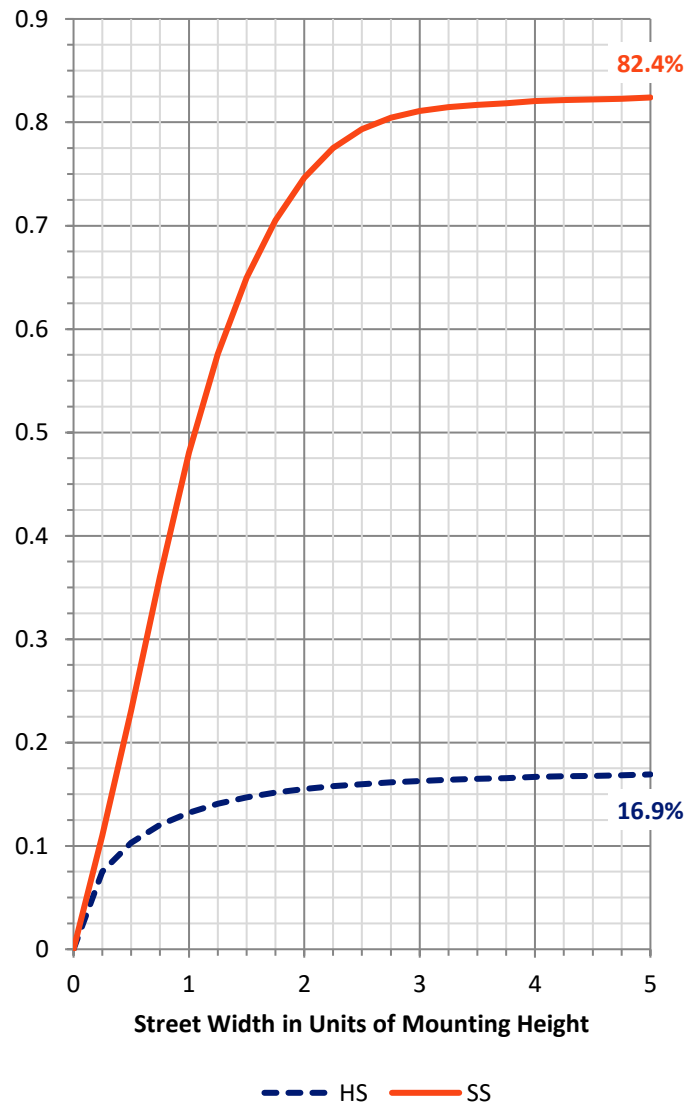
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	882.7	0.0	882.7
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	4253.6	0.0	4253.6
	% Fixture	82.8	0.0	82.8
Total	Lumens	5136.2	0.0	5136.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.3	1.3
10°-20°	186.4	3.6
20°-30°	316.8	6.2
30°-40°	506.8	9.9
40°-50°	780.2	15.2
50°-60°	1082.5	21.1
60°-70°	1443.9	28.1
70°-80°	687.2	13.4
80°-90°	65.1	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°	5136.2	100.0
0°-180°	5136.2	100.0



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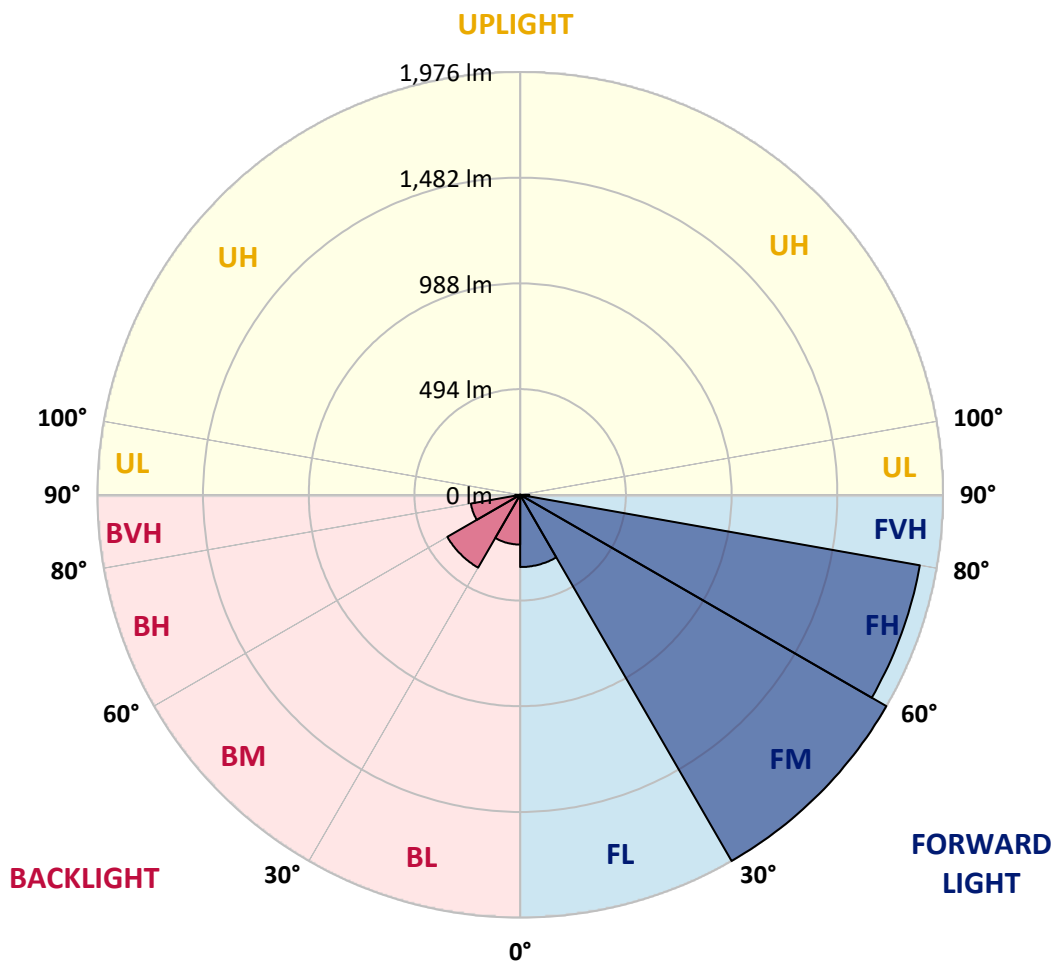
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	337.8	6.6			
FM (30°-60°)	1976.5	38.5			
FH (60°-80°)	1897.1	36.9			G2/5000
FVH (80°-90°)	42.3	0.8			G1/100
BL (0°-30°)	232.8	4.5	B1/500		
BM (30°-60°)	393.0	7.7	B1/1000		
BH (60°-80°)	234.0	4.6	B1/500		G1/500
BVH (80°-90°)	22.8	0.4			G1/100
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°	65°	75°	77.5°	85°
0°	756.0	756.0	756.0	756.0	756.0	756.0	756.0	756.0	756.0	756.0	756.0
2.5°	677.8	681.0	681.3	690.5	694.7	705.1	716.6	726.7	735.6	738.8	744.5
5°	609.9	609.9	610.8	616.8	628.6	645.5	669.2	695.3	722.6	729.3	746.0
7.5°	574.3	575.0	575.6	581.6	590.9	605.8	629.5	665.1	710.5	721.6	751.2
10°	577.5	576.5	573.4	572.1	575.9	585.4	606.1	642.6	700.3	717.5	760.4
12.5°	627.4	625.4	615.0	599.8	585.7	582.3	596.6	631.2	695.6	717.5	775.9
15°	712.8	714.0	693.4	661.6	625.1	600.4	598.4	627.1	694.0	719.4	794.0
17.5°	823.9	824.5	796.0	749.9	689.3	638.1	611.4	627.1	694.0	721.3	811.5
20°	941.9	937.5	905.1	847.3	768.6	690.5	635.3	630.9	695.9	724.1	828.0
22.5°	1043.2	1039.1	1005.2	944.5	854.4	752.4	667.4	643.5	706.3	735.9	851.2
25°	1131.8	1134.4	1101.3	1033.1	939.8	822.2	715.2	672.7	728.3	757.2	879.7
27.5°	1239.4	1234.7	1196.5	1131.5	1027.7	894.7	775.3	709.5	754.3	782.9	914.6
30°	1363.9	1361.6	1310.2	1243.3	1124.5	975.6	834.6	749.2	788.3	818.2	958.5
32.5°	1515.0	1514.7	1459.4	1377.2	1233.4	1067.0	904.8	803.5	837.8	868.0	1016.6
35°	1686.1	1685.8	1628.6	1520.1	1358.8	1168.3	987.4	869.6	899.1	930.9	1085.8
37.5°	1804.9	1803.0	1773.1	1667.7	1497.6	1286.2	1090.6	958.5	968.6	1004.2	1169.2
40°	1827.7	1839.2	1864.8	1802.6	1649.0	1416.9	1194.1	1054.0	1063.6	1109.3	1274.4
42.5°	1803.0	1817.9	1903.3	1920.8	1800.4	1575.3	1323.6	1186.4	1198.5	1255.4	1397.9
45°	1781.4	1794.4	1901.4	1986.2	1949.9	1748.0	1485.1	1348.0	1370.9	1441.3	1538.8
47.5°	1744.5	1756.6	1863.9	1997.9	2035.4	1914.5	1679.8	1542.3	1581.7	1667.1	1699.4
50°	1742.6	1748.0	1812.8	1958.5	2064.9	2040.8	1895.3	1769.6	1830.0	1928.4	1877.2
52.5°	1694.4	1732.2	1790.9	1895.6	2065.5	2114.4	2107.8	2018.9	2111.9	2220.7	2072.2
55°	1399.1	1442.7	1717.8	1864.8	2061.8	2177.6	2301.7	2283.9	2429.3	2544.0	2290.6
57.5°	1306.4	1324.8	1507.1	1874.0	2093.5	2282.0	2495.7	2568.7	2792.6	2917.7	2552.6
60°	1281.0	1300.4	1464.9	1878.5	2179.5	2472.2	2758.9	2890.3	3219.5	3352.3	2850.0
62.5°	1252.8	1277.9	1468.0	1882.6	2330.6	2753.5	3108.1	3239.3	3658.0	3776.4	3128.8
65°	1170.3	1203.6	1409.3	1856.7	2496.0	3106.5	3569.8	3603.0	4020.2	4095.5	3297.1
67°	1013.7	1050.3	1248.0	1706.2	2480.8	3344.3	3939.0	3830.7	4174.3	4183.5	3242.4
67.5°	964.2	1002.0	1193.4	1643.6	2437.3	3375.4	4004.3	3862.2	4172.9	4162.8	3191.6
70°	649.3	691.8	845.2	1206.8	1955.1	3141.5	3988.5	3765.3	3899.3	3782.8	2742.1
72.5°	322.2	323.6	421.7	661.0	1184.5	2253.2	3327.1	3221.2	3160.8	2940.8	2012.1
75°	155.3	158.1	199.1	292.1	499.4	1163.2	2269.0	2173.5	1850.6	1602.4	1007.1
77.5°	118.5	121.3	154.6	190.2	208.3	379.4	1123.9	908.3	536.2	428.3	283.9
80°	91.5	96.9	130.5	146.1	137.8	152.1	353.3	278.1	208.6	191.4	140.7
82.5°	71.4	74.6	110.8	110.8	95.2	101.9	164.5	160.6	129.5	116.8	75.6
85°	50.4	56.9	89.2	82.6	62.5	63.2	98.4	94.3	66.7	53.7	29.6
87.5°	22.5	28.8	63.5	54.0	33.3	25.7	40.3	34.6	26.4	20.4	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	756.0	756.0	756.0	756.0	756.0	756.0	756.0	756.0	756.0	756.0	756.0
2.5°	750.8	756.0	763.8	768.6	775.0	777.5	780.0	784.5	788.0	787.1	785.4
5°	757.8	766.4	776.2	779.4	779.4	776.2	774.4	774.7	773.7	773.0	771.2
7.5°	768.0	779.7	786.8	783.6	773.7	761.3	749.6	742.6	735.9	731.8	733.0
10°	782.3	795.2	795.7	781.6	758.1	731.2	708.0	693.0	678.7	672.4	674.3
12.5°	802.9	815.9	804.9	774.7	733.4	691.1	648.7	617.9	590.2	583.5	581.6
15°	825.1	835.2	810.5	759.7	697.9	628.3	556.9	510.9	480.1	474.6	472.7
17.5°	844.4	850.2	807.6	733.0	641.6	532.1	448.9	417.8	411.4	414.6	414.6
20°	861.6	859.7	795.2	691.8	553.0	425.4	377.2	376.9	385.4	393.3	394.0
22.5°	883.2	868.3	775.6	630.5	447.3	355.0	346.7	355.0	364.5	373.4	374.3
25°	909.0	877.8	749.2	543.2	359.7	322.2	325.7	332.8	338.8	345.8	346.1
27.5°	934.7	885.2	712.1	440.7	312.1	301.3	305.1	307.9	309.5	313.9	313.9
30°	964.5	890.9	658.5	353.0	290.2	282.8	280.7	279.4	280.7	286.7	287.0
32.5°	1002.0	901.0	585.1	302.9	280.0	269.9	258.4	252.1	256.6	267.3	269.2
35°	1044.5	913.1	497.2	282.8	276.5	263.5	242.5	232.7	234.3	244.2	245.7
37.5°	1097.8	928.6	410.5	278.1	280.0	262.9	235.3	221.3	214.3	214.6	214.3
40°	1166.1	944.2	342.0	279.4	287.7	264.4	231.8	209.8	195.3	195.9	197.1
42.5°	1237.6	954.3	298.4	283.2	296.9	266.7	230.5	198.8	186.1	196.8	206.6
45°	1321.0	951.4	275.9	286.7	303.8	267.6	225.8	197.4	187.0	219.4	237.8
47.5°	1416.9	939.1	263.2	288.3	305.8	267.3	222.2	201.6	195.0	251.1	272.1
50°	1521.0	919.7	253.1	285.7	304.7	266.1	226.1	206.6	198.1	258.1	274.3
52.5°	1635.0	901.9	242.5	280.0	300.0	262.3	230.8	204.5	189.2	237.8	250.2
55°	1769.9	897.8	230.8	270.2	292.1	258.1	228.2	197.4	179.4	210.8	218.4
57.5°	1924.3	923.5	215.5	258.1	281.3	249.9	222.2	193.6	175.8	191.8	195.9
60°	2120.2	980.4	199.4	245.4	267.9	237.4	216.9	194.6	176.9	188.9	189.9
62.5°	2273.2	1031.4	184.7	229.9	250.2	222.6	211.1	195.6	179.7	192.7	191.1
65°	2328.7	1006.4	166.6	206.6	225.0	206.0	203.2	196.2	179.7	195.0	191.4
67°	2214.7	886.7	149.6	183.5	201.3	191.4	195.6	193.6	176.6	194.6	188.6
67.5°	2160.5	844.4	145.1	179.7	195.0	187.0	193.6	192.4	175.5	194.0	187.0
70°	1781.7	605.8	122.5	150.8	163.2	164.8	181.9	184.1	168.0	182.2	169.5
72.5°	1267.7	379.1	105.7	116.8	131.8	141.0	166.0	173.0	157.7	158.5	147.9
75°	627.4	203.5	94.3	90.1	102.5	117.4	144.7	157.7	142.9	132.1	128.6
77.5°	211.8	115.3	79.7	72.7	79.7	94.3	120.0	137.8	126.0	111.7	109.6
80°	109.6	83.8	62.2	58.4	62.9	73.0	94.0	114.6	107.6	108.2	89.2
82.5°	68.2	51.1	44.8	44.4	47.7	55.9	69.3	93.0	92.4	79.1	57.5
85°	31.7	29.6	28.5	29.6	30.5	31.7	45.1	66.4	70.2	42.6	37.7
87.5°	13.3	13.0	11.5	12.4	13.6	13.3	18.1	28.2	39.4	26.7	24.4
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)