

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: P270256

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270256
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
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-AFL-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4393.1 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

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

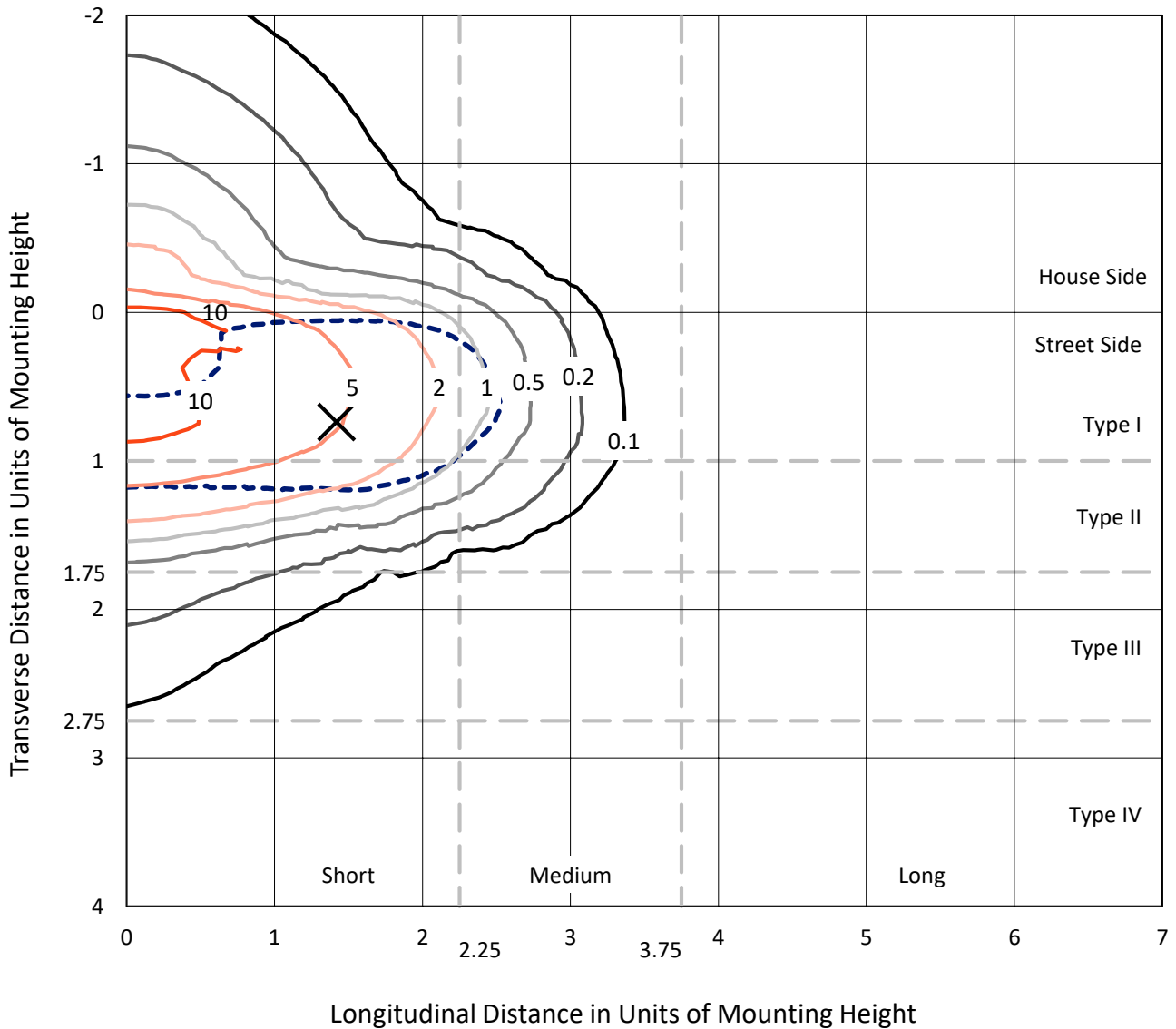


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Iso-Footcandle Lines of Horizontal Illumination

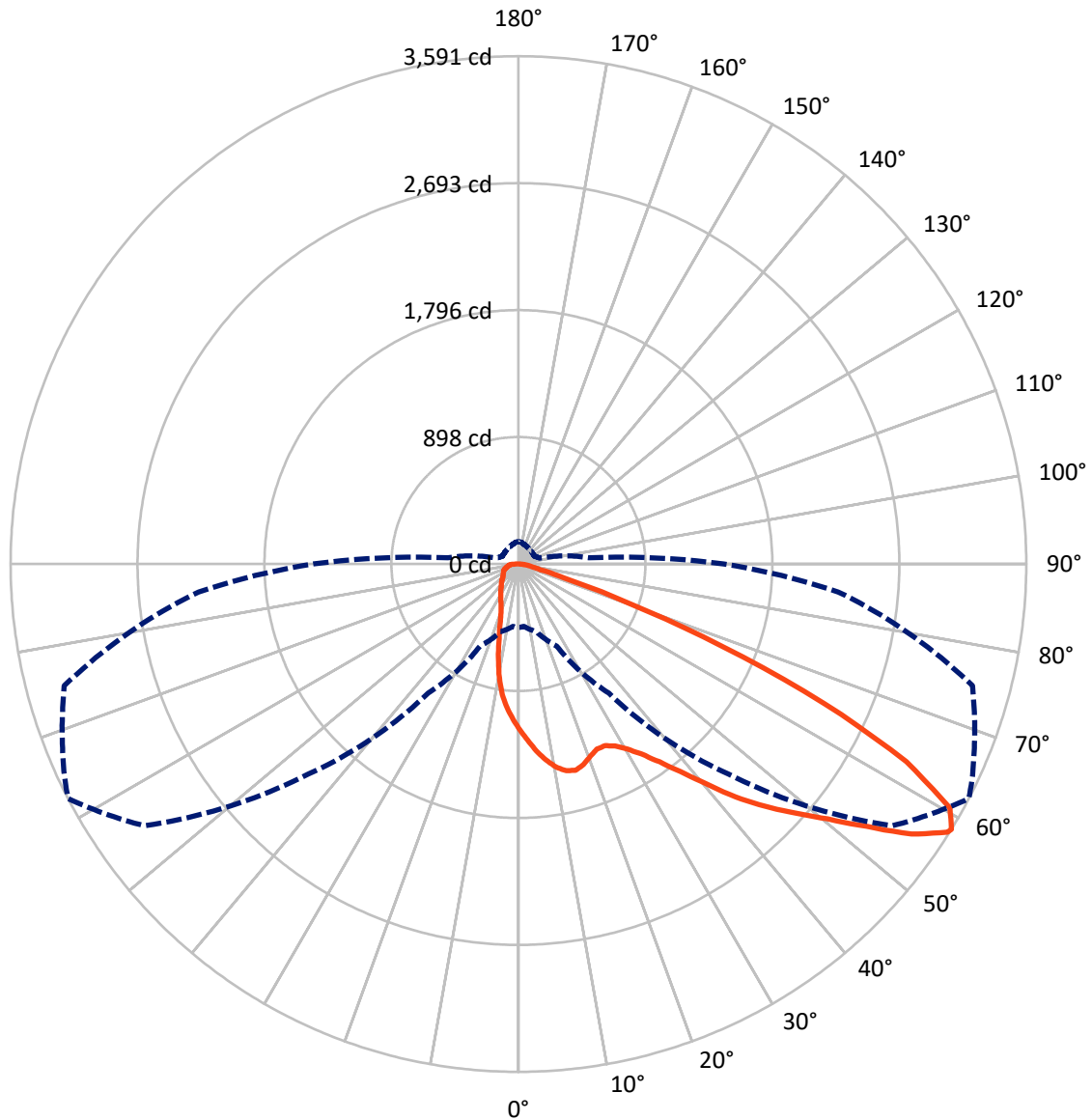
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.7 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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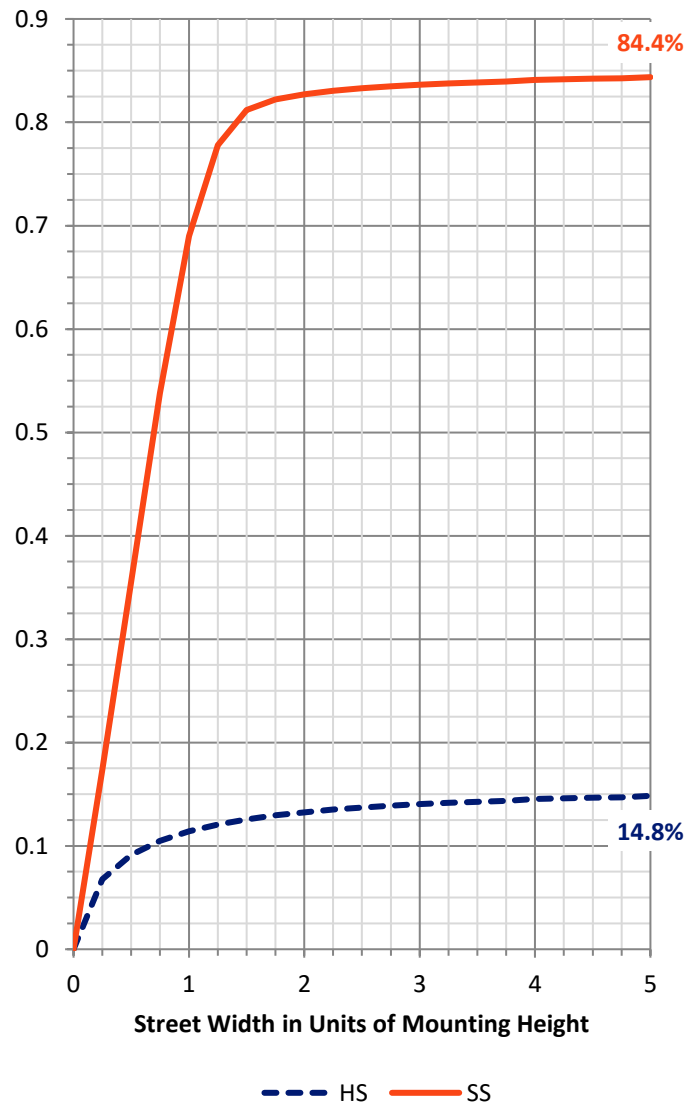
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	674.5	0.0	674.5
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	3718.6	0.0	3718.6
	% Fixture	84.6	0.0	84.6
Total	Lumens	4393.1	0.0	4393.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.8	2.4
10°-20°	264.6	6.0
20°-30°	428.8	9.8
30°-40°	684.6	15.6
40°-50°	995.8	22.7
50°-60°	1042.0	23.7
60°-70°	635.3	14.5
70°-80°	177.6	4.0
80°-90°	59.5	1.4
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°	4393.1	100.0
0°-180°	4393.1	100.0



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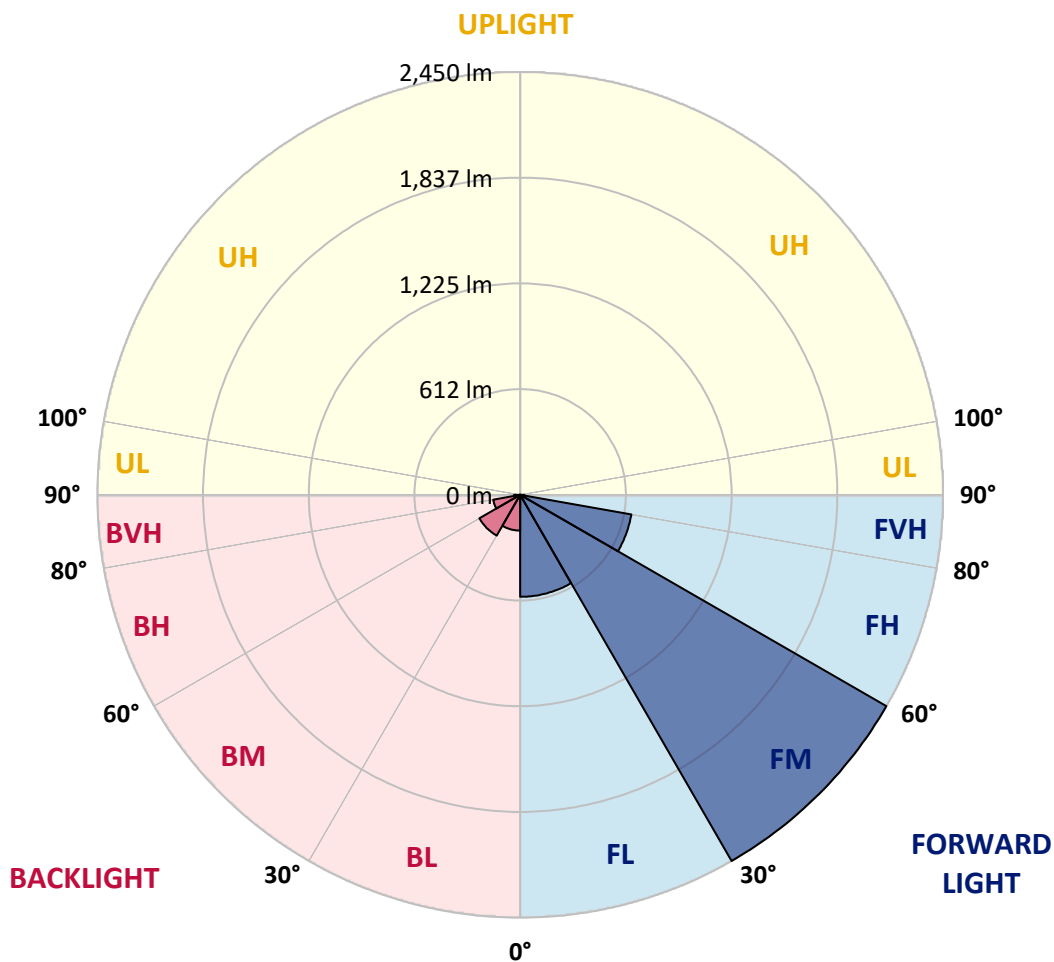
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	590.9	13.5			
FM	(30°-60°)	2449.6	55.8			
FH	(60°-80°)	654.1	14.9			G0/660
FVH	(80°-90°)	24.0	0.5			G1/100
BL	(0°-30°)	207.3	4.7	B1/500		
BM	(30°-60°)	272.8	6.2	B1/1000		
BH	(60°-80°)	158.8	3.6	B1/500		G1/500
BVH	(80°-90°)	35.6	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9
2.5°	1331.4	1330.5	1319.3	1311.9	1303.1	1282.8	1262.5	1247.3	1239.7	1210.2	1181.7
5°	1441.5	1438.1	1431.9	1423.9	1412.3	1386.9	1354.7	1326.9	1315.9	1263.8	1211.4
7.5°	1383.2	1388.5	1408.0	1429.9	1453.0	1454.6	1431.9	1398.9	1386.9	1317.0	1240.2
10°	1222.1	1219.9	1244.3	1287.1	1363.2	1438.5	1476.1	1459.8	1447.2	1367.6	1269.0
12.5°	1173.1	1172.6	1176.8	1187.7	1235.4	1338.7	1464.7	1499.9	1495.6	1421.2	1299.8
15°	1188.0	1188.5	1188.3	1189.6	1202.9	1252.0	1402.0	1513.4	1527.1	1474.1	1331.1
17.5°	1235.4	1233.6	1227.5	1220.9	1223.0	1240.5	1334.2	1490.3	1531.5	1521.4	1357.5
20°	1308.8	1308.8	1292.7	1274.2	1262.2	1266.0	1305.9	1450.9	1511.2	1561.4	1377.2
22.5°	1400.7	1402.2	1378.3	1344.9	1317.4	1306.9	1322.0	1421.4	1486.4	1598.5	1394.8
25°	1515.0	1514.7	1479.9	1431.9	1388.5	1363.4	1363.2	1422.7	1478.8	1641.9	1413.2
27.5°	1656.5	1643.4	1602.8	1534.6	1473.3	1435.1	1417.9	1457.4	1495.0	1695.1	1437.8
30°	1816.0	1802.8	1749.4	1661.7	1578.7	1522.9	1494.4	1517.2	1544.5	1763.0	1475.2
32.5°	1973.8	1976.9	1914.3	1815.1	1708.5	1630.1	1587.8	1601.8	1620.7	1845.8	1525.7
35°	2205.0	2204.7	2123.0	1999.1	1872.4	1763.8	1710.3	1717.6	1734.9	1962.8	1596.6
37.5°	2377.5	2374.7	2321.9	2212.4	2070.0	1939.5	1862.0	1863.2	1877.9	2109.7	1689.9
40°	2395.1	2394.4	2394.3	2378.5	2281.1	2158.1	2061.2	2041.0	2047.1	2265.6	1789.1
42.5°	2260.8	2280.7	2338.5	2426.9	2454.0	2389.5	2297.9	2253.0	2239.8	2444.6	1893.9
45°	2069.3	2079.5	2180.5	2379.4	2541.0	2607.1	2538.0	2443.6	2421.1	2618.7	1979.3
47.5°	1980.5	1976.0	2034.5	2251.2	2532.6	2780.0	2784.8	2630.1	2591.9	2768.9	2052.1
50°	1789.7	1783.9	1857.7	2062.5	2439.7	2866.0	3038.2	2833.3	2762.6	2911.8	2117.9
52.5°	1409.4	1403.8	1503.0	1766.7	2232.2	2833.8	3252.0	3082.5	2962.3	3049.2	2179.5
55°	917.0	917.6	1012.0	1284.1	1806.3	2646.4	3352.1	3370.5	3235.8	3186.8	2229.1
57.5°	504.8	500.3	567.5	734.8	1242.6	2221.1	3268.7	3578.0	3507.8	3305.0	2265.2
58°	449.0	443.5	495.3	639.5	1114.2	2101.2	3226.6	3591.2	3542.6	3324.4	2270.3
60°	319.8	310.5	302.5	360.5	641.8	1515.0	2946.6	3505.8	3552.8	3363.4	2265.4
62.5°	269.6	258.9	230.3	228.2	302.3	741.0	2330.3	3078.9	3210.5	3273.7	2185.8
65°	250.4	239.7	202.1	188.6	205.2	319.8	1440.9	2377.5	2553.2	2961.4	1985.3
67.5°	236.7	224.0	183.7	166.0	169.4	191.3	611.4	1554.8	1758.6	2309.4	1592.8
70°	224.3	210.4	169.2	148.8	146.1	145.5	238.9	811.9	1008.2	1511.2	1066.9
72.5°	210.4	196.5	156.2	134.6	128.5	118.0	143.5	335.4	459.9	740.7	488.9
75°	190.0	178.8	141.9	122.7	112.3	95.8	106.0	160.8	198.3	283.7	227.0
77.5°	167.3	158.1	127.4	112.8	98.9	78.2	80.9	109.1	122.4	159.8	131.5
80°	118.3	121.6	111.2	99.4	87.0	63.2	62.3	79.9	87.9	107.3	88.5
82.5°	81.6	84.0	90.5	78.5	70.2	49.1	45.9	55.4	59.6	64.8	42.8
85°	58.2	56.6	62.9	56.2	51.7	31.4	29.4	35.2	37.5	39.5	20.7
87.5°	35.5	35.2	36.2	29.1	26.9	15.9	14.6	16.8	17.8	17.2	9.9
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°	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9	1172.9
2.5°	1171.0	1157.6	1128.2	1104.6	1079.0	1059.6	1040.1	1029.1	1017.1	1010.1	1009.2
5°	1184.0	1156.5	1093.9	1035.7	975.7	922.0	869.3	830.3	798.5	780.3	779.2
7.5°	1198.2	1155.1	1058.5	957.7	851.1	745.1	651.5	585.3	542.8	523.1	521.6
10°	1209.2	1149.3	1015.4	858.6	689.7	549.7	464.6	425.5	412.7	409.4	408.8
12.5°	1222.4	1145.2	960.9	731.4	527.1	418.4	392.6	390.1	392.9	394.5	394.9
15°	1234.7	1137.3	887.6	590.5	412.7	374.0	374.6	379.8	385.3	387.7	388.0
17.5°	1240.5	1117.8	791.2	465.4	361.1	353.9	360.2	367.0	372.1	374.0	374.0
20°	1240.5	1086.4	679.6	377.0	334.1	335.4	343.2	348.5	349.5	347.9	347.0
22.5°	1235.3	1047.8	570.9	328.9	312.3	317.5	323.4	319.8	307.0	297.1	295.2
25°	1230.6	1001.9	466.2	299.6	292.9	299.9	297.3	272.9	253.1	243.0	241.4
27.5°	1223.0	946.5	378.8	275.4	274.3	279.8	255.4	231.8	221.8	216.3	215.2
30°	1220.9	886.3	317.1	254.0	255.8	248.2	220.3	212.4	210.4	207.2	205.9
32.5°	1227.4	826.1	278.5	236.4	238.3	213.1	202.4	203.5	203.1	199.3	197.9
35°	1244.6	767.7	253.7	220.4	215.0	190.8	192.1	195.6	195.6	190.8	189.2
37.5°	1274.8	713.3	238.1	207.0	188.0	179.3	182.8	187.2	187.2	184.0	182.5
40°	1306.9	660.3	226.3	196.3	171.0	171.3	174.9	178.3	179.7	180.1	179.0
42.5°	1336.0	605.4	213.5	184.8	163.3	165.3	166.9	169.4	175.2	179.0	178.5
45°	1353.0	550.2	200.0	170.5	158.1	159.0	158.5	162.9	169.7	175.4	175.4
47.5°	1368.7	504.8	188.6	156.2	152.9	152.9	151.3	155.6	162.0	168.8	169.4
50°	1383.5	475.6	180.6	145.3	146.3	145.5	144.9	149.1	157.7	165.8	167.3
52.5°	1398.7	465.6	173.6	137.4	139.4	138.3	139.0	144.6	154.2	162.9	164.2
55°	1419.9	472.0	166.0	131.8	132.9	132.6	134.8	141.5	149.8	158.5	159.0
57.5°	1445.8	495.1	159.8	127.6	126.7	128.2	131.8	138.1	146.3	156.6	157.4
58°	1451.0	500.5	158.7	126.7	125.3	127.6	131.2	137.4	145.7	156.6	157.4
60°	1459.0	519.9	155.9	124.3	120.6	125.0	129.4	135.4	144.6	157.9	159.4
62.5°	1420.6	523.8	155.1	121.9	115.6	121.1	126.3	133.2	143.5	162.6	166.0
65°	1287.5	484.4	149.4	117.8	111.5	118.0	123.5	131.5	147.0	176.5	178.3
67.5°	1033.5	402.3	135.4	111.5	106.8	114.5	121.4	131.5	148.3	178.8	179.8
70°	710.6	302.3	117.8	104.7	101.2	110.1	120.6	134.6	143.5	169.2	165.8
72.5°	371.2	210.4	103.2	96.7	94.7	106.3	128.5	131.5	138.1	157.9	154.6
75°	186.9	143.0	90.9	87.6	87.3	104.9	143.9	126.7	132.3	148.5	155.6
77.5°	110.4	112.0	80.9	79.1	80.5	102.3	144.2	121.6	125.8	136.7	144.4
80°	75.5	92.5	73.3	72.8	73.9	94.2	132.9	115.6	118.0	129.4	137.6
82.5°	42.6	51.1	64.3	67.8	67.3	77.2	114.8	105.1	108.2	152.9	161.8
85°	20.7	30.7	53.8	63.4	57.4	51.4	93.3	93.3	94.2	109.6	110.9
87.5°	7.6	13.7	36.2	50.2	40.1	30.7	63.4	66.1	73.7	75.7	77.4
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)