

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: P197258

Luminaire Tested: **NAV-AF-02-D-UNV-T3-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197258
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6551 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

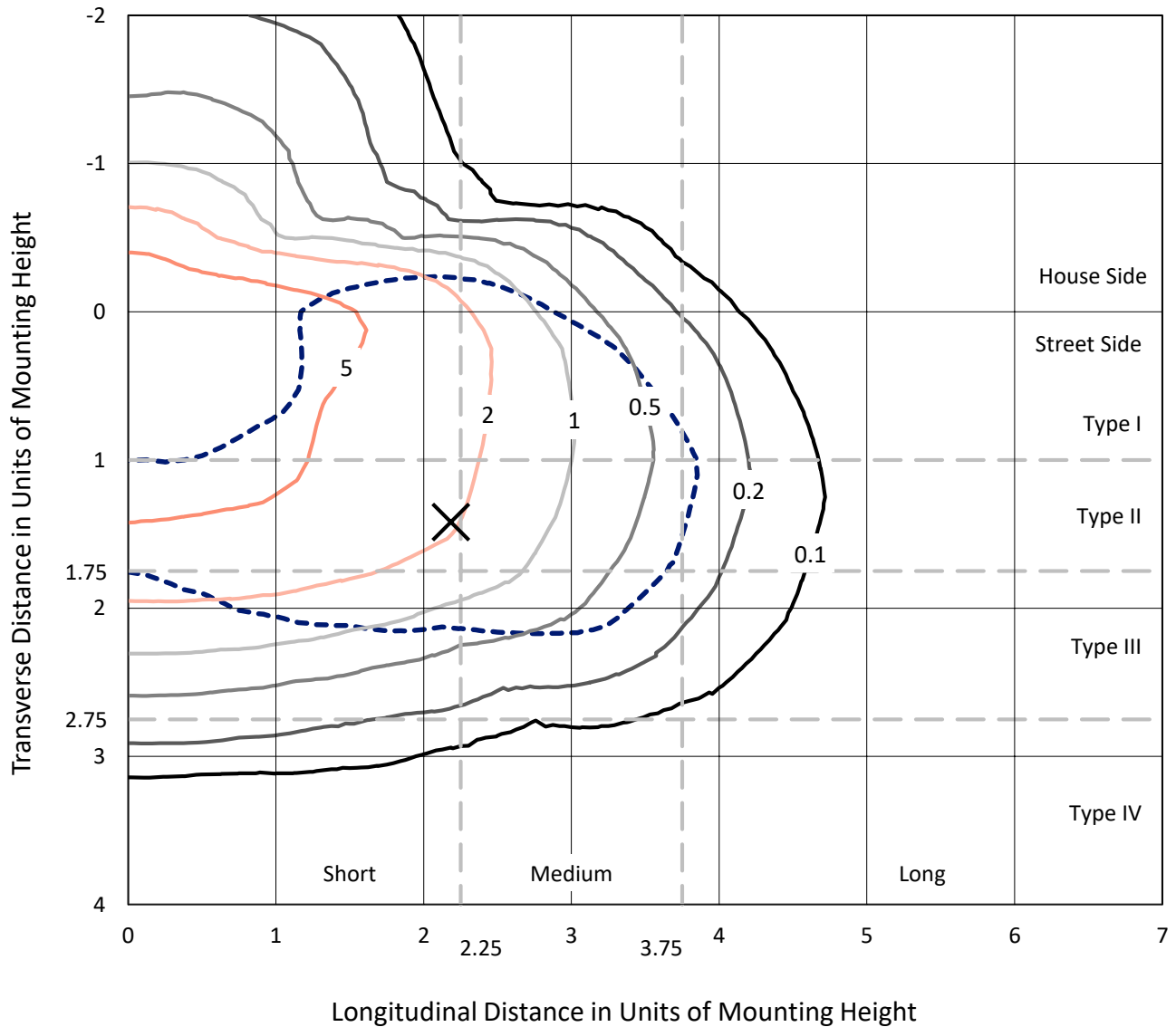
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

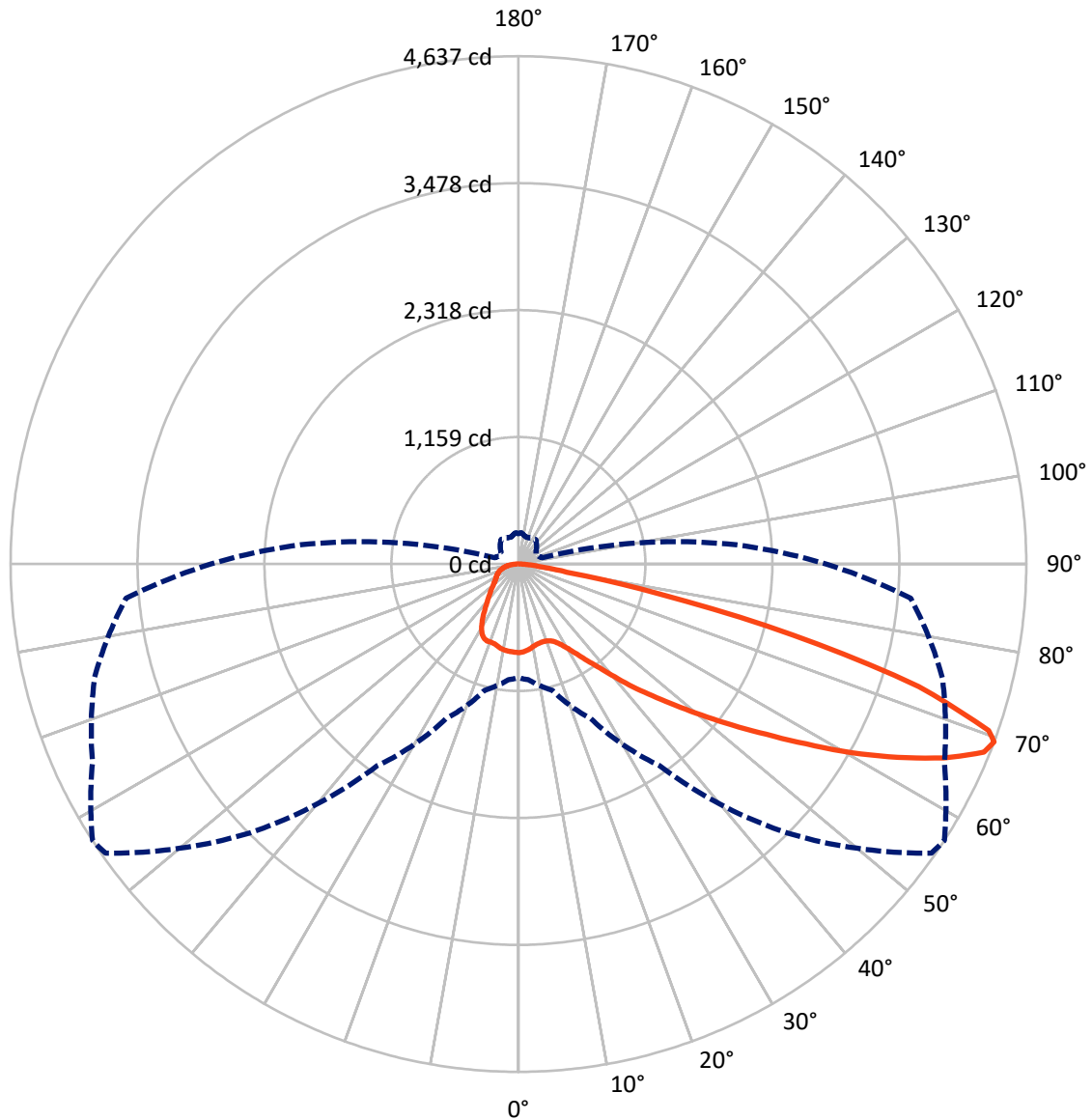
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.3 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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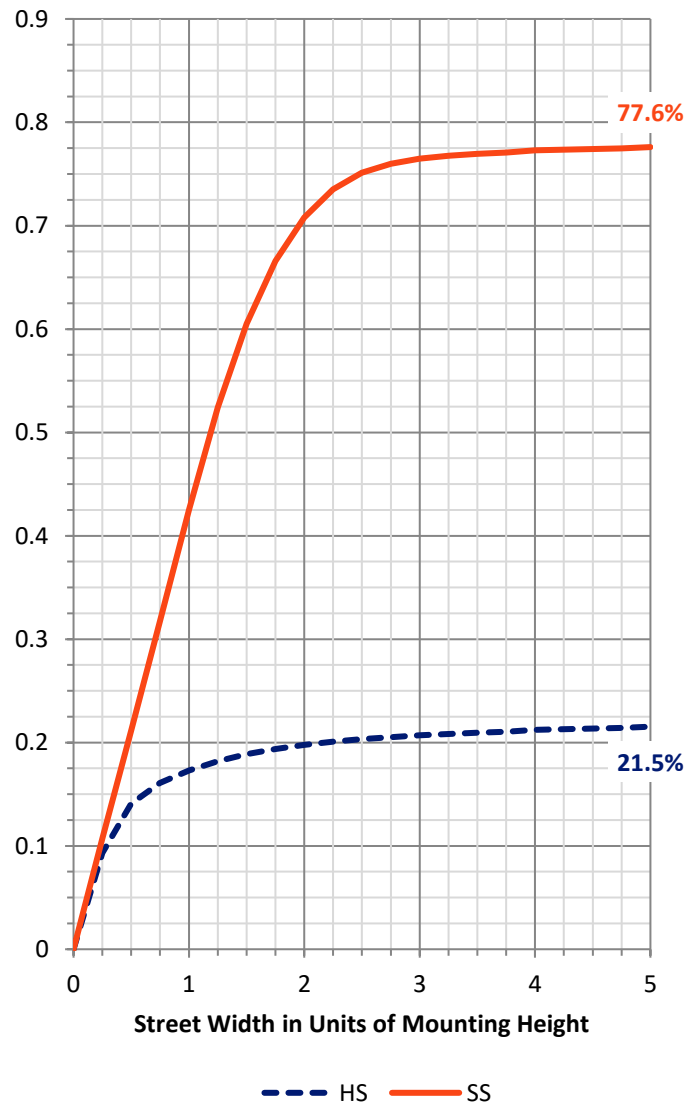
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1445.6	0.0	1445.6
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	5105.4	0.0	5105.4
	% Fixture	77.9	0.0	77.9
Total	Lumens	6551.0	0.0	6551.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.8	1.2
10°-20°	215.5	3.3
20°-30°	358.4	5.5
30°-40°	585.3	8.9
40°-50°	987.8	15.1
50°-60°	1536.6	23.5
60°-70°	1830.4	27.9
70°-80°	852.7	13.0
80°-90°	108.5	1.7
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°	6551.0	100.0
0°-180°	6551.0	100.0

Coefficient of Utilization



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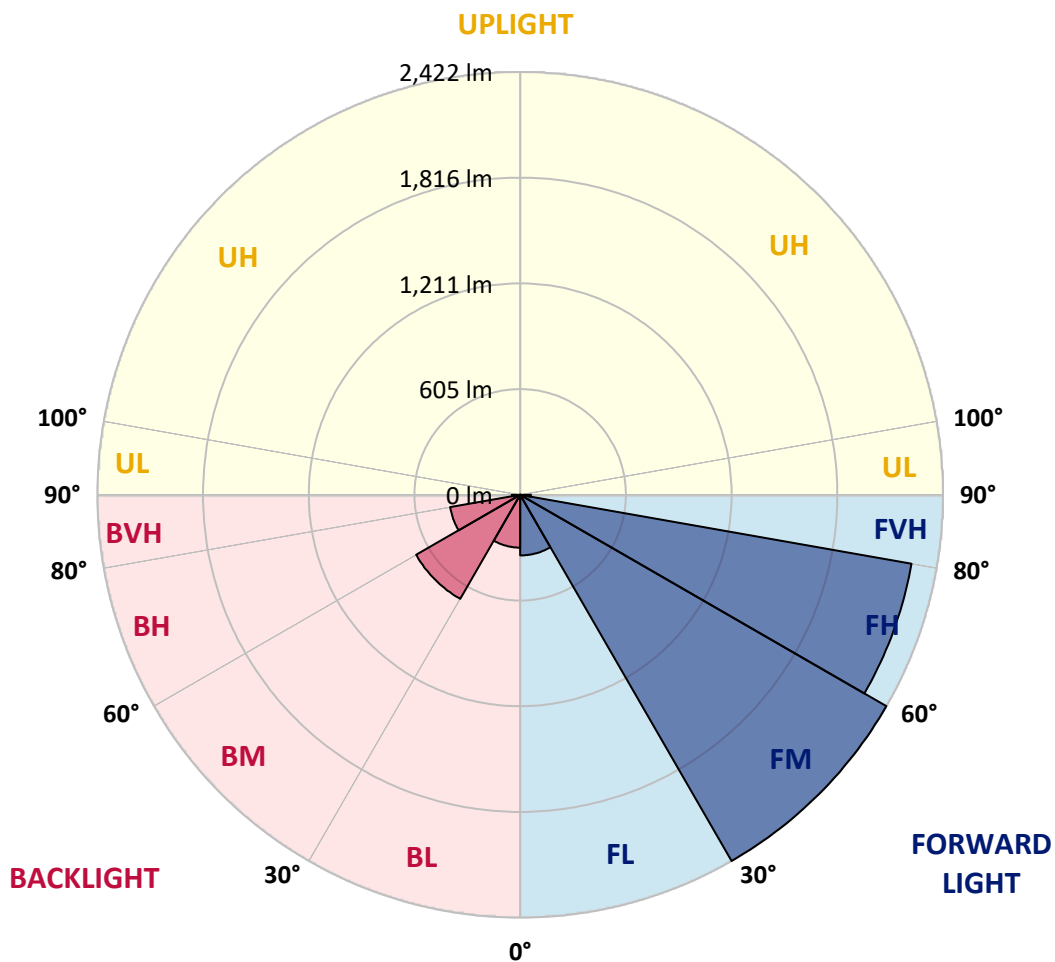
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	346.9	5.3			
FM	(30°-60°)	2421.7	37.0			
FH	(60°-80°)	2275.8	34.7			G2/5000
FVH	(80°-90°)	61.0	0.9			G1/100
BL	(0°-30°)	302.7	4.6	B1/500		
BM	(30°-60°)	688.0	10.5	B1/1000		
BH	(60°-80°)	407.3	6.2	B1/500		G1/500
BVH	(80°-90°)	47.5	0.7			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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	809.4	809.4	809.4	809.4	809.4	809.4	809.4	809.4	809.4	809.4	809.4
2.5°	804.8	804.8	806.9	806.9	806.9	806.1	803.6	804.4	802.7	801.5	799.4
5°	788.5	789.3	791.8	792.7	793.9	794.3	794.3	793.9	794.3	794.3	793.1
7.5°	765.8	766.7	769.6	771.3	775.0	778.4	780.1	780.1	782.2	783.9	784.3
10°	752.0	752.0	753.7	753.7	756.6	758.3	763.7	763.3	769.2	774.6	777.1
12.5°	750.3	750.3	749.5	746.5	744.9	744.4	749.9	750.7	759.5	769.2	773.8
15°	755.8	755.8	753.2	747.4	741.1	738.1	743.6	745.3	754.9	766.2	773.4
17.5°	773.4	773.0	767.5	755.8	744.9	740.2	741.9	743.6	752.4	765.4	774.2
20°	812.4	812.4	800.6	779.2	760.4	749.5	746.9	748.2	754.5	766.7	778.0
22.5°	880.7	882.0	861.0	825.8	793.5	770.4	760.4	761.6	764.6	776.3	788.9
25°	981.4	978.0	948.3	898.4	848.0	808.6	788.1	789.3	789.3	800.2	813.2
27.5°	1087.9	1088.8	1046.0	992.3	926.0	867.3	834.6	834.2	833.8	844.3	858.1
30°	1208.3	1208.7	1159.2	1097.1	1021.2	946.2	897.1	896.7	892.9	905.9	923.9
32.5°	1340.0	1339.6	1282.1	1212.1	1127.8	1042.6	978.9	978.5	975.5	993.1	1014.9
35°	1485.9	1485.9	1428.9	1342.5	1251.5	1156.7	1082.9	1082.5	1084.1	1108.1	1128.6
37.5°	1661.7	1665.4	1596.7	1491.8	1392.4	1291.3	1205.4	1202.8	1190.3	1230.5	1264.5
40°	1844.9	1855.4	1784.1	1661.7	1554.3	1449.9	1355.1	1353.4	1342.5	1385.3	1440.2
42.5°	2043.3	2067.2	1988.0	1863.0	1746.0	1633.1	1537.9	1533.3	1491.4	1558.1	1644.0
45°	2303.3	2318.9	2203.9	2090.7	1980.4	1851.6	1738.4	1713.7	1671.7	1757.3	1868.8
47.5°	2480.3	2472.8	2401.1	2325.1	2254.3	2131.0	1956.9	1925.5	1874.3	1987.5	2110.4
50°	2590.2	2595.7	2555.4	2551.6	2547.8	2461.9	2203.5	2165.8	2106.6	2240.8	2384.3
52.5°	2662.8	2638.0	2645.1	2730.7	2834.3	2793.2	2482.4	2440.5	2379.7	2513.9	2675.8
55°	2632.6	2599.9	2665.7	2834.3	3078.0	3087.2	2788.6	2745.4	2693.4	2804.1	3026.4
57.5°	2507.6	2523.9	2628.0	2862.4	3244.5	3350.6	3140.5	3096.4	2994.1	3106.5	3359.4
60°	2331.9	2365.0	2523.9	2817.9	3361.1	3555.7	3526.7	3497.4	3321.2	3400.9	3709.2
62.5°	2143.1	2175.8	2371.3	2742.0	3308.6	3737.3	3905.9	3887.8	3682.3	3684.4	3931.0
65°	1864.2	1877.6	2077.3	2534.8	3163.1	3901.2	4285.4	4269.5	4027.5	3926.4	3993.1
67.5°	1407.9	1424.7	1588.7	2001.0	2720.2	3812.3	4588.6	4586.1	4235.1	4016.2	3845.5
69°	1039.7	1060.2	1194.0	1553.5	2249.2	3473.5	4602.9	4636.9	4291.3	4006.9	3595.9
70°	760.8	784.3	908.0	1233.0	1873.5	3099.4	4480.9	4553.8	4269.9	3948.6	3401.3
72.5°	323.4	331.3	392.1	556.5	950.4	1868.8	3670.2	3823.7	3856.4	3538.0	2657.3
75°	202.6	205.1	229.0	285.6	422.8	773.0	2376.7	2586.0	2879.2	2745.0	1779.1
77.5°	152.7	154.8	168.6	196.7	262.5	288.5	1102.6	1314.8	1649.1	1614.7	885.4
80°	117.0	118.3	127.5	143.0	185.0	180.8	357.7	449.6	688.2	607.3	313.3
82.5°	91.8	92.3	100.2	103.2	129.2	121.6	179.5	200.1	278.1	231.1	153.1
85°	81.4	82.6	90.6	75.5	82.6	73.4	98.6	106.9	147.6	139.2	57.9
87.5°	41.5	43.6	75.9	64.6	41.5	34.8	43.2	46.6	60.0	65.0	28.1
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°	809.4	809.4	809.4	809.4	809.4	809.4	809.4	809.4	809.4	809.4	809.4
2.5°	799.8	800.2	801.5	803.6	806.9	811.1	816.2	821.2	824.1	826.2	825.4
5°	793.1	793.5	796.0	799.8	804.0	810.3	818.7	825.0	829.6	832.5	832.1
7.5°	784.7	786.0	791.0	795.2	801.1	806.1	812.8	818.7	823.3	826.2	825.8
10°	778.4	779.7	786.0	791.4	796.4	797.3	796.0	794.3	793.9	796.0	795.2
12.5°	775.5	778.0	783.9	787.6	785.5	777.6	768.3	764.6	763.3	767.5	767.9
15°	776.3	778.4	783.4	780.9	769.6	756.2	751.1	754.1	756.6	759.1	759.5
17.5°	778.4	779.7	780.9	771.7	755.8	746.9	745.3	742.3	734.8	730.6	730.2
20°	782.2	783.9	781.8	767.1	752.8	741.1	720.9	702.9	685.7	676.5	672.7
22.5°	795.2	796.4	790.1	775.9	754.1	715.9	675.2	644.2	617.8	603.5	598.1
25°	820.8	822.9	814.1	796.0	739.0	672.3	614.8	572.9	539.8	522.6	518.0
27.5°	865.6	867.7	858.1	811.1	703.8	614.0	544.4	502.9	474.3	459.7	457.6
30°	932.7	935.7	926.9	810.7	650.1	539.8	475.6	451.3	434.9	424.9	424.4
32.5°	1025.8	1036.8	1000.7	796.4	583.8	464.7	423.6	415.2	407.2	400.5	400.5
35°	1144.1	1169.7	1073.7	766.7	510.8	413.5	394.7	386.7	376.6	369.5	368.7
37.5°	1285.5	1325.3	1125.7	713.8	447.9	388.8	377.0	364.0	348.1	334.3	330.9
40°	1479.6	1488.9	1151.3	627.8	400.9	375.4	360.7	344.3	324.2	308.7	307.0
42.5°	1674.7	1644.5	1146.2	535.6	374.1	363.2	343.9	325.9	307.8	294.8	294.8
45°	1896.5	1780.3	1108.1	442.9	349.8	349.4	328.4	311.2	297.4	287.7	285.6
47.5°	2108.7	1902.4	1042.2	374.5	324.6	335.5	318.3	304.5	291.9	282.7	281.0
50°	2366.2	2043.7	972.2	326.7	300.3	323.4	314.1	307.0	294.8	278.9	277.2
52.5°	2622.1	2209.0	918.1	290.6	278.9	313.7	316.6	317.5	306.2	275.1	273.0
55°	2896.8	2385.5	861.0	262.5	261.3	309.1	322.5	321.7	316.2	276.0	272.6
57.5°	3158.1	2562.9	775.9	242.8	247.4	304.5	323.8	310.4	300.7	280.2	274.7
60°	3374.5	2709.7	650.9	229.0	235.7	295.3	315.4	295.3	278.9	279.3	274.3
62.5°	3479.8	2750.8	497.8	213.1	226.1	280.2	303.2	283.9	268.8	281.0	278.1
65°	3399.6	2633.8	354.8	198.4	214.3	262.5	296.1	274.3	263.8	289.4	286.0
67.5°	3111.9	2315.1	257.5	185.4	203.0	244.5	282.7	265.5	258.8	295.7	288.1
69°	2806.2	1998.9	223.1	177.8	195.0	234.9	273.9	260.9	255.0	286.9	276.0
70°	2552.0	1755.2	205.9	173.2	188.3	229.4	267.2	257.9	251.2	276.4	263.4
72.5°	1829.8	1134.5	173.2	159.4	170.7	217.2	252.5	247.0	237.0	249.5	241.2
75°	1105.5	592.2	147.2	145.1	152.2	200.5	235.3	228.6	218.5	219.8	215.6
77.5°	507.9	273.4	123.3	128.3	132.9	179.5	214.3	206.8	197.5	194.2	194.6
80°	222.7	159.8	103.2	109.5	112.0	161.5	191.7	183.3	173.2	191.2	177.4
82.5°	120.4	92.7	80.5	84.7	91.8	140.5	166.5	155.6	146.0	169.9	137.1
85°	48.7	47.4	54.5	58.7	63.7	101.1	139.2	127.9	116.2	104.0	101.5
87.5°	21.0	22.6	26.8	28.5	34.0	62.9	93.5	81.8	82.2	70.5	69.2
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)