

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: P196645

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196645
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
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-SL4-7030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4815.1 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B0 - U0 - G2

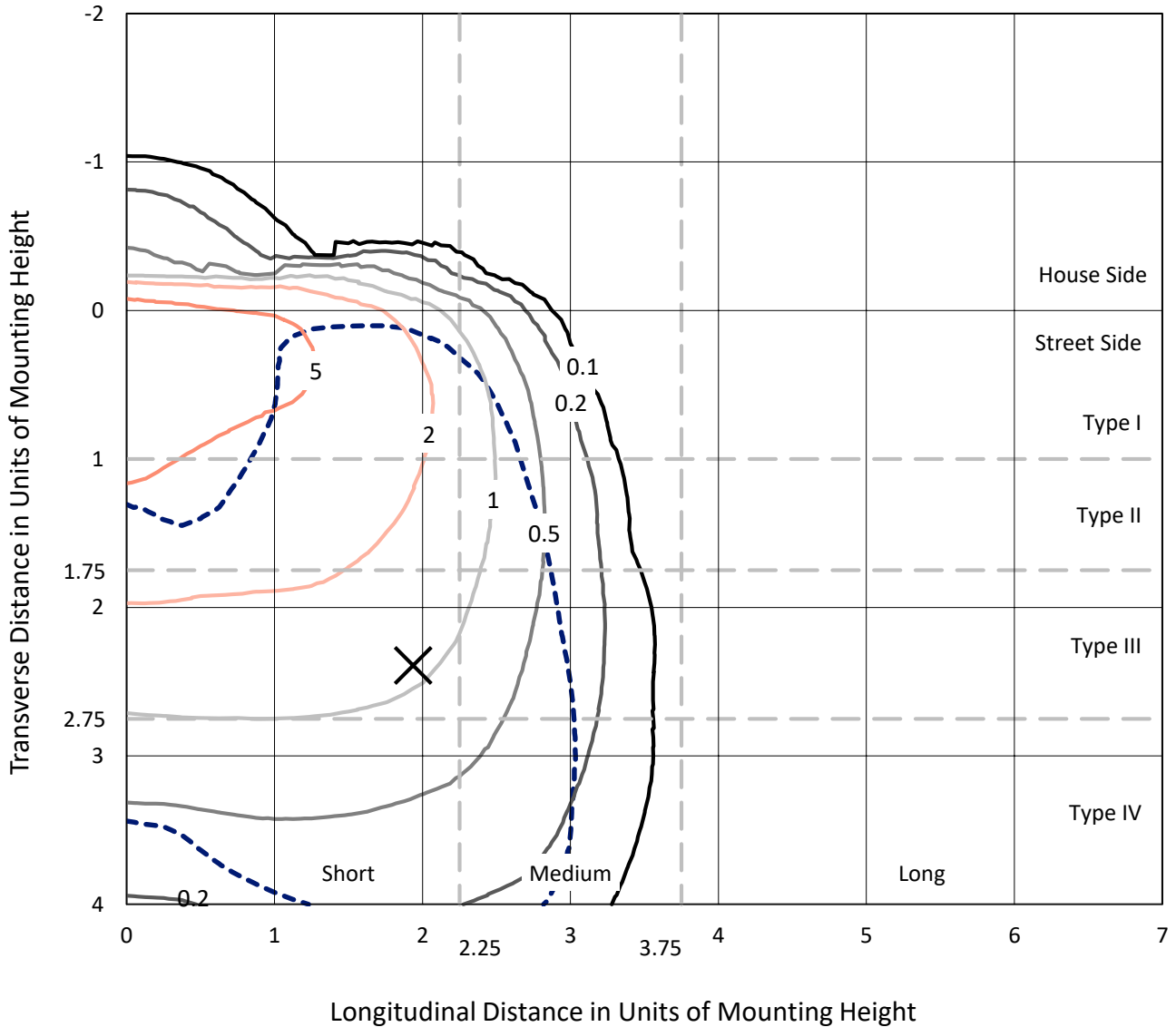
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

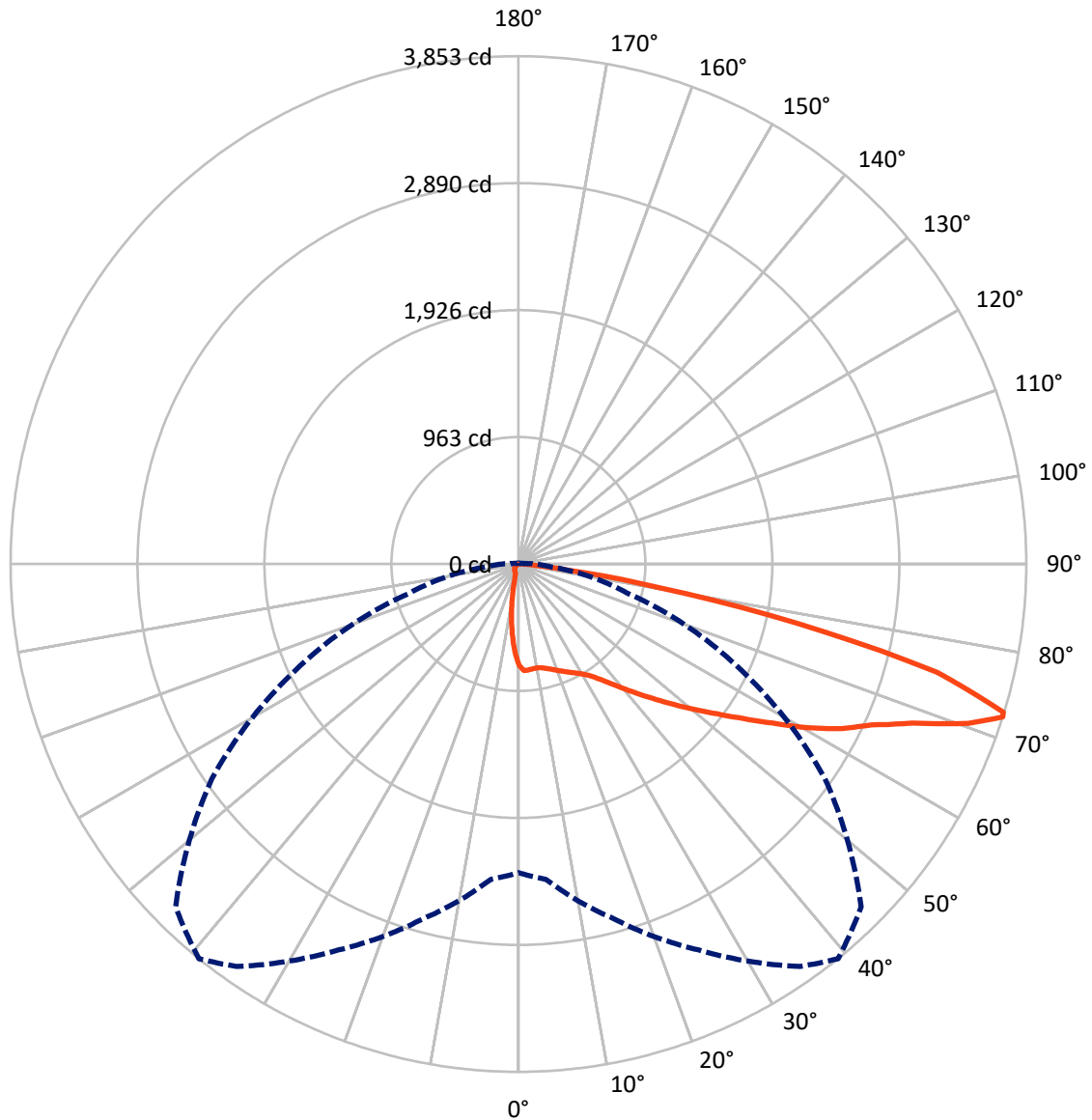
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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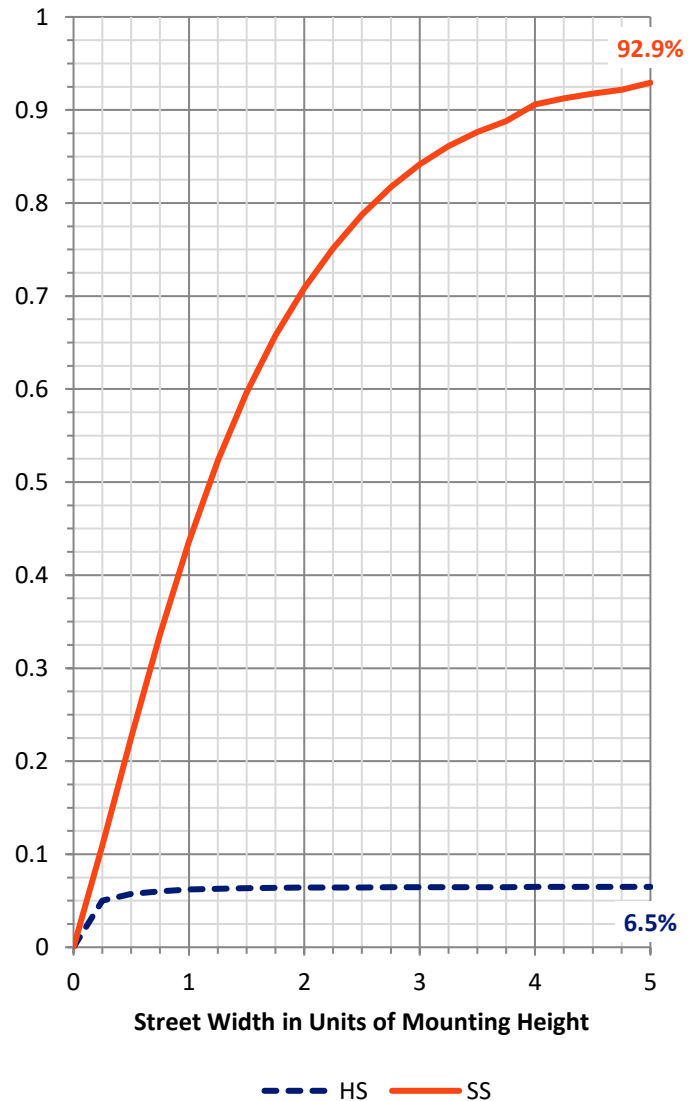
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	315.6	0.0	315.6
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	4499.5	0.0	4499.5
	% Fixture	93.4	0.0	93.4
Total	Lumens	4815.1	0.0	4815.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.7	1.3
10°-20°	151.8	3.2
20°-30°	252.0	5.2
30°-40°	401.7	8.3
40°-50°	663.1	13.8
50°-60°	1001.4	20.8
60°-70°	1304.4	27.1
70°-80°	881.4	18.3
80°-90°	96.5	2.0
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°	4815.1	100.0
0°-180°	4815.1	100.0



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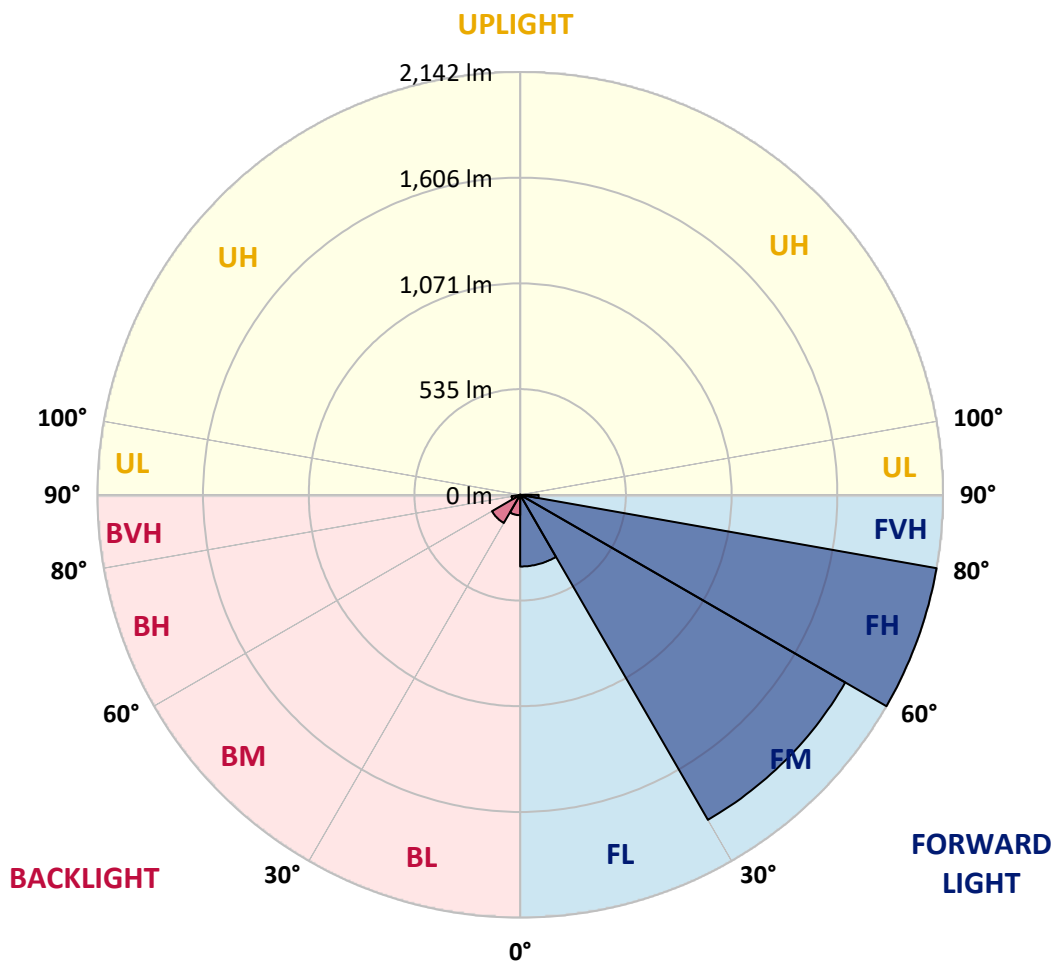
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	363.2	7.5			
FM	(30°-60°)	1901.0	39.5			
FH	(60°-80°)	2141.5	44.5			G2/5000
FVH	(80°-90°)	93.8	1.9			G1/100
BL	(0°-30°)	103.3	2.1	B0/110		
BM	(30°-60°)	165.1	3.4	B0/220		
BH	(60°-80°)	44.3	0.9	B0/110		G0/110
BVH	(80°-90°)	2.8	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	770.8	770.8	770.8	770.8	770.8	770.8	770.8	770.8	770.8	770.8	770.8
2.5°	820.6	822.1	820.3	816.8	811.9	808.9	804.7	795.6	784.3	774.4	763.0
5°	827.1	827.8	825.6	819.1	811.6	807.4	802.1	792.2	780.5	766.9	746.5
7.5°	829.0	828.6	826.0	818.1	806.3	801.0	791.9	779.8	767.6	755.2	732.0
10°	828.1	828.1	826.3	818.8	805.5	800.6	790.4	777.5	762.3	749.8	725.3
12.5°	825.6	827.1	826.0	821.7	811.9	808.2	799.1	786.2	771.8	759.0	732.8
15°	829.0	831.3	833.5	832.0	826.3	822.9	814.6	801.3	789.6	776.0	748.0
17.5°	842.6	847.6	852.8	853.2	847.2	841.1	831.6	818.1	806.7	794.1	763.8
20°	868.4	872.1	881.9	883.9	871.8	863.0	849.8	833.8	822.5	811.9	778.6
22.5°	906.6	910.7	918.7	916.0	895.6	885.3	868.7	850.6	838.8	832.8	795.6
25°	964.5	965.7	967.5	955.8	922.0	910.7	890.3	869.8	860.4	859.7	819.9
27.5°	1032.6	1034.1	1025.8	999.7	951.6	936.9	913.7	895.3	890.7	896.4	850.6
30°	1110.6	1110.9	1087.9	1045.5	985.7	969.4	945.5	925.1	929.2	943.2	889.9
32.5°	1190.5	1186.7	1154.9	1099.5	1032.3	1012.5	992.1	971.7	983.8	1012.2	947.5
35°	1263.5	1262.1	1224.6	1160.3	1092.8	1075.4	1060.6	1039.0	1058.7	1104.9	1025.8
37.5°	1336.6	1335.4	1292.6	1225.7	1167.3	1154.9	1144.0	1127.2	1159.5	1227.2	1130.7
40°	1417.2	1415.4	1362.7	1298.3	1254.1	1247.2	1240.8	1233.6	1288.5	1382.7	1261.3
42.5°	1516.7	1508.5	1436.9	1377.4	1349.5	1351.3	1351.7	1358.8	1444.9	1567.9	1415.4
45°	1631.0	1612.5	1511.5	1462.2	1454.4	1465.6	1476.9	1506.9	1626.9	1780.9	1585.7
47.5°	1742.0	1712.1	1597.4	1553.4	1569.7	1593.2	1620.5	1678.8	1831.3	2004.0	1740.1
50°	1837.4	1806.7	1682.6	1646.2	1698.1	1732.9	1781.4	1869.5	2047.1	2192.4	1837.4
52.5°	1912.4	1888.1	1772.6	1748.3	1840.4	1888.1	1964.2	2080.0	2250.7	2316.7	1905.5
55°	1967.5	1955.5	1858.9	1862.4	1998.6	2067.5	2162.1	2293.2	2422.6	2413.1	1956.7
57.5°	2030.0	2020.5	1949.4	1996.7	2189.0	2277.9	2387.4	2492.6	2547.5	2490.7	2006.5
60°	2094.1	2097.0	2059.2	2159.5	2424.5	2522.9	2618.3	2644.4	2654.6	2569.4	2059.2
62.5°	2142.5	2155.3	2158.8	2335.1	2665.9	2749.9	2791.2	2772.7	2770.5	2675.1	2055.0
65°	2198.1	2231.8	2287.8	2527.8	2885.5	2940.8	2970.3	2997.2	2940.3	2706.5	1852.9
67.5°	2294.2	2347.2	2473.3	2764.0	3139.1	3220.9	3304.5	3276.1	2965.8	2387.4	1411.5
70°	2423.7	2488.5	2711.0	3072.5	3483.1	3620.2	3690.2	3253.8	2518.0	1649.6	744.6
72°	2342.0	2400.7	2784.5	3229.9	3727.0	3852.7	3677.3	2838.2	1825.2	855.1	249.4
72.5°	2262.4	2323.1	2761.0	3228.1	3751.2	3847.3	3593.7	2674.3	1615.2	665.5	171.9
75°	1569.7	1646.2	2366.9	2901.8	3387.5	3281.8	2749.6	1619.3	585.2	114.2	56.9
77.5°	811.6	870.6	1435.7	2050.5	2360.9	2162.1	1625.0	702.5	162.0	60.5	37.4
80°	503.0	532.2	671.5	1010.3	1226.4	1072.7	717.0	283.8	103.7	35.9	29.9
82.5°	260.5	282.8	422.9	407.6	453.1	376.6	264.6	237.7	63.9	22.3	30.7
85°	85.5	90.8	259.7	271.1	193.8	130.2	117.4	226.7	18.6	14.4	26.1
87.5°	11.4	13.2	91.2	155.1	95.4	59.0	70.4	79.9	6.4	7.9	7.2
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°	770.8	770.8	770.8	770.8	770.8	770.8	770.8	770.8	770.8	770.8	770.8
2.5°	755.5	750.6	735.1	719.6	701.8	685.5	672.6	664.3	668.1	655.5	657.5
5°	734.0	721.4	687.5	650.6	611.0	573.8	544.3	522.4	518.2	499.4	500.1
7.5°	713.1	692.7	637.4	576.9	511.0	457.7	409.1	366.8	351.7	336.1	327.0
10°	701.8	673.8	595.5	507.2	414.5	336.1	268.0	214.5	192.3	176.0	168.0
12.5°	705.2	668.1	564.0	444.0	322.1	222.6	151.5	112.4	98.8	91.2	88.6
15°	716.5	669.2	535.6	382.3	234.4	134.7	88.9	76.1	75.0	74.7	74.2
17.5°	727.1	670.5	505.8	318.0	156.7	85.9	71.6	70.4	70.4	70.4	70.4
20°	738.1	670.8	472.8	250.5	102.9	70.4	67.4	66.6	67.4	67.4	67.4
22.5°	751.0	673.4	441.0	185.0	76.1	66.2	64.4	63.9	64.4	64.4	63.9
25°	766.9	679.0	406.6	132.5	69.0	63.6	61.7	61.3	61.7	61.3	61.3
27.5°	788.1	686.7	366.4	95.0	65.9	60.9	59.0	59.0	59.0	58.7	58.7
30°	815.3	695.8	312.7	75.0	62.9	58.4	56.9	56.9	56.4	56.0	56.0
32.5°	854.3	710.5	254.0	67.7	59.4	54.8	53.3	53.7	53.3	53.0	52.7
35°	909.6	733.5	196.1	63.9	56.0	51.5	49.9	49.9	49.9	49.1	49.1
37.5°	987.9	768.7	146.9	60.2	52.7	48.1	46.2	46.2	45.8	45.1	45.5
40°	1084.8	813.1	106.4	56.9	49.1	44.2	42.7	42.1	41.3	40.5	40.5
42.5°	1201.5	856.3	79.9	53.3	45.8	41.3	39.4	38.6	37.1	36.4	35.9
45°	1332.1	902.1	66.2	49.1	42.1	37.8	36.4	34.9	32.9	31.8	31.4
47.5°	1442.2	930.1	59.0	45.1	38.2	34.4	32.9	30.7	28.4	27.7	27.7
50°	1508.5	918.4	53.0	40.9	34.4	31.0	29.2	26.1	24.6	23.8	23.5
52.5°	1545.5	883.5	48.1	37.4	31.0	27.2	24.6	22.0	21.2	20.4	20.4
55°	1570.9	833.1	42.7	34.1	28.0	23.8	20.9	18.9	18.1	17.8	17.4
57.5°	1595.0	771.8	37.8	31.0	25.0	21.2	17.8	17.1	15.6	15.2	15.2
60°	1602.3	687.5	33.4	27.7	22.3	18.6	15.6	14.4	12.9	12.4	12.4
62.5°	1510.7	547.0	29.5	23.5	19.6	16.0	13.6	12.1	10.6	10.6	10.6
65°	1262.4	371.4	25.3	20.4	17.4	13.6	11.7	9.9	9.1	9.1	9.1
67.5°	879.3	207.0	21.6	17.4	14.7	11.4	9.9	8.3	7.9	8.3	8.3
70°	396.3	82.2	18.1	14.4	12.1	9.5	8.3	7.2	7.9	7.9	7.9
72°	118.9	43.9	15.2	11.7	9.9	8.3	7.2	6.8	7.5	7.9	7.9
72.5°	88.2	39.4	14.4	11.4	9.9	7.9	6.8	6.8	7.5	7.9	7.9
75°	45.5	26.9	10.9	8.3	7.2	6.4	5.7	6.4	7.5	7.5	7.5
77.5°	35.6	22.0	9.1	6.4	6.0	5.7	5.4	6.0	6.8	6.8	6.8
80°	33.4	14.4	7.2	6.0	5.4	4.9	4.9	5.4	6.0	6.4	6.4
82.5°	33.7	11.7	6.4	5.7	4.9	4.6	4.6	4.9	5.7	6.0	6.0
85°	21.6	7.9	5.7	4.9	4.6	4.2	4.2	4.6	5.4	5.7	5.7
87.5°	7.2	6.0	4.9	4.6	3.9	3.9	3.9	3.9	4.6	4.9	5.4
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)