

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: P196675

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196675
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
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-SL4-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6183 lumens
Efficiency: N/A
Efficacy: 92.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

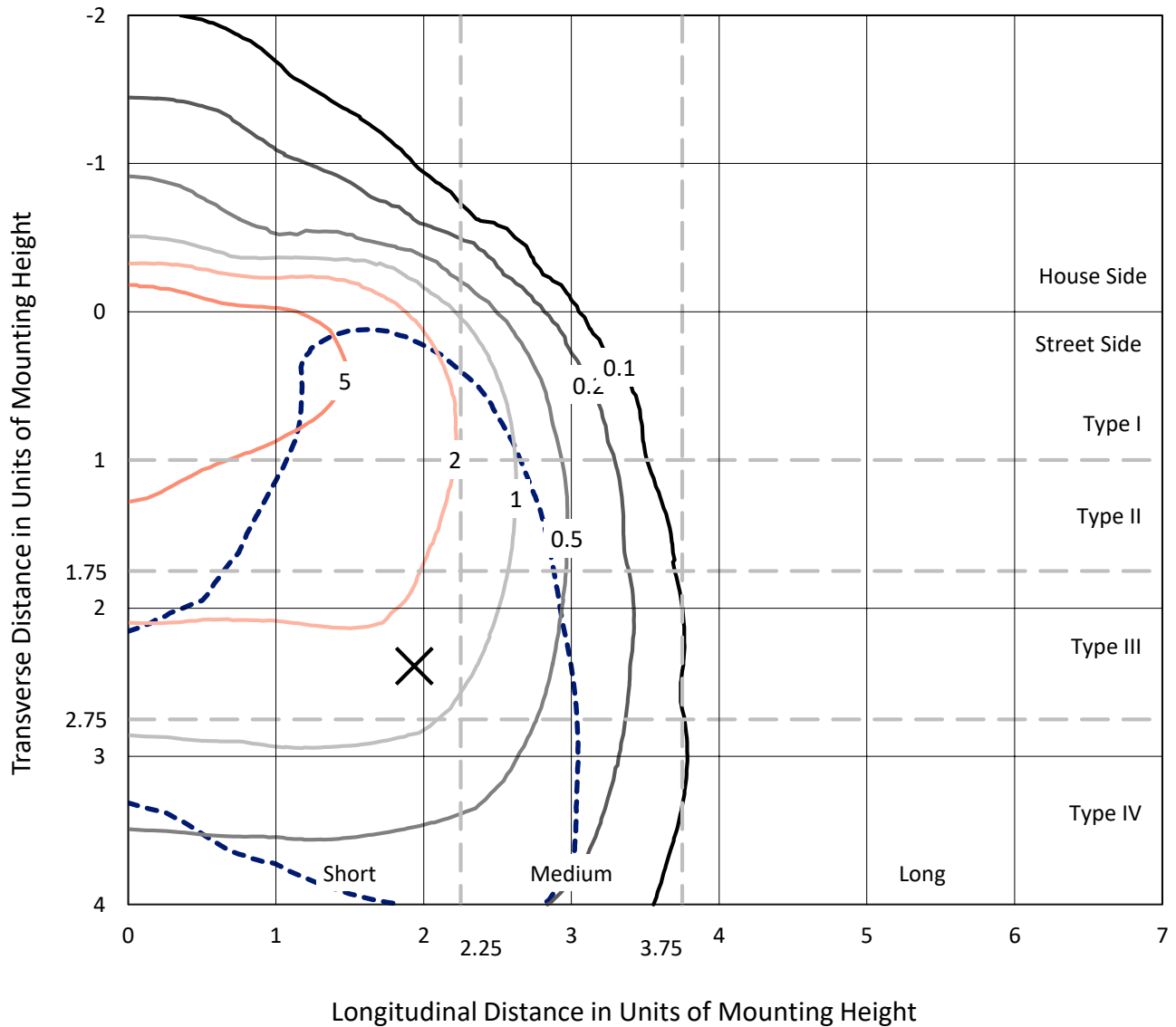
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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 CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-7030-1200

Iso-Footcandle Lines of Horizontal Illumination

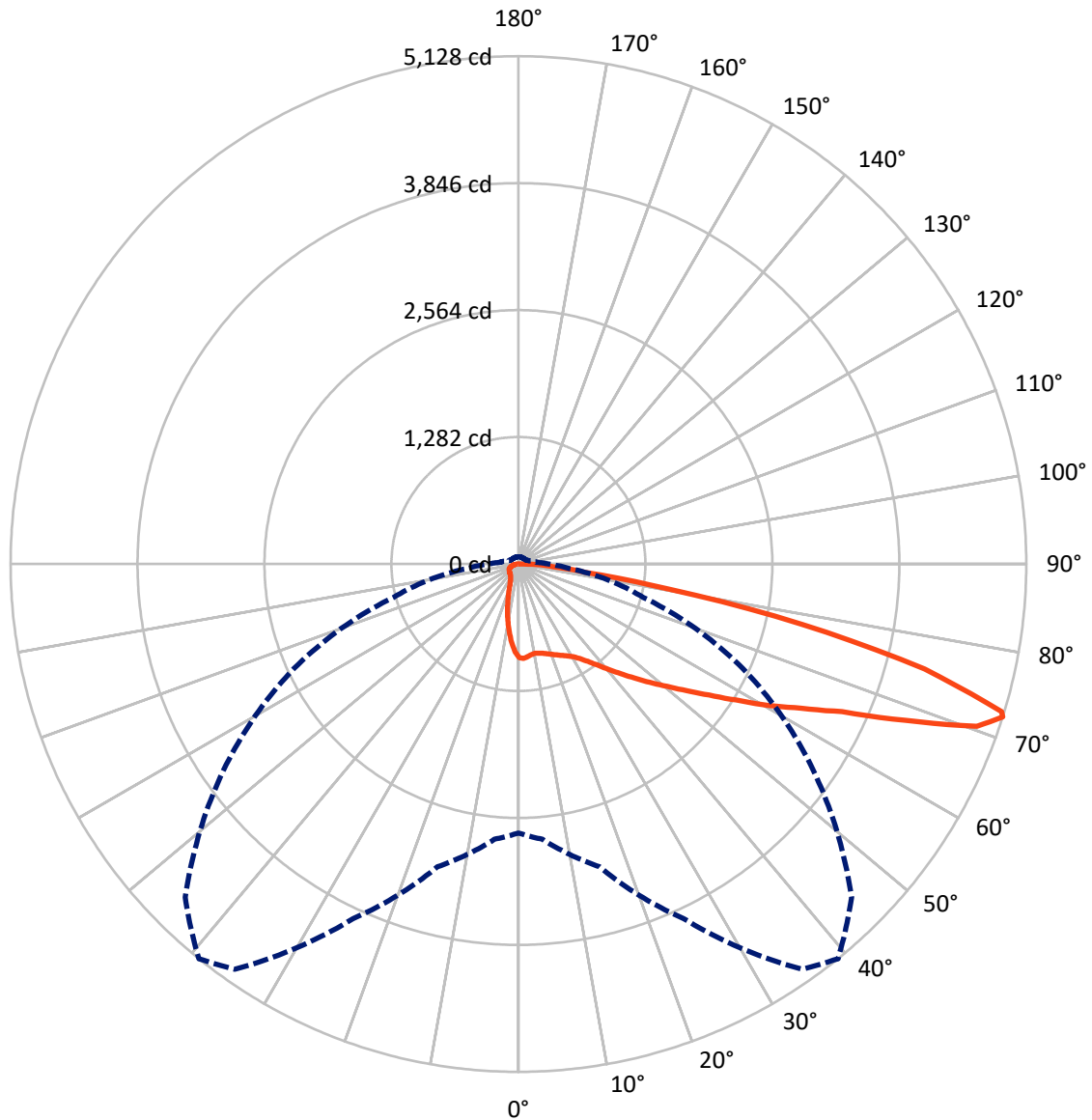
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.4 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196675
CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-7030-1200

Luminous Intensity Polar Plot



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

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CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-7030-1200

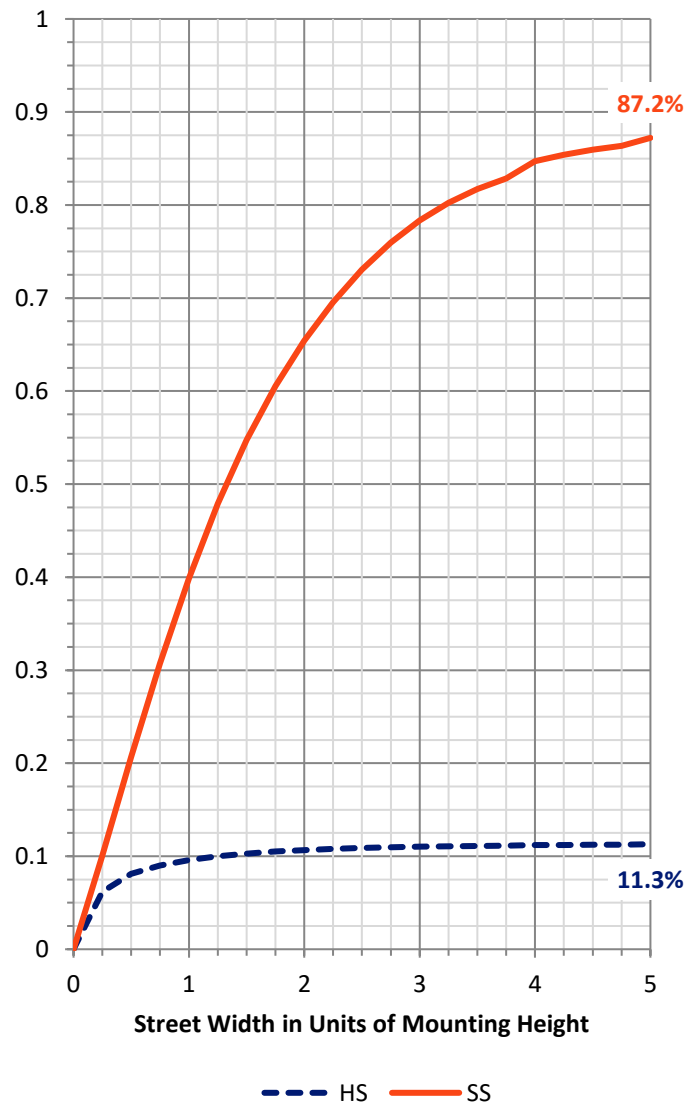
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	708.9	0.0	708.9
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	5474.0	0.0	5474.0
	% Fixture	88.5	0.0	88.5
Total	Lumens	6183.0	0.0	6183.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.1	1.3
10°-20°	203.9	3.3
20°-30°	317.8	5.1
30°-40°	489.2	7.9
40°-50°	797.6	12.9
50°-60°	1239.3	20.0
60°-70°	1658.8	26.8
70°-80°	1192.9	19.3
80°-90°	202.2	3.3
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°	6183.0	100.0
0°-180°	6183.0	100.0



REPORT NUMBER: P196675

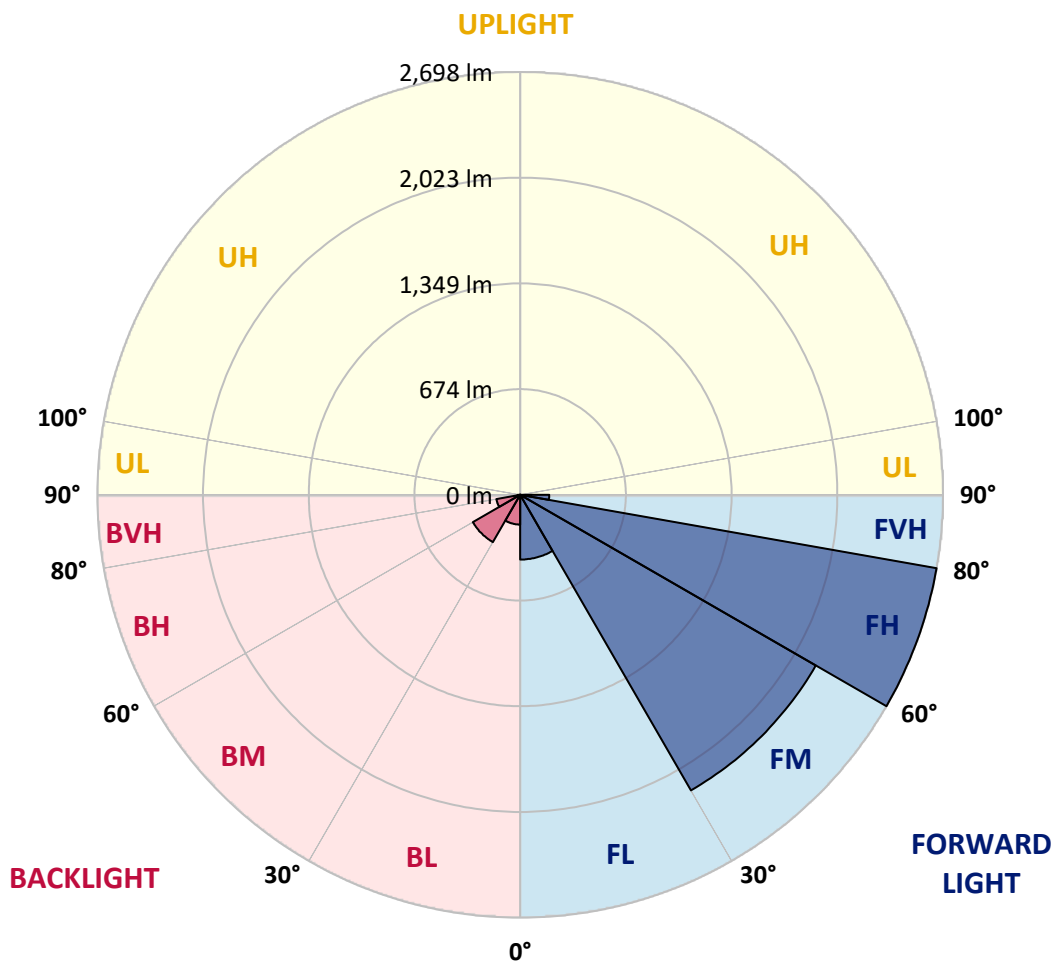
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	413.0	6.7			
FM	(30°-60°)	2177.8	35.2			
FH	(60°-80°)	2697.7	43.6			G2/5000
FVH	(80°-90°)	185.5	3.0			G2/225
BL	(0°-30°)	189.8	3.1	B1/500		
BM	(30°-60°)	348.4	5.6	B1/1000		
BH	(60°-80°)	154.0	2.5	B1/500		G1/500
BVH	(80°-90°)	16.7	0.3			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 IV Short





REPORT NUMBER: P196675

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-7030-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	944.2	944.2	944.2	944.2	944.2	944.2	944.2	944.2	944.2	944.2	944.2
2.5°	964.5	965.0	963.7	960.1	956.7	955.0	952.0	947.2	940.5	936.0	932.2
5°	955.5	956.7	955.9	949.7	943.9	940.5	936.0	928.9	920.2	916.4	907.7
7.5°	948.4	949.3	946.7	939.7	928.4	924.4	916.0	906.9	898.9	893.6	883.3
10°	943.5	944.2	942.2	935.1	922.7	917.7	907.7	897.8	887.4	880.7	869.1
12.5°	936.4	938.0	938.0	934.7	926.4	923.1	913.1	902.4	892.7	885.8	871.3
15°	935.1	937.2	940.9	940.5	938.0	935.6	927.6	916.9	908.6	900.3	882.4
17.5°	945.5	950.0	957.5	960.1	958.3	953.0	943.9	933.8	924.8	916.9	894.9
20°	971.7	974.1	985.3	990.3	982.0	974.1	962.1	949.3	940.9	934.7	906.6
22.5°	1011.0	1014.4	1023.5	1024.0	1006.5	997.0	981.5	965.9	957.9	955.5	922.2
25°	1074.1	1073.4	1075.8	1065.5	1033.9	1022.6	1004.0	985.7	980.4	985.3	945.5
27.5°	1149.7	1147.7	1139.8	1112.8	1065.1	1050.5	1028.1	1012.0	1012.0	1023.5	977.0
30°	1236.9	1234.7	1209.1	1163.8	1102.0	1085.4	1061.7	1044.7	1053.4	1075.8	1019.8
32.5°	1329.0	1321.5	1285.4	1224.8	1154.7	1136.4	1113.6	1096.2	1112.8	1150.9	1081.2
35°	1415.8	1411.6	1367.2	1295.4	1222.7	1207.5	1191.6	1170.0	1196.6	1255.9	1168.0
37.5°	1505.4	1502.1	1447.6	1371.3	1305.7	1295.4	1282.1	1267.2	1309.9	1387.9	1285.4
40°	1605.4	1598.8	1530.2	1453.9	1402.5	1397.5	1390.5	1386.3	1455.3	1571.3	1434.0
42.5°	1718.7	1705.9	1617.5	1544.8	1507.9	1512.0	1508.4	1524.9	1630.3	1783.1	1610.8
45°	1848.2	1822.6	1704.2	1641.5	1624.5	1641.2	1649.0	1691.4	1837.4	2027.6	1808.4
47.5°	1969.4	1936.2	1799.3	1746.5	1756.2	1784.7	1807.1	1881.9	2064.5	2269.1	2010.2
50°	2081.1	2043.7	1901.0	1855.3	1901.7	1942.4	1988.9	2094.4	2306.0	2517.8	2195.2
52.5°	2163.7	2136.7	2002.6	1974.0	2069.1	2123.0	2197.3	2330.5	2550.1	2754.8	2360.4
55°	2227.6	2213.0	2101.8	2110.2	2258.3	2335.5	2425.5	2578.7	2808.3	2967.3	2493.2
57.5°	2301.4	2290.7	2215.1	2274.6	2493.2	2590.3	2696.6	2866.8	3054.1	3154.5	2597.4
60°	2379.5	2379.5	2341.3	2472.5	2787.1	2898.3	3004.2	3136.7	3298.9	3322.9	2639.7
62.5°	2438.4	2453.9	2467.5	2683.3	3066.1	3204.2	3320.5	3447.4	3552.4	3405.9	2540.2
65°	2524.0	2556.7	2633.9	2926.9	3411.3	3592.3	3749.2	3855.9	3757.9	3339.9	2215.1
67.5°	2670.9	2719.5	2883.8	3289.7	3940.1	4211.2	4363.5	4179.1	3717.6	2924.5	1696.8
70°	2803.3	2871.8	3152.7	3750.0	4627.4	4908.9	4838.8	4104.1	3237.9	2143.7	1043.9
72°	2715.3	2790.1	3165.2	3950.5	4994.8	5127.6	4757.8	3637.1	2501.9	1308.3	514.7
72.5°	2657.6	2735.2	3125.0	3945.6	5004.7	5099.7	4645.2	3451.6	2271.2	1144.7	416.3
75°	2220.1	2286.6	2687.1	3496.9	4410.4	4236.1	3625.1	2233.8	1043.9	369.9	214.1
77.5°	1449.8	1500.4	1852.8	2422.8	3089.3	2921.6	2206.5	1045.9	391.3	224.5	161.0
80°	728.4	764.5	991.5	1273.9	1667.3	1534.0	1018.6	506.0	261.9	162.2	126.6
82.5°	506.8	540.0	682.8	650.4	696.8	674.4	479.0	422.1	195.9	102.4	66.4
85°	425.0	459.4	564.9	463.6	379.3	345.7	343.3	398.9	129.5	50.6	56.0
87.5°	370.6	423.0	466.1	338.7	260.2	229.6	252.7	365.7	41.1	27.9	17.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196675

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	944.2	944.2	944.2	944.2	944.2	944.2	944.2	944.2	944.2	944.2	944.2
2.5°	926.0	924.8	918.6	908.9	901.9	897.3	888.6	888.2	889.1	881.6	884.5
5°	899.9	894.9	878.7	856.7	838.8	821.8	803.2	796.9	791.5	780.3	781.5
7.5°	872.4	863.7	835.5	799.4	765.0	733.4	702.3	686.9	675.3	660.8	660.8
10°	856.3	842.6	799.4	746.7	691.9	645.8	599.3	571.5	551.2	532.5	531.2
12.5°	855.4	834.6	774.5	701.9	626.7	562.0	498.4	455.7	425.4	403.3	401.3
15°	862.0	833.0	753.8	659.9	565.3	481.1	402.6	348.2	309.6	285.1	282.7
17.5°	867.8	830.9	731.4	615.9	505.6	403.0	315.9	259.4	222.9	203.0	200.9
20°	873.3	826.3	702.6	569.5	439.6	330.0	246.9	201.2	177.2	166.1	164.8
22.5°	881.1	822.1	672.8	517.2	374.8	268.6	203.8	171.0	158.1	152.8	151.9
25°	894.1	822.6	643.7	463.6	315.4	223.8	176.4	156.0	149.0	145.4	145.4
27.5°	912.8	827.6	615.1	409.2	265.2	193.0	160.2	148.1	143.5	140.7	139.9
30°	940.0	836.7	584.9	357.9	225.4	171.9	150.7	143.2	139.5	137.0	136.6
32.5°	979.9	853.0	552.9	310.9	195.0	156.9	143.5	139.1	136.1	134.1	133.7
35°	1039.3	881.6	521.7	271.1	173.5	146.1	137.7	134.1	132.4	131.5	131.1
37.5°	1126.5	927.6	492.2	240.0	159.4	139.1	131.9	129.9	129.0	129.0	129.0
40°	1236.0	988.2	465.7	217.9	151.6	133.7	127.9	126.2	126.2	126.6	126.6
42.5°	1369.2	1064.1	442.8	203.0	147.0	129.9	124.9	124.1	123.7	123.7	124.1
45°	1524.0	1153.9	428.8	191.3	143.5	127.9	122.8	122.5	120.7	119.9	119.9
47.5°	1679.8	1249.7	428.0	184.6	139.5	125.3	120.7	120.7	117.5	115.9	116.3
50°	1824.9	1335.7	437.0	183.0	137.0	121.6	118.6	119.1	114.5	112.4	112.1
52.5°	1942.1	1401.2	448.3	185.0	137.0	118.3	114.9	117.0	112.1	109.6	109.2
55°	2032.5	1446.9	452.5	189.7	138.6	115.4	111.7	114.9	111.2	107.9	107.9
57.5°	2097.2	1461.5	434.6	191.7	141.2	114.9	108.2	114.5	112.4	108.2	108.2
60°	2073.6	1377.1	368.2	183.9	140.7	114.1	105.9	115.4	116.6	112.1	112.1
62.5°	1888.9	1152.2	295.5	166.1	133.7	111.2	102.9	114.5	119.5	117.9	117.0
65°	1537.9	845.0	229.1	144.9	121.6	105.0	96.7	107.1	112.9	114.5	114.9
67.5°	1083.8	535.1	178.1	123.3	106.6	95.9	89.7	94.6	96.7	97.6	99.2
70°	592.7	289.7	141.5	103.8	91.3	86.8	82.2	82.6	81.7	81.0	81.7
72°	297.6	189.2	119.5	90.0	81.0	78.0	75.9	74.8	74.8	73.4	73.9
72.5°	256.1	176.0	115.4	86.8	78.4	75.9	74.3	73.1	72.6	71.8	72.2
75°	170.6	139.5	96.2	72.6	66.8	65.1	66.0	64.8	65.1	64.4	64.8
77.5°	137.7	119.9	81.7	61.4	57.3	54.7	56.5	56.9	57.7	56.9	56.5
80°	115.4	102.1	68.5	50.6	47.7	45.7	46.4	49.3	49.8	47.3	46.9
82.5°	74.8	82.2	54.0	39.5	36.5	35.7	37.8	40.7	41.5	38.1	37.3
85°	62.8	66.0	39.0	27.0	24.0	23.3	27.5	30.3	32.3	29.1	28.2
87.5°	17.5	32.3	19.1	12.9	10.8	10.8	13.3	15.8	18.7	19.1	19.1
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)