

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: P270286

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7027-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270286  
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-SL4-7027-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 2700K, 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: 5554.2 lumens  
Efficiency: N/A  
Efficacy: 82.9 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

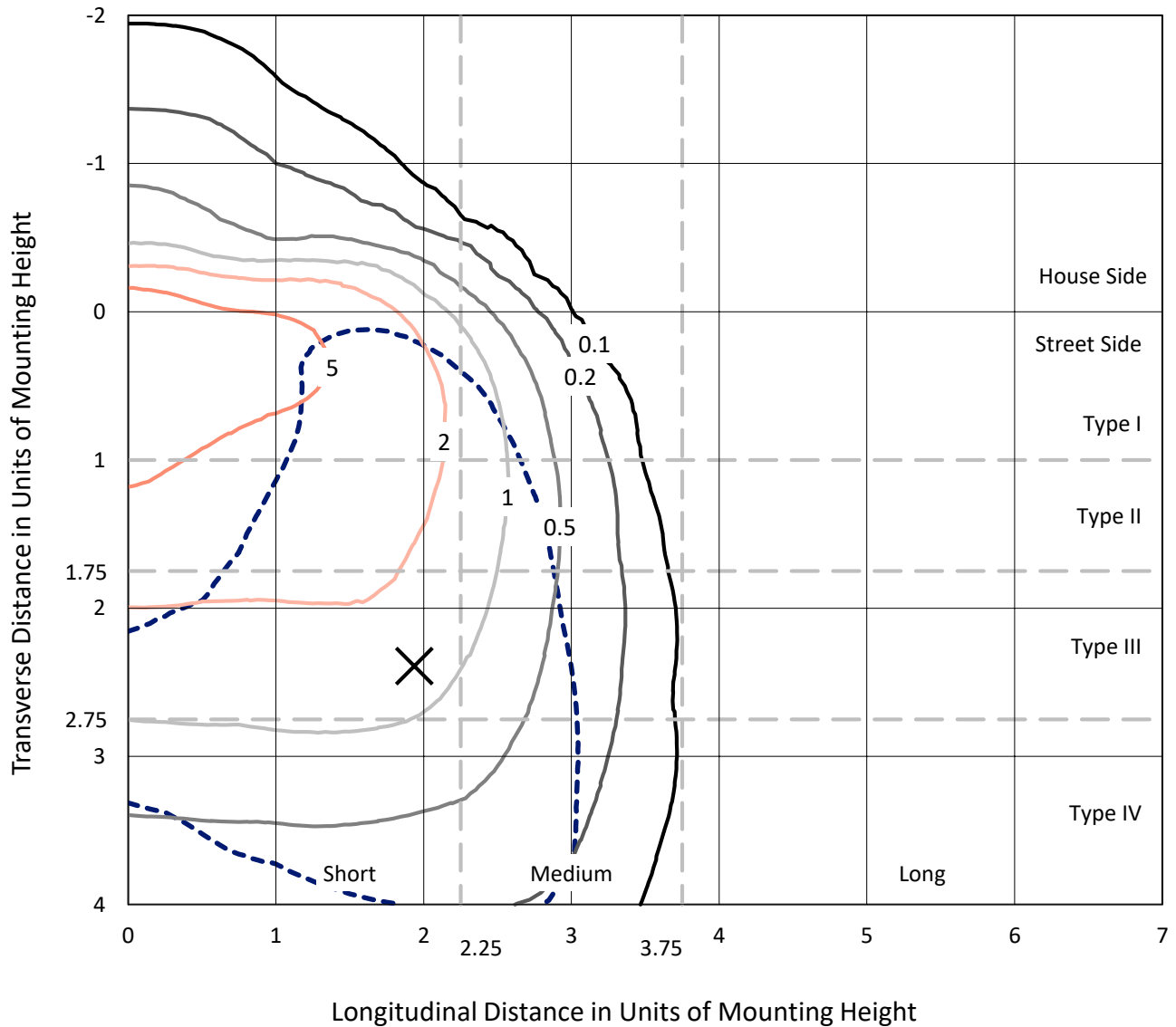
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

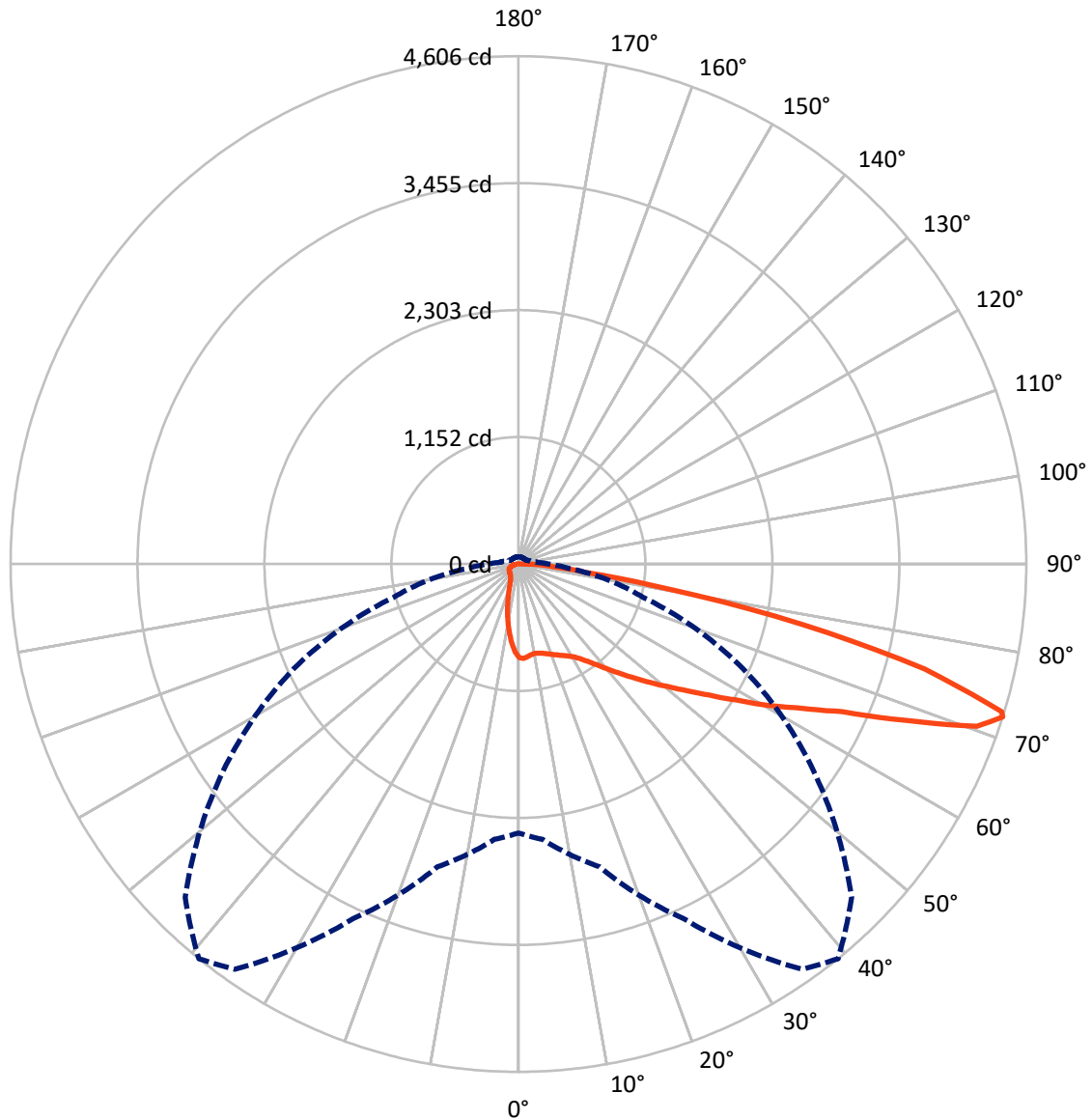
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.5 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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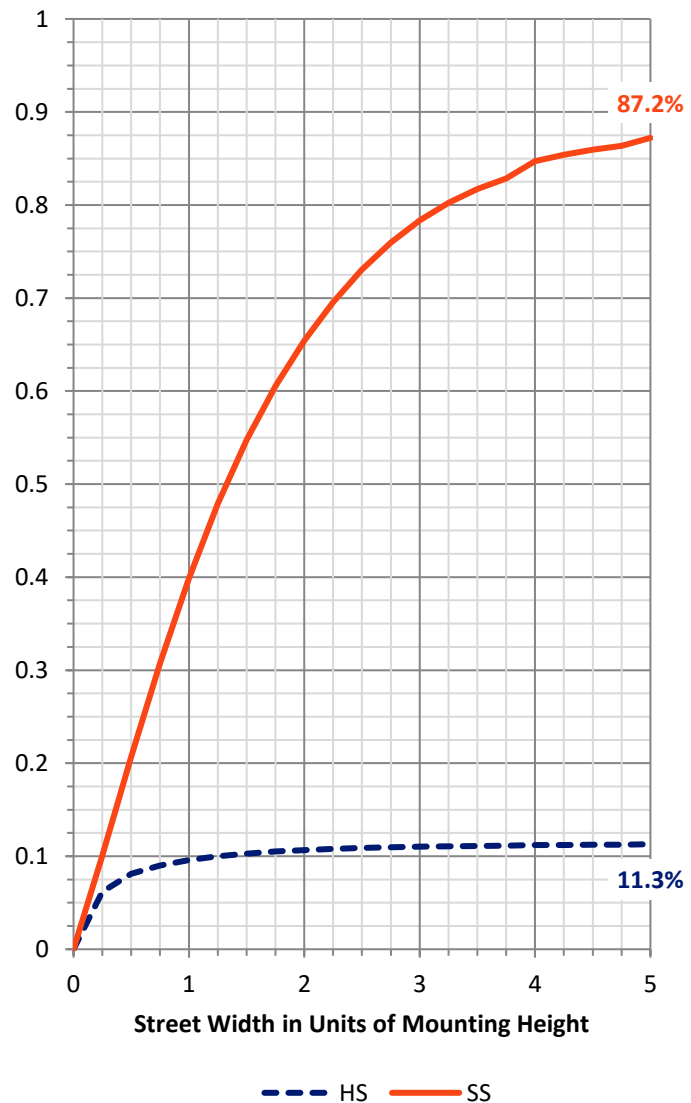
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	636.9	0.0	636.9
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	4917.3	0.0	4917.3
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	5554.2	0.0	5554.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.9	1.3
10°-20°	183.2	3.3
20°-30°	285.4	5.1
30°-40°	439.5	7.9
40°-50°	716.5	12.9
50°-60°	1113.3	20.0
60°-70°	1490.1	26.8
70°-80°	1071.6	19.3
80°-90°	181.7	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°	5554.2	100.0
0°-180°	5554.2	100.0

**Coefficient of Utilization**



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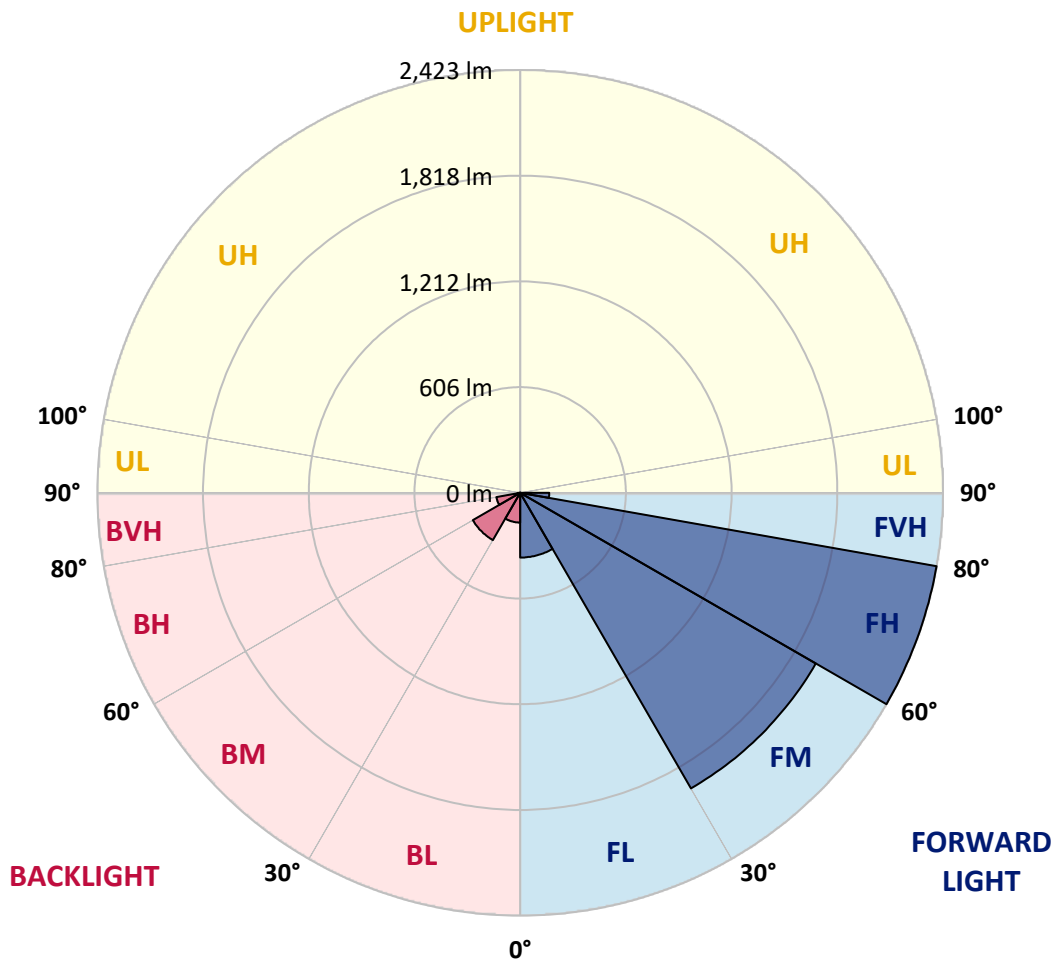
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	371.0	6.7			
FM	(30°-60°)	1956.3	35.2			
FH	(60°-80°)	2423.4	43.6			G2/5000
FVH	(80°-90°)	166.6	3.0			G2/225
BL	(0°-30°)	170.5	3.1	B1/500		
BM	(30°-60°)	313.0	5.6	B1/1000		
BH	(60°-80°)	138.4	2.5	B1/500		G1/500
BVH	(80°-90°)	15.0	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2
2.5°	866.4	866.9	865.7	862.5	859.4	857.9	855.2	850.9	844.9	840.8	837.4
5°	858.3	859.4	858.7	853.1	847.9	844.9	840.8	834.4	826.6	823.2	815.4
7.5°	852.0	852.8	850.4	844.1	834.0	830.4	822.8	814.7	807.5	802.7	793.5
10°	847.6	848.2	846.4	840.0	828.9	824.4	815.4	806.5	797.2	791.1	780.7
12.5°	841.2	842.6	842.6	839.6	832.2	829.2	820.2	810.6	801.9	795.7	782.7
15°	840.0	841.9	845.2	844.9	842.6	840.5	833.3	823.7	816.2	808.7	792.7
17.5°	849.3	853.4	860.1	862.5	860.8	856.1	847.9	838.8	830.8	823.7	803.9
20°	872.9	875.0	885.1	889.6	882.1	875.0	864.3	852.8	845.2	839.6	814.4
22.5°	908.2	911.2	919.4	919.9	904.1	895.6	881.7	867.7	860.5	858.3	828.4
25°	964.9	964.2	966.4	957.1	928.8	918.6	901.9	885.5	880.7	885.1	849.3
27.5°	1032.8	1031.0	1023.9	999.6	956.8	943.7	923.5	909.1	909.1	919.4	877.6
30°	1111.1	1109.1	1086.1	1045.4	989.9	975.0	953.7	938.5	946.3	966.4	916.1
32.5°	1193.8	1187.1	1154.7	1100.2	1037.3	1020.8	1000.4	984.7	999.6	1033.9	971.2
35°	1271.8	1268.0	1228.2	1163.7	1098.4	1084.7	1070.4	1051.0	1074.9	1128.2	1049.2
37.5°	1352.3	1349.3	1300.4	1231.8	1172.9	1163.7	1151.7	1138.3	1176.7	1246.8	1154.7
40°	1442.1	1436.2	1374.6	1306.0	1259.9	1255.4	1249.1	1245.3	1307.3	1411.5	1288.2
42.5°	1543.9	1532.4	1453.0	1387.7	1354.6	1358.2	1355.0	1369.8	1464.5	1601.8	1447.0
45°	1660.2	1637.3	1530.9	1474.6	1459.3	1474.3	1481.3	1519.4	1650.5	1821.4	1624.5
47.5°	1769.1	1739.3	1616.3	1568.9	1577.6	1603.2	1623.3	1690.5	1854.6	2038.3	1805.8
50°	1869.5	1835.9	1707.7	1666.6	1708.3	1744.9	1786.6	1881.4	2071.5	2261.8	1972.0
52.5°	1943.7	1919.4	1798.9	1773.3	1858.7	1907.1	1973.8	2093.5	2290.8	2474.7	2120.4
55°	2001.1	1987.9	1888.1	1895.6	2028.6	2098.0	2178.8	2316.5	2522.7	2665.5	2239.7
57.5°	2067.4	2057.7	1989.8	2043.3	2239.7	2326.9	2422.4	2575.3	2743.5	2833.7	2333.3
60°	2137.5	2137.5	2103.2	2221.1	2503.7	2603.6	2698.7	2817.7	2963.4	2985.0	2371.3
62.5°	2190.4	2204.4	2216.6	2410.4	2754.3	2878.3	2982.8	3096.8	3191.1	3059.5	2281.9
65°	2267.3	2296.7	2366.0	2629.2	3064.4	3227.0	3367.9	3463.8	3375.7	3000.2	1989.8
67.5°	2399.3	2442.9	2590.5	2955.2	3539.4	3782.9	3919.8	3754.1	3339.5	2627.1	1524.2
70°	2518.2	2579.8	2832.1	3368.6	4156.8	4409.7	4346.7	3686.7	2908.6	1925.7	937.7
72°	2439.2	2506.4	2843.3	3548.8	4486.9	4606.1	4274.0	3267.2	2247.5	1175.3	462.4
72.5°	2387.3	2457.0	2807.2	3544.4	4495.7	4581.1	4172.8	3100.6	2040.2	1028.3	374.0
75°	1994.3	2054.1	2413.8	3141.3	3961.9	3805.3	3256.4	2006.6	937.7	332.3	192.3
77.5°	1302.4	1347.8	1664.4	2176.4	2775.1	2624.5	1982.1	939.5	351.5	201.7	144.6
80°	654.3	686.8	890.7	1144.4	1497.7	1378.0	915.0	454.5	235.3	145.7	113.7
82.5°	455.3	485.1	613.4	584.3	625.9	605.8	430.3	379.2	176.0	92.0	59.6
85°	381.8	412.7	507.5	416.5	340.7	310.5	308.4	358.3	116.3	45.5	50.3
87.5°	332.9	380.0	418.7	304.3	233.7	206.3	227.0	328.5	36.9	25.1	15.4
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°	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2
2.5°	831.8	830.8	825.2	816.5	810.2	806.0	798.2	797.9	798.7	791.9	794.6
5°	808.4	803.9	789.3	769.6	753.5	738.2	721.5	715.9	711.0	700.9	702.0
7.5°	783.7	775.9	750.5	718.1	687.2	658.8	630.9	617.0	606.6	593.6	593.6
10°	769.2	756.9	718.1	670.8	621.5	580.1	538.4	513.4	495.1	478.3	477.2
12.5°	768.4	749.7	695.7	630.5	563.0	504.8	447.7	409.4	382.1	362.3	360.5
15°	774.3	748.3	677.1	592.8	507.8	432.2	361.7	312.8	278.1	256.1	254.0
17.5°	779.5	746.4	657.0	553.3	454.2	362.0	283.8	233.0	200.2	182.4	180.5
20°	784.5	742.3	631.1	511.6	394.9	296.4	221.8	180.7	159.2	149.2	148.0
22.5°	791.5	738.5	604.4	464.6	336.7	241.3	183.1	153.6	142.0	137.3	136.5
25°	803.2	738.9	578.2	416.5	283.3	201.0	158.5	140.1	133.8	130.6	130.6
27.5°	820.0	743.4	552.5	367.6	238.2	173.4	143.9	133.0	128.9	126.4	125.7
30°	844.4	751.6	525.4	321.5	202.5	154.4	135.4	128.6	125.3	123.1	122.7
32.5°	880.2	766.3	496.7	279.3	175.2	140.9	128.9	125.0	122.3	120.5	120.1
35°	933.6	791.9	468.6	243.5	155.9	131.2	123.7	120.5	118.9	118.1	117.8
37.5°	1011.9	833.3	442.1	215.6	143.2	125.0	118.5	116.7	115.9	115.9	115.9
40°	1110.3	887.7	418.3	195.7	136.2	120.1	114.9	113.4	113.4	113.7	113.7
42.5°	1230.0	955.9	397.8	182.4	132.1	116.7	112.2	111.5	111.1	111.1	111.5
45°	1369.0	1036.6	385.2	171.8	128.9	114.9	110.3	110.0	108.4	107.7	107.7
47.5°	1509.0	1122.6	384.5	165.8	125.3	112.6	108.4	108.4	105.6	104.1	104.5
50°	1639.3	1199.9	392.6	164.4	123.1	109.2	106.5	107.0	102.9	101.0	100.7
52.5°	1744.6	1258.7	402.7	166.2	123.1	106.3	103.2	105.1	100.7	98.5	98.1
55°	1825.8	1299.8	406.5	170.4	124.5	103.7	100.3	103.2	99.9	96.9	96.9
57.5°	1883.9	1312.9	390.4	172.2	126.8	103.2	97.2	102.9	101.0	97.2	97.2
60°	1862.7	1237.1	330.8	165.2	126.4	102.5	95.1	103.7	104.7	100.7	100.7
62.5°	1696.8	1035.0	265.4	149.2	120.1	99.9	92.4	102.9	107.3	105.9	105.1
65°	1381.5	759.1	205.8	130.2	109.2	94.3	86.9	96.2	101.4	102.9	103.2
67.5°	973.6	480.7	160.0	110.8	95.8	86.1	80.6	85.0	86.9	87.7	89.1
70°	532.4	260.2	127.1	93.2	82.0	78.0	73.8	74.2	73.4	72.8	73.4
72°	267.3	170.0	107.3	80.8	72.8	70.1	68.2	67.2	67.2	65.9	66.4
72.5°	230.1	158.1	103.7	78.0	70.4	68.2	66.7	65.7	65.2	64.5	64.9
75°	153.3	125.3	86.4	65.2	60.0	58.5	59.3	58.2	58.5	57.9	58.2
77.5°	123.7	107.7	73.4	55.2	51.5	49.1	50.8	51.1	51.8	51.1	50.8
80°	103.7	91.7	61.5	45.5	42.8	41.1	41.7	44.3	44.7	42.5	42.1
82.5°	67.2	73.8	48.5	35.5	32.8	32.1	34.0	36.6	37.3	34.2	33.5
85°	56.4	59.3	35.0	24.3	21.6	20.9	24.7	27.2	29.0	26.1	25.3
87.5°	15.7	29.0	17.2	11.6	9.7	9.7	11.9	14.2	16.8	17.2	17.2
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)