

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: P459870

Luminaire Tested: **NAV-SA5A-AMB-U-SL4-HSS**

Issue Date: 1/6/2021

Test Information

Test Method: LM-79-08
Report Number: P459870
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-9)
Test Lab: INNOVATION CENTER
Issue Date: 1/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA5A-AMB-U-SL4-HSS
Description: NAVION AREA AND ROADWAY LUMINAIRE
(5) NARROW BAND AMBER, 500mA LIGHTSQUARES 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: 4107 lumens
Efficiency: N/A
Efficacy: 40.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B0 - U0 - G2

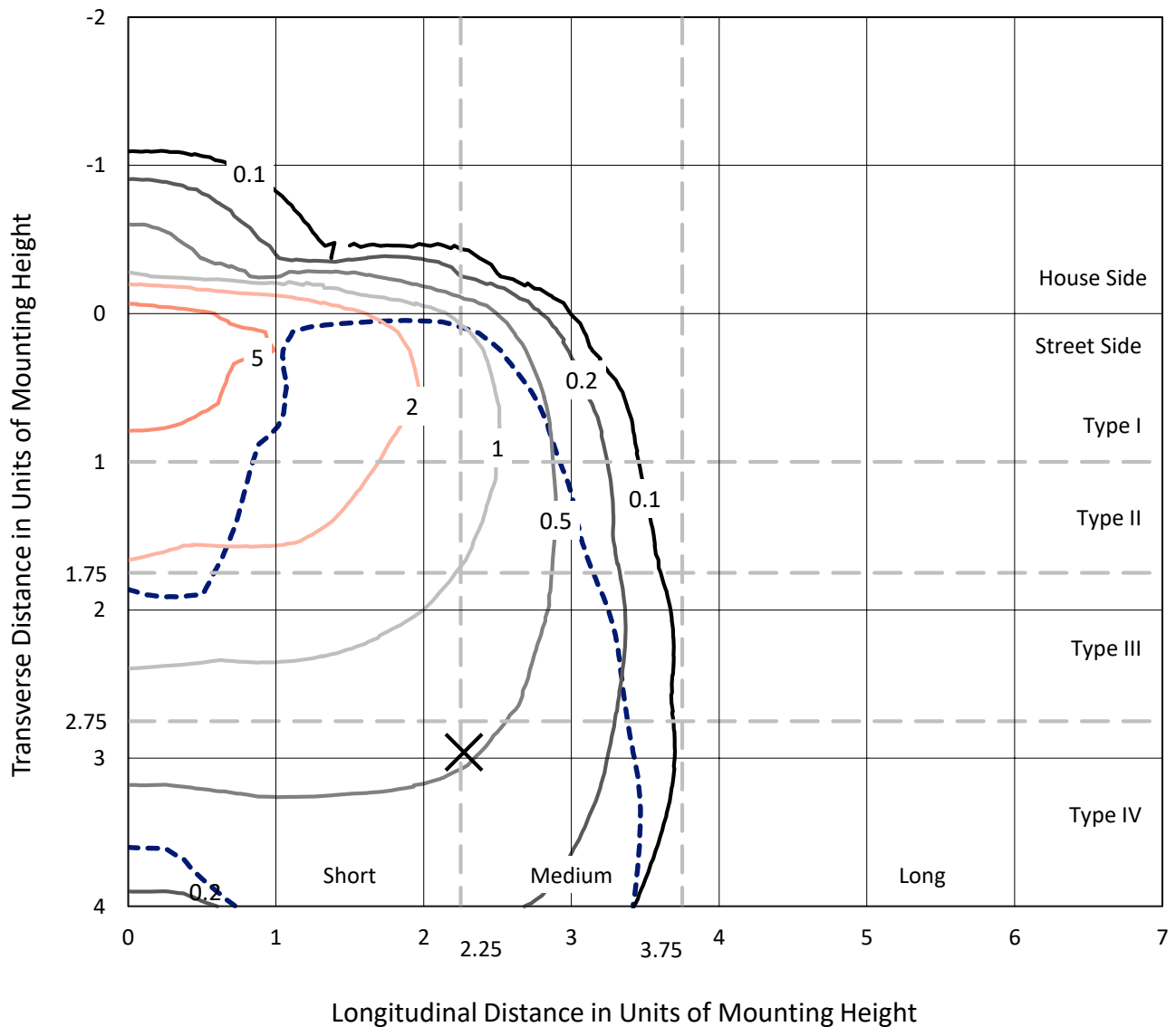
Input Watts (W): 101
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P459870
 CATALOG NUMBER: NAV-SA5A-AMB-U-SL4-HSS

Iso-Footcandle Lines of Horizontal Illumination

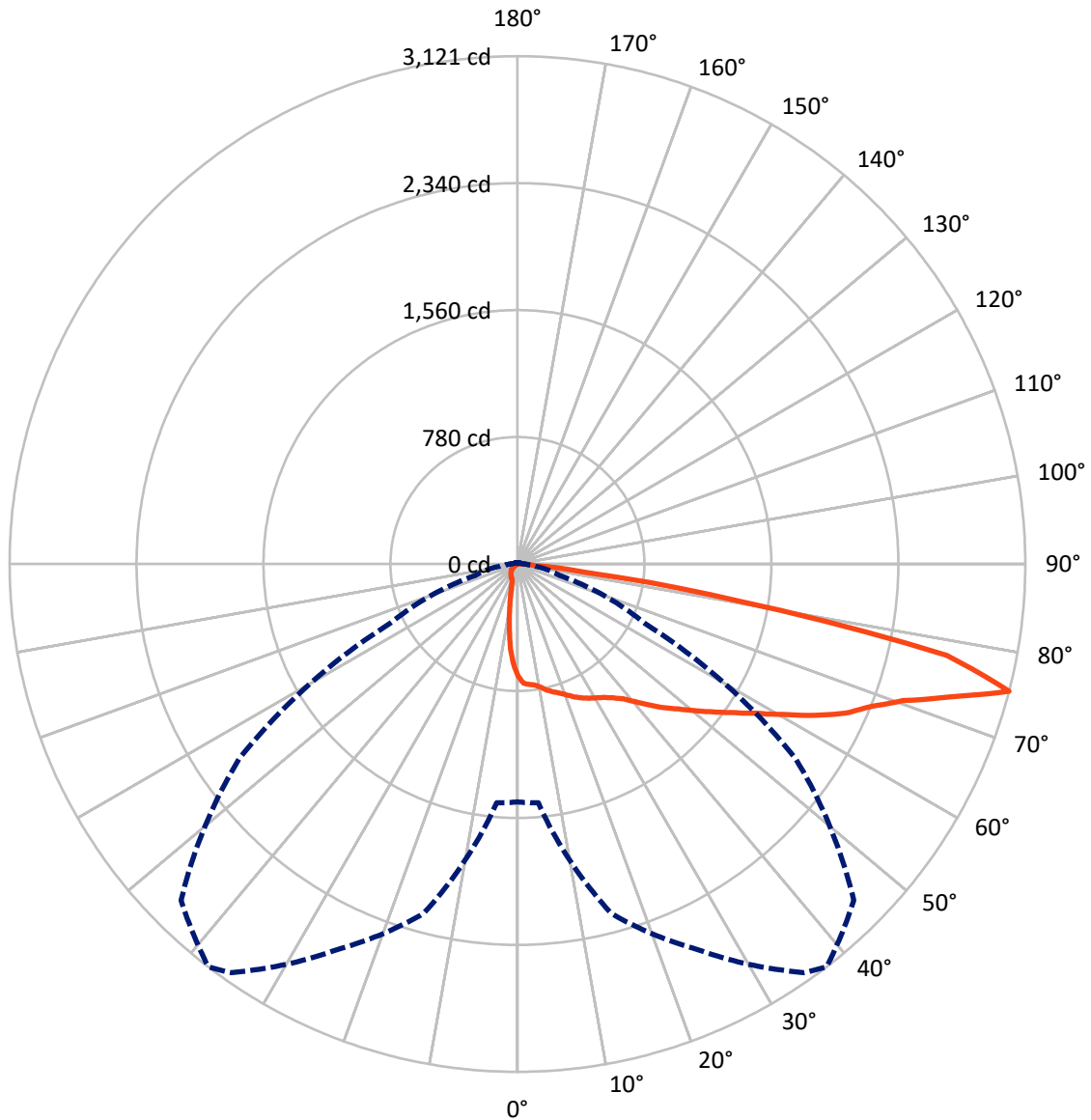
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.4 fc
 Type IV - Medium - Non-Cutoff

REPORT NUMBER: P459870
CATALOG NUMBER: NAV-SA5A-AMB-U-SL4-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 37.5-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical



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CATALOG NUMBER: NAV-SA5A-AMB-U-SL4-HSS

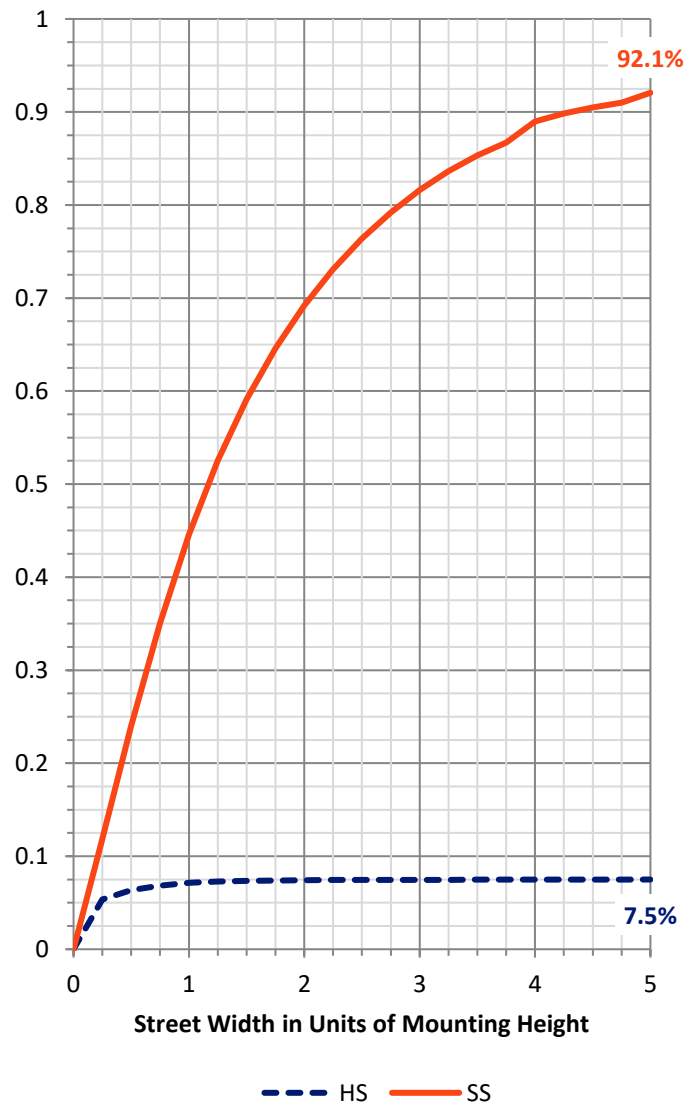
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	310.4	0.0	310.4
	% Fixture	7.6	0.0	7.6
Street Side	Lumens	3796.6	0.0	3796.6
	% Fixture	92.4	0.0	92.4
Total	Lumens	4107.0	0.0	4107.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.6	1.4
10°-20°	148.3	3.6
20°-30°	242.8	5.9
30°-40°	360.7	8.8
40°-50°	540.0	13.1
50°-60°	775.9	18.9
60°-70°	1039.9	25.3
70°-80°	842.3	20.5
80°-90°	98.5	2.4
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°	4107.0	100.0
0°-180°	4107.0	100.0

Coefficient of Utilization



REPORT NUMBER: P459870

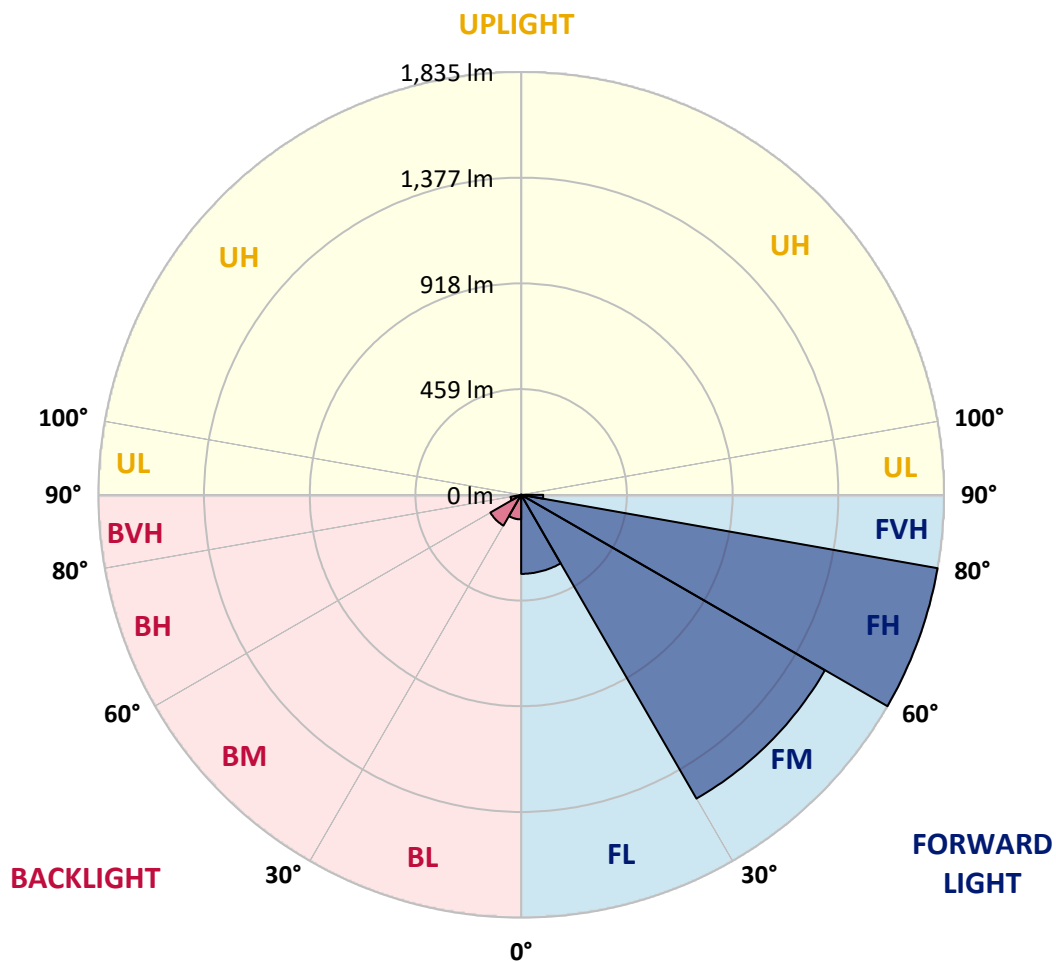
CATALOG NUMBER: NAV-SA5A-AMB-U-SL4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	343.0	8.4			
FM (30°-60°)	1522.5	37.1			
FH (60°-80°)	1835.4	44.7			G2/5000
FVH (80°-90°)	95.7	2.3			G1/100
BL (0°-30°)	106.6	2.6	B0/110		
BM (30°-60°)	154.1	3.8	B0/220		
BH (60°-80°)	46.9	1.1	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 Medium





REPORT NUMBER: P459870

CATALOG NUMBER: NAV-SA5A-AMB-U-SL4-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	45°	55°	65°	75°	85°
0°	690.6	690.6	690.6	690.6	690.6	690.6	690.6	690.6	690.6	690.6	690.6
2.5°	743.4	741.1	741.1	736.5	734.2	734.2	725.1	722.8	713.6	704.4	692.9
5°	745.7	745.7	743.4	745.7	743.4	743.4	738.8	736.5	727.3	709.0	688.3
7.5°	759.5	757.2	754.9	754.9	750.3	750.3	738.8	734.2	725.1	713.6	683.7
10°	759.5	759.5	764.1	768.6	768.6	768.6	757.2	743.4	729.6	718.2	683.7
12.5°	757.2	757.2	764.1	780.1	791.6	793.9	787.0	768.6	745.7	725.1	692.9
15°	754.9	757.2	766.4	789.3	809.9	814.5	812.2	798.5	768.6	738.8	704.4
17.5°	759.5	764.1	775.5	807.7	830.6	832.9	835.2	826.0	793.9	757.2	722.8
20°	766.4	768.6	793.9	832.9	855.8	858.1	855.8	842.1	814.5	780.1	743.4
22.5°	777.8	782.4	814.5	858.1	883.4	885.7	878.8	855.8	826.0	798.5	766.4
25°	800.8	805.4	844.4	888.0	906.3	910.9	904.0	876.5	837.5	819.1	791.6
27.5°	828.3	835.2	876.5	917.8	929.3	933.8	927.0	894.8	853.5	846.7	823.7
30°	869.6	874.2	913.2	947.6	952.2	954.5	949.9	913.2	876.5	876.5	855.8
32.5°	920.1	927.0	952.2	977.4	975.1	977.4	975.1	936.1	904.0	922.4	894.8
35°	979.7	972.9	1002.7	1014.2	1005.0	1009.6	1011.9	972.9	945.3	982.0	947.6
37.5°	1025.6	1025.6	1041.7	1053.2	1046.3	1050.9	1057.7	1021.0	1002.7	1066.9	1027.9
40°	1064.6	1064.6	1076.1	1099.0	1101.3	1110.5	1124.3	1080.7	1080.7	1165.6	1122.0
42.5°	1094.5	1099.0	1108.2	1138.1	1167.9	1183.9	1197.7	1154.1	1174.8	1291.8	1245.9
45°	1124.3	1128.9	1133.5	1177.1	1236.7	1259.7	1287.2	1245.9	1282.6	1424.9	1374.4
47.5°	1161.0	1161.0	1158.7	1227.5	1301.0	1330.8	1379.0	1344.6	1411.1	1587.8	1509.8
50°	1206.9	1202.3	1181.6	1280.3	1379.0	1415.7	1489.1	1454.7	1555.6	1757.6	1610.7
52.5°	1259.7	1248.2	1216.1	1335.4	1463.9	1509.8	1603.8	1580.9	1707.1	1892.9	1668.1
55°	1326.2	1307.8	1264.2	1401.9	1567.1	1613.0	1723.1	1736.9	1851.6	1970.9	1727.7
57.5°	1411.1	1376.7	1328.5	1484.5	1686.4	1730.0	1858.5	1888.3	1948.0	2046.7	1803.4
60°	1496.0	1459.3	1415.7	1596.9	1817.2	1876.9	2003.1	2014.5	2026.0	2152.2	1886.0
62.5°	1571.7	1551.1	1525.8	1723.1	1996.2	2049.0	2127.0	2110.9	2124.7	2276.1	1952.6
65°	1668.1	1647.4	1642.8	1867.7	2166.0	2211.9	2221.0	2227.9	2278.4	2397.7	1987.0
67.5°	1750.7	1743.8	1785.1	2039.8	2319.7	2338.1	2372.5	2411.5	2439.0	2452.8	1757.6
70°	1867.7	1856.2	1948.0	2211.9	2473.4	2512.4	2634.0	2673.0	2482.6	2009.9	1076.1
72.5°	1879.2	1899.8	2149.9	2390.8	2702.9	2787.8	2939.2	2730.4	1929.6	1078.4	335.0
75°	1461.6	1473.0	2221.0	2613.4	3065.4	3120.5	2923.1	2088.0	862.7	266.2	75.7
77.5°	814.5	858.1	1484.5	2425.2	2785.5	2698.3	1998.5	922.4	222.6	59.7	39.0
80°	596.6	617.2	715.9	1388.1	1576.3	1385.9	832.9	351.1	121.6	41.3	27.5
82.5°	176.7	190.4	369.4	447.4	557.6	442.8	250.1	268.5	78.0	29.8	22.9
85°	48.2	50.5	126.2	176.7	160.6	103.3	91.8	231.7	32.1	20.7	18.4
87.5°	22.9	22.9	39.0	78.0	66.5	55.1	75.7	135.4	6.9	6.9	4.6
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: P459870

CATALOG NUMBER: NAV-SA5A-AMB-U-SL4-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	690.6	690.6	690.6	690.6	690.6	690.6	690.6	690.6	690.6	690.6	690.6
2.5°	686.0	681.5	663.1	653.9	644.7	628.7	619.5	612.6	610.3	605.7	608.0
5°	674.6	658.5	628.7	603.4	573.6	541.5	523.1	502.5	481.8	477.2	475.0
7.5°	665.4	642.4	596.6	548.4	497.9	442.8	392.4	360.2	328.1	323.5	321.2
10°	660.8	628.7	562.1	491.0	408.4	332.7	277.6	240.9	218.0	206.5	201.9
12.5°	660.8	621.8	534.6	433.7	328.1	245.5	190.4	153.7	137.7	130.8	128.5
15°	665.4	617.2	502.5	367.1	257.0	174.4	133.1	114.7	107.8	105.5	107.8
17.5°	676.9	617.2	472.7	309.8	195.0	128.5	105.5	103.3	101.0	101.0	101.0
20°	692.9	621.8	440.5	259.3	144.6	105.5	98.7	98.7	98.7	98.7	98.7
22.5°	711.3	624.1	403.8	211.1	117.0	96.4	94.1	94.1	94.1	94.1	94.1
25°	729.6	628.7	364.8	165.2	96.4	91.8	89.5	91.8	91.8	91.8	91.8
27.5°	752.6	633.3	325.8	130.8	89.5	87.2	87.2	87.2	87.2	87.2	87.2
30°	773.2	633.3	289.1	107.8	84.9	82.6	82.6	82.6	82.6	82.6	82.6
32.5°	798.5	631.0	250.1	89.5	80.3	78.0	75.7	78.0	78.0	78.0	75.7
35°	835.2	631.0	206.5	82.6	75.7	73.4	71.1	71.1	71.1	71.1	71.1
37.5°	883.4	640.2	162.9	75.7	68.8	66.5	66.5	66.5	64.2	64.2	64.2
40°	954.5	656.2	130.8	71.1	64.2	62.0	59.7	59.7	57.4	55.1	55.1
42.5°	1039.4	674.6	107.8	66.5	59.7	57.4	55.1	52.8	50.5	48.2	48.2
45°	1124.3	688.3	84.9	62.0	55.1	52.8	50.5	48.2	43.6	41.3	39.0
47.5°	1213.8	688.3	68.8	57.4	52.8	48.2	45.9	41.3	36.7	32.1	32.1
50°	1266.5	663.1	62.0	52.8	48.2	43.6	41.3	34.4	29.8	25.2	25.2
52.5°	1296.4	628.7	57.4	48.2	45.9	41.3	34.4	29.8	22.9	18.4	18.4
55°	1321.6	612.6	52.8	45.9	41.3	36.7	29.8	22.9	16.1	13.8	13.8
57.5°	1353.7	587.4	48.2	41.3	36.7	32.1	25.2	18.4	11.5	9.2	9.2
60°	1381.3	553.0	43.6	39.0	34.4	27.5	20.7	13.8	6.9	4.6	4.6
62.5°	1395.0	500.2	39.0	34.4	29.8	22.9	16.1	9.2	4.6	2.3	2.3
65°	1356.0	419.9	36.7	29.8	25.2	18.4	11.5	4.6	2.3	0.0	0.0
67.5°	1108.2	270.7	29.8	25.2	20.7	13.8	9.2	4.6	2.3	0.0	0.0
70°	569.0	114.7	25.2	20.7	18.4	11.5	6.9	2.3	0.0	0.0	0.0
72.5°	149.1	41.3	20.7	18.4	16.1	11.5	4.6	2.3	0.0	0.0	0.0
75°	45.9	27.5	16.1	13.8	13.8	9.2	4.6	2.3	0.0	0.0	0.0
77.5°	32.1	20.7	13.8	11.5	11.5	9.2	4.6	2.3	0.0	0.0	0.0
80°	25.2	18.4	11.5	9.2	11.5	11.5	4.6	2.3	0.0	0.0	0.0
82.5°	20.7	16.1	9.2	9.2	11.5	11.5	6.9	2.3	0.0	0.0	0.0
85°	16.1	11.5	9.2	9.2	11.5	9.2	4.6	2.3	0.0	0.0	0.0
87.5°	4.6	4.6	2.3	2.3	2.3	4.6	4.6	2.3	0.0	0.0	0.0
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)