

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: P197113

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-8030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197113
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-SL4-8030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 615mA 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: 2676 lumens
Efficiency: N/A
Efficacy: 78.7 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 - G1

Input Watts (W): 34
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

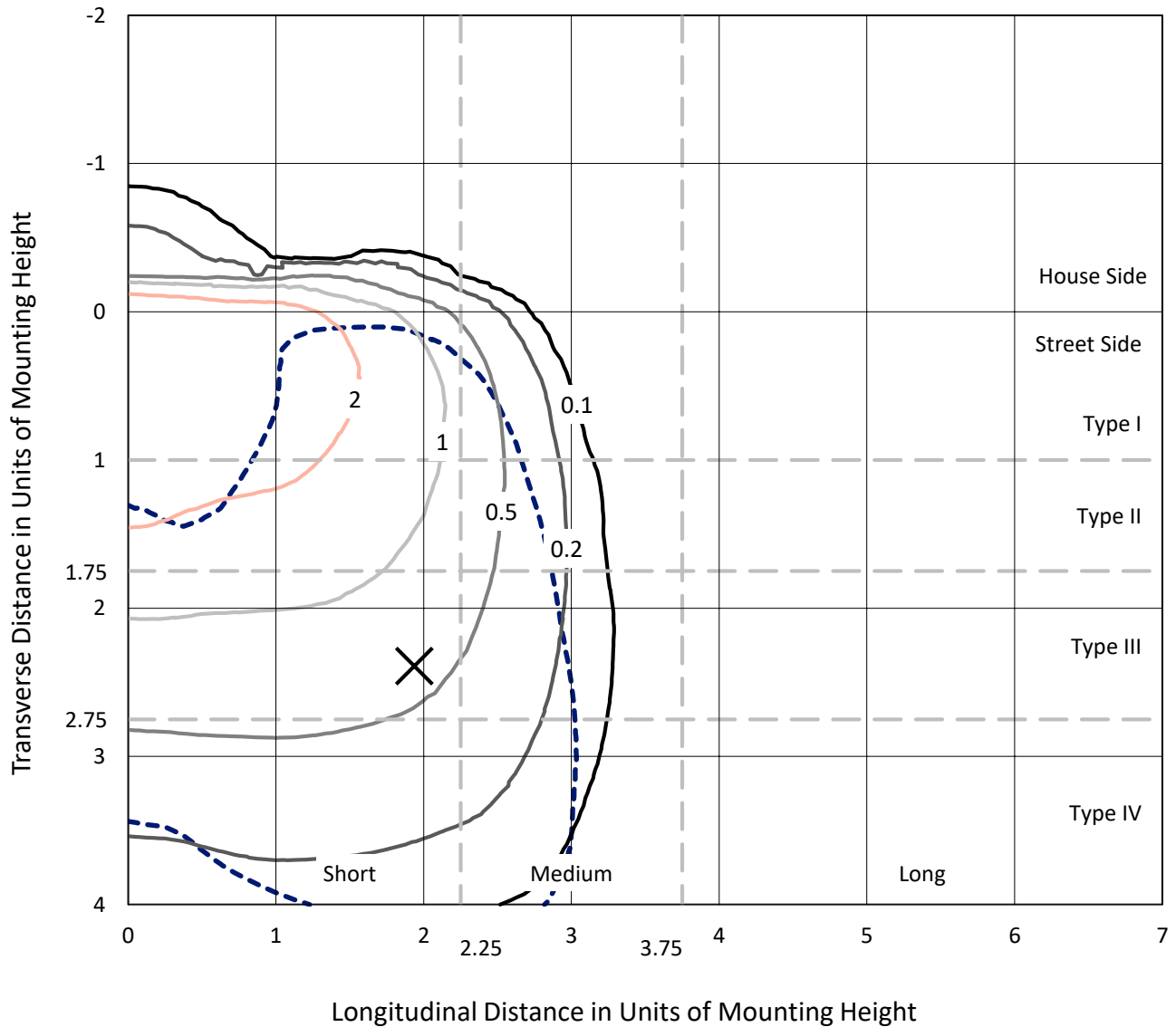


REPORT NUMBER: P197113

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-8030-600-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

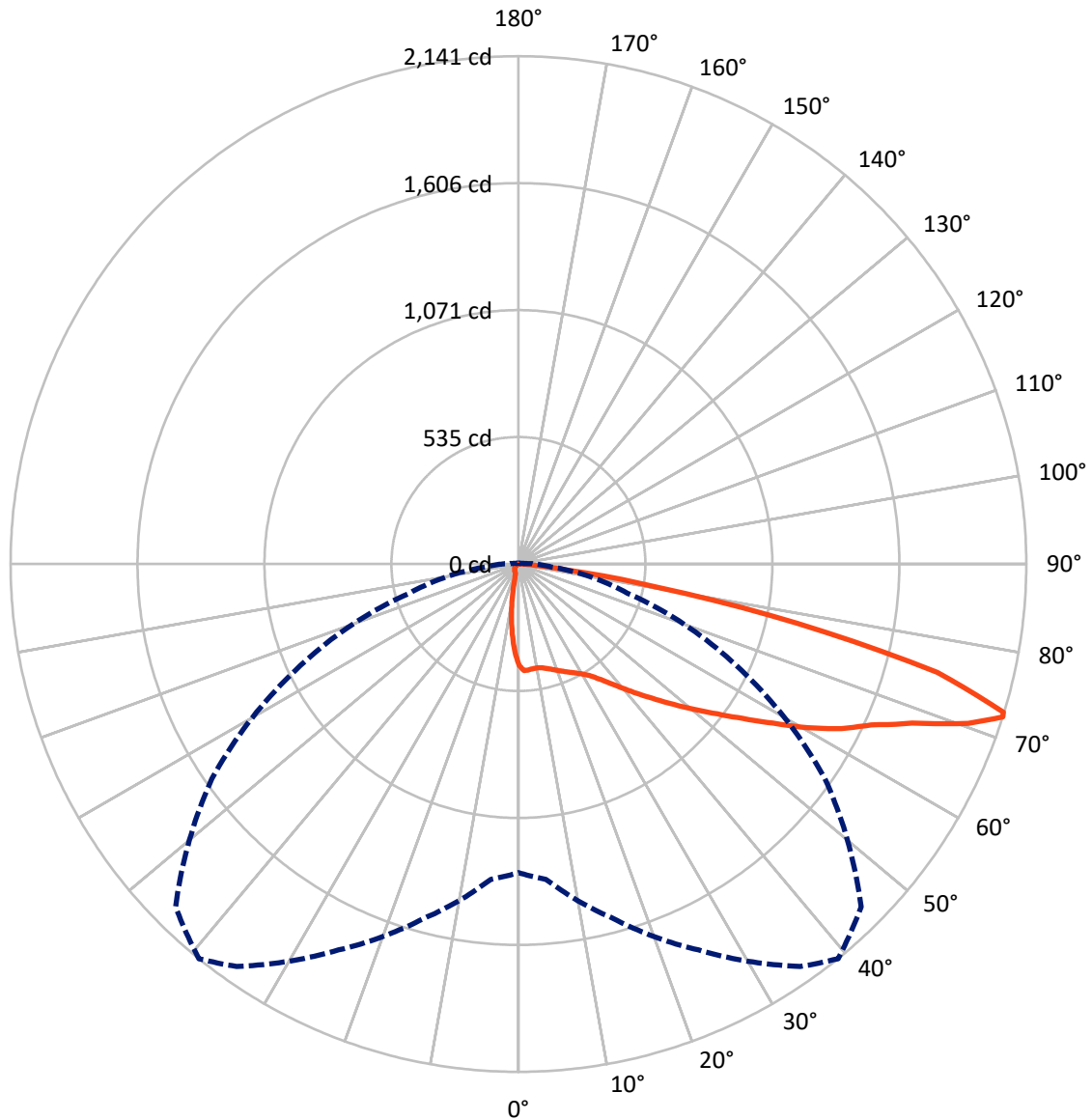


Based on 10 foot mounting height. Maximum calculated value = 4.5 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197113

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-8030-600-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197113

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-8030-600-HSS

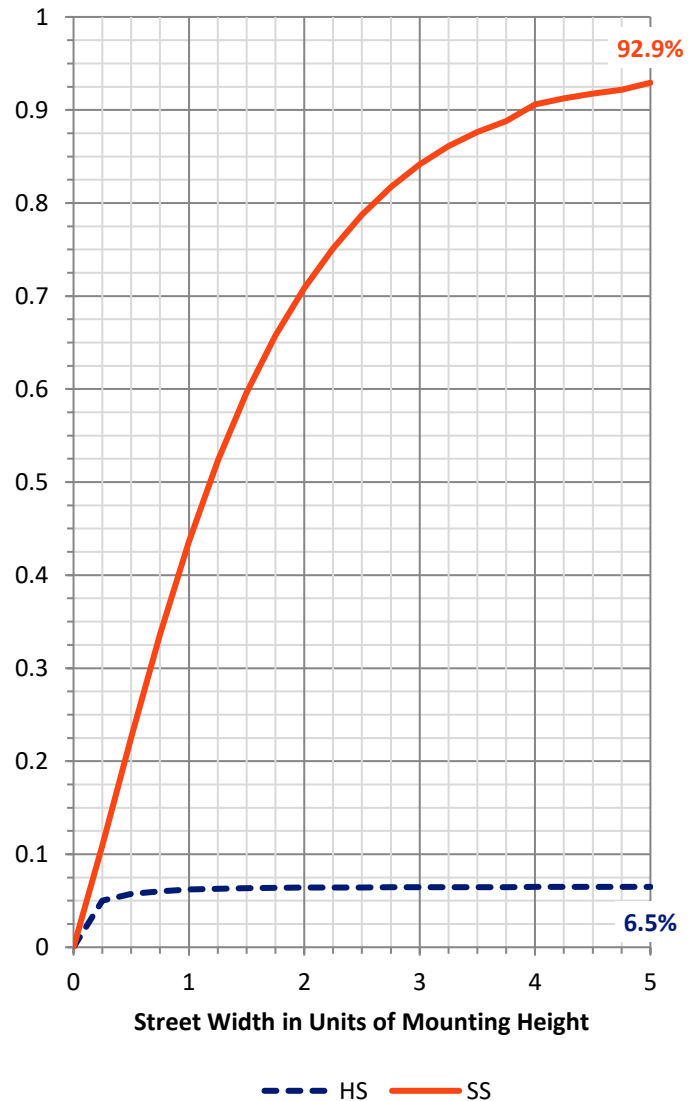
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	175.4	0.0	175.4
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	2500.6	0.0	2500.6
	% Fixture	93.4	0.0	93.4
Total	Lumens	2676.0	0.0	2676.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.8	1.3
10°-20°	84.3	3.2
20°-30°	140.1	5.2
30°-40°	223.3	8.3
40°-50°	368.5	13.8
50°-60°	556.5	20.8
60°-70°	725.0	27.1
70°-80°	489.9	18.3
80°-90°	53.6	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°	2676.0	100.0
0°-180°	2676.0	100.0



REPORT NUMBER: P197113

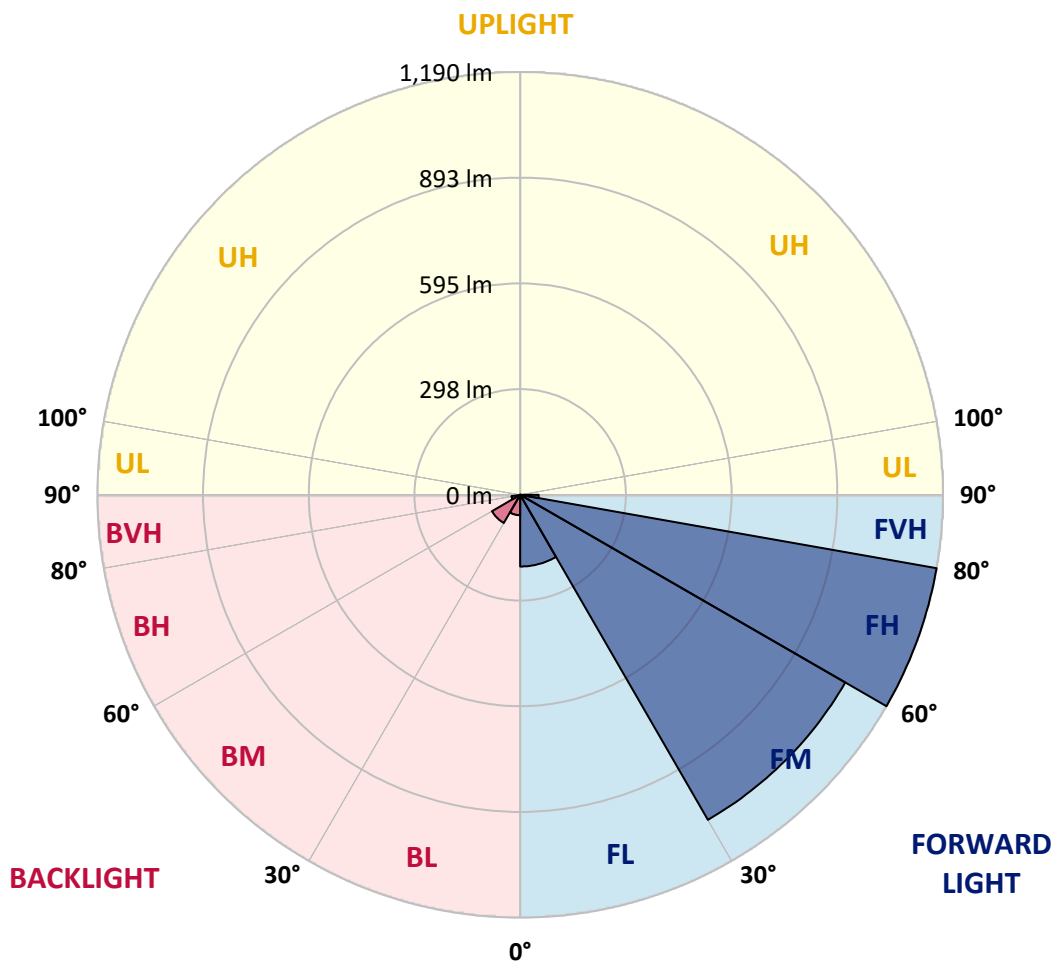
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	201.8	7.5			
FM	(30°-60°)	1056.5	39.5			
FH	(60°-80°)	1190.2	44.5			G1/1800
FVH	(80°-90°)	52.1	1.9			G1/100
BL	(0°-30°)	57.4	2.1	B0/110		
BM	(30°-60°)	91.8	3.4	B0/220		
BH	(60°-80°)	24.6	0.9	B0/110		G0/110
BVH	(80°-90°)	1.5	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-G1

Type IV Short





REPORT NUMBER: P197113

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-8030-600-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	428.3	428.3	428.3	428.3	428.3	428.3	428.3	428.3	428.3	428.3	428.3
2.5°	456.1	456.9	455.9	454.0	451.2	449.6	447.2	442.2	435.9	430.4	424.1
5°	459.7	460.1	458.8	455.2	451.0	448.7	445.8	440.3	433.8	426.2	414.8
7.5°	460.7	460.5	459.0	454.6	448.1	445.1	440.1	433.4	426.6	419.7	406.9
10°	460.3	460.3	459.2	455.0	447.7	444.9	439.3	432.1	423.7	416.7	403.1
12.5°	458.8	459.7	459.0	456.7	451.2	449.1	444.1	436.9	428.9	421.8	407.3
15°	460.7	462.0	463.2	462.4	459.2	457.3	452.7	445.4	438.8	431.3	415.7
17.5°	468.3	471.0	474.0	474.2	470.8	467.4	462.2	454.6	448.3	441.4	424.5
20°	482.6	484.7	490.2	491.2	484.5	479.6	472.3	463.4	457.1	451.2	432.7
22.5°	503.8	506.1	510.6	509.1	497.7	492.1	482.8	472.7	466.2	462.8	442.2
25°	536.0	536.7	537.7	531.2	512.5	506.1	494.8	483.4	478.2	477.7	455.7
27.5°	573.9	574.7	570.1	555.6	528.9	520.7	507.8	497.5	495.0	498.2	472.7
30°	617.2	617.4	604.6	581.0	547.8	538.8	525.5	514.1	516.5	524.2	494.6
32.5°	661.6	659.5	641.8	611.1	573.7	562.7	551.4	540.0	546.7	562.5	526.6
35°	702.2	701.4	680.5	644.8	607.3	597.7	589.5	577.5	588.4	614.1	570.1
37.5°	742.8	742.2	718.4	681.2	648.8	641.8	635.7	626.5	644.4	682.0	628.4
40°	787.6	786.6	757.3	721.6	697.0	693.2	689.6	685.6	716.1	768.5	700.9
42.5°	842.9	838.3	798.6	765.5	750.0	751.0	751.2	755.2	803.0	871.3	786.6
45°	906.5	896.2	840.0	812.7	808.2	814.5	820.9	837.5	904.2	989.8	881.2
47.5°	968.1	951.5	887.8	863.4	872.4	885.4	900.6	933.0	1017.8	1113.7	967.1
50°	1021.1	1004.1	935.1	914.9	943.7	963.1	990.0	1039.0	1137.7	1218.5	1021.1
52.5°	1062.8	1049.3	985.2	971.7	1022.8	1049.3	1091.6	1156.0	1250.9	1287.5	1059.0
55°	1093.5	1086.8	1033.1	1035.0	1110.7	1149.0	1201.6	1274.4	1346.4	1341.1	1087.4
57.5°	1128.2	1122.9	1083.4	1109.7	1216.6	1266.0	1326.8	1385.3	1415.8	1384.2	1115.2
60°	1163.8	1165.4	1144.4	1200.2	1347.4	1402.1	1455.1	1469.6	1475.3	1428.0	1144.4
62.5°	1190.7	1197.8	1199.7	1297.8	1481.6	1528.3	1551.3	1541.0	1539.7	1486.7	1142.1
65°	1221.6	1240.3	1271.5	1404.8	1603.6	1634.4	1650.8	1665.7	1634.1	1504.1	1029.8
67.5°	1275.0	1304.5	1374.6	1536.1	1744.6	1790.0	1836.5	1820.7	1648.2	1326.8	784.5
70°	1347.0	1383.0	1506.7	1707.6	1935.8	2012.0	2050.9	1808.3	1399.4	916.8	413.8
72°	1301.6	1334.2	1547.5	1795.1	2071.3	2141.1	2043.7	1577.3	1014.4	475.2	138.6
72.5°	1257.4	1291.0	1534.4	1794.0	2084.8	2138.2	1997.2	1486.3	897.6	369.8	95.5
75°	872.4	914.9	1315.4	1612.7	1882.6	1823.9	1528.1	900.0	325.2	63.5	31.6
77.5°	451.0	483.8	797.9	1139.6	1312.1	1201.6	903.1	390.4	90.0	33.7	20.8
80°	279.6	295.8	373.2	561.5	681.6	596.2	398.4	157.8	57.6	20.0	16.6
82.5°	144.7	157.1	235.0	226.6	251.8	209.3	147.0	132.1	35.6	12.4	17.0
85°	47.5	50.5	144.3	150.6	107.7	72.4	65.2	126.0	10.3	8.0	14.5
87.5°	6.3	7.4	50.7	86.3	53.0	32.8	39.1	44.4	3.6	4.4	4.0
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: P197113

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-8030-600-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	428.3	428.3	428.3	428.3	428.3	428.3	428.3	428.3	428.3	428.3	428.3
2.5°	419.9	417.2	408.5	399.9	390.0	381.0	373.8	369.2	371.3	364.4	365.4
5°	407.9	401.0	382.0	361.6	339.5	318.9	302.5	290.3	288.0	277.5	277.9
7.5°	396.3	385.0	354.3	320.6	284.0	254.3	227.4	203.8	195.4	186.8	181.8
10°	390.0	374.5	330.9	281.9	230.4	186.8	148.9	119.3	106.9	97.8	93.4
12.5°	391.9	371.3	313.4	246.8	179.0	123.7	84.1	62.5	54.9	50.7	49.2
15°	398.2	371.9	297.7	212.5	130.2	74.9	49.4	42.3	41.7	41.4	41.2
17.5°	404.1	372.6	281.1	176.7	87.1	47.8	39.8	39.1	39.1	39.1	39.1
20°	410.2	372.8	262.8	139.3	57.2	39.1	37.4	37.0	37.4	37.4	37.4
22.5°	417.4	374.2	245.1	102.9	42.3	36.8	35.8	35.6	35.8	35.8	35.6
25°	426.2	377.4	225.9	73.6	38.3	35.3	34.3	34.1	34.3	34.1	34.1
27.5°	438.0	381.6	203.6	52.8	36.6	33.9	32.8	32.8	32.8	32.6	32.6
30°	453.1	386.7	173.8	41.7	34.9	32.4	31.6	31.6	31.3	31.1	31.1
32.5°	474.8	394.9	141.2	37.7	33.0	30.5	29.7	29.9	29.7	29.5	29.2
35°	505.5	407.7	109.0	35.6	31.1	28.6	27.8	27.8	27.8	27.3	27.3
37.5°	549.1	427.3	81.6	33.4	29.2	26.7	25.7	25.7	25.5	25.0	25.2
40°	602.9	451.9	59.1	31.6	27.3	24.6	23.8	23.4	22.9	22.5	22.5
42.5°	667.7	475.9	44.4	29.7	25.5	22.9	21.9	21.5	20.6	20.2	20.0
45°	740.3	501.3	36.8	27.3	23.4	21.0	20.2	19.4	18.3	17.7	17.5
47.5°	801.5	516.9	32.8	25.0	21.2	19.1	18.3	17.0	15.8	15.4	15.4
50°	838.3	510.4	29.5	22.7	19.1	17.3	16.2	14.5	13.7	13.3	13.0
52.5°	858.9	491.0	26.7	20.8	17.3	15.1	13.7	12.2	11.8	11.4	11.4
55°	873.0	463.0	23.8	18.9	15.6	13.3	11.6	10.5	10.1	9.9	9.7
57.5°	886.5	428.9	21.0	17.3	13.9	11.8	9.9	9.5	8.6	8.4	8.4
60°	890.5	382.0	18.5	15.4	12.4	10.3	8.6	8.0	7.2	6.9	6.9
62.5°	839.6	304.0	16.4	13.0	10.9	8.8	7.6	6.7	5.9	5.9	5.9
65°	701.6	206.4	14.1	11.4	9.7	7.6	6.5	5.5	5.0	5.0	5.0
67.5°	488.7	115.1	12.0	9.7	8.2	6.3	5.5	4.6	4.4	4.6	4.6
70°	220.3	45.7	10.1	8.0	6.7	5.3	4.6	4.0	4.4	4.4	4.4
72°	66.1	24.4	8.4	6.5	5.5	4.6	4.0	3.8	4.2	4.4	4.4
72.5°	49.0	21.9	8.0	6.3	5.5	4.4	3.8	3.8	4.2	4.4	4.4
75°	25.2	14.9	6.1	4.6	4.0	3.6	3.2	3.6	4.2	4.2	4.2
77.5°	19.8	12.2	5.0	3.6	3.4	3.2	2.9	3.4	3.8	3.8	3.8
80°	18.5	8.0	4.0	3.4	2.9	2.7	2.7	2.9	3.4	3.6	3.6
82.5°	18.7	6.5	3.6	3.2	2.7	2.5	2.5	2.7	3.2	3.4	3.4
85°	12.0	4.4	3.2	2.7	2.5	2.3	2.3	2.5	2.9	3.2	3.2
87.5°	4.0	3.4	2.7	2.5	2.1	2.1	2.1	2.1	2.5	2.7	2.9
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)