

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: P270284

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270284
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-SL4-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 800mA 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: 4090.8 lumens
Efficiency: N/A
Efficacy: 93.0 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): 44
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

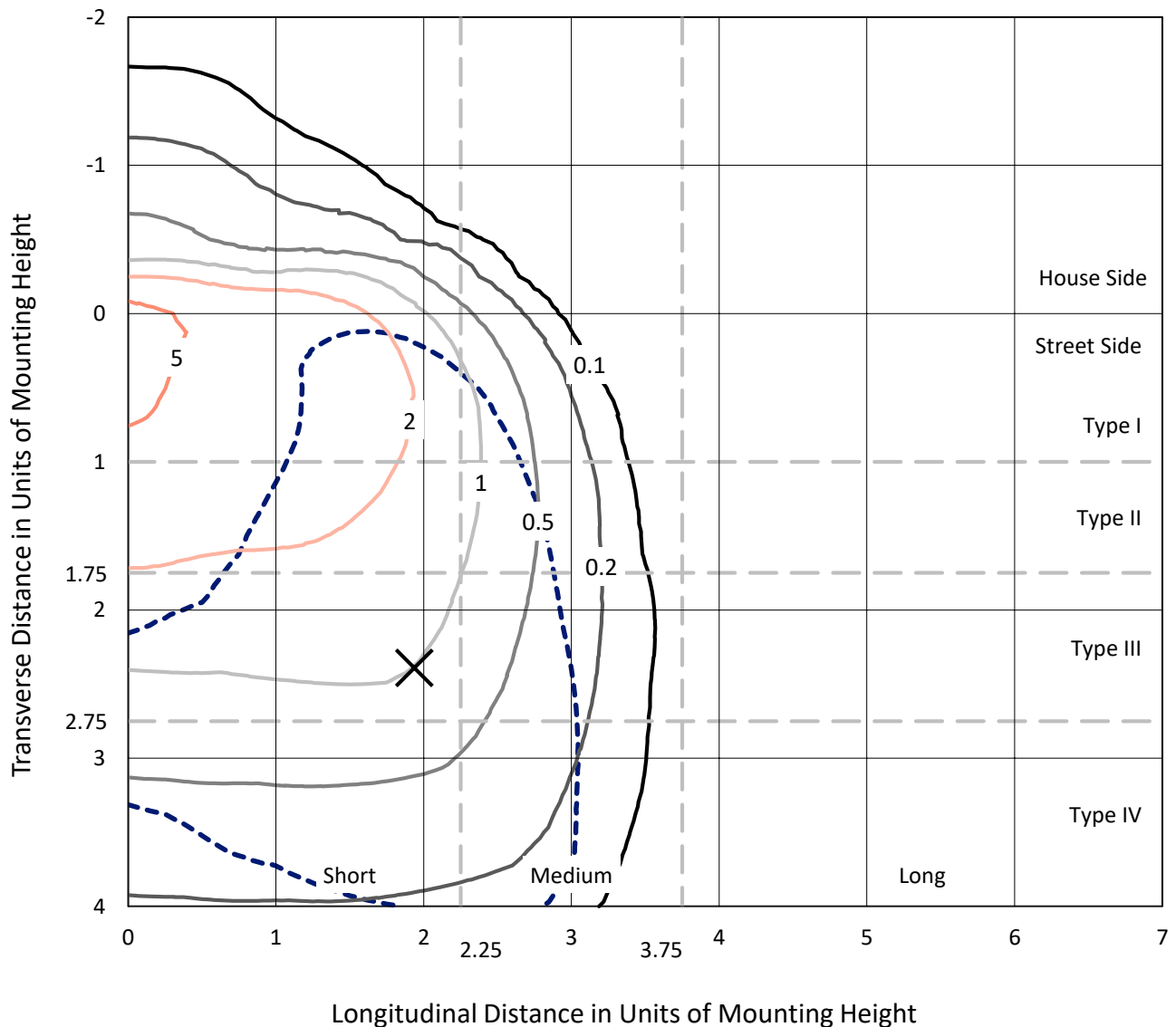


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

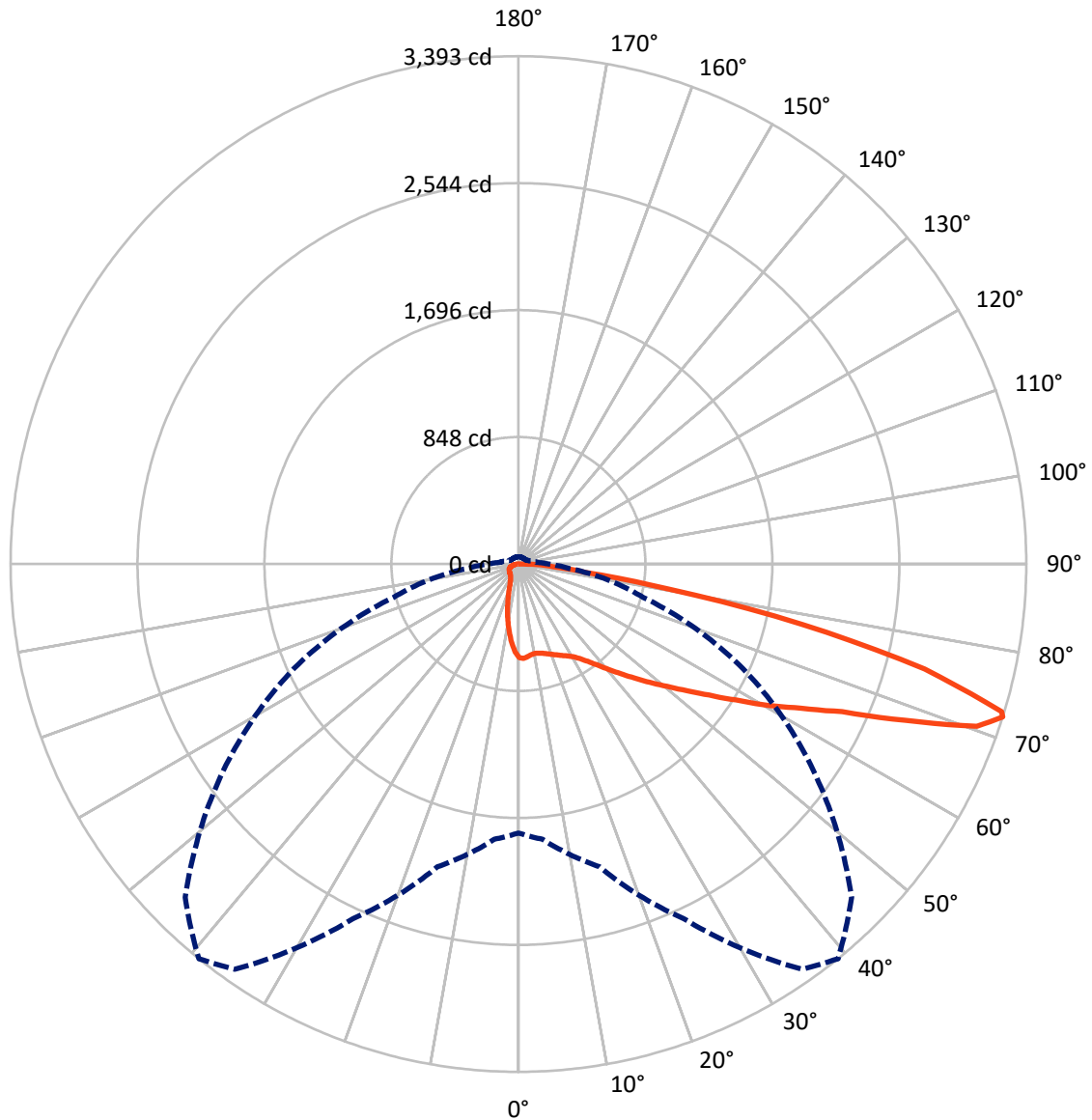


Based on 10 foot mounting height. Maximum calculated value = 6.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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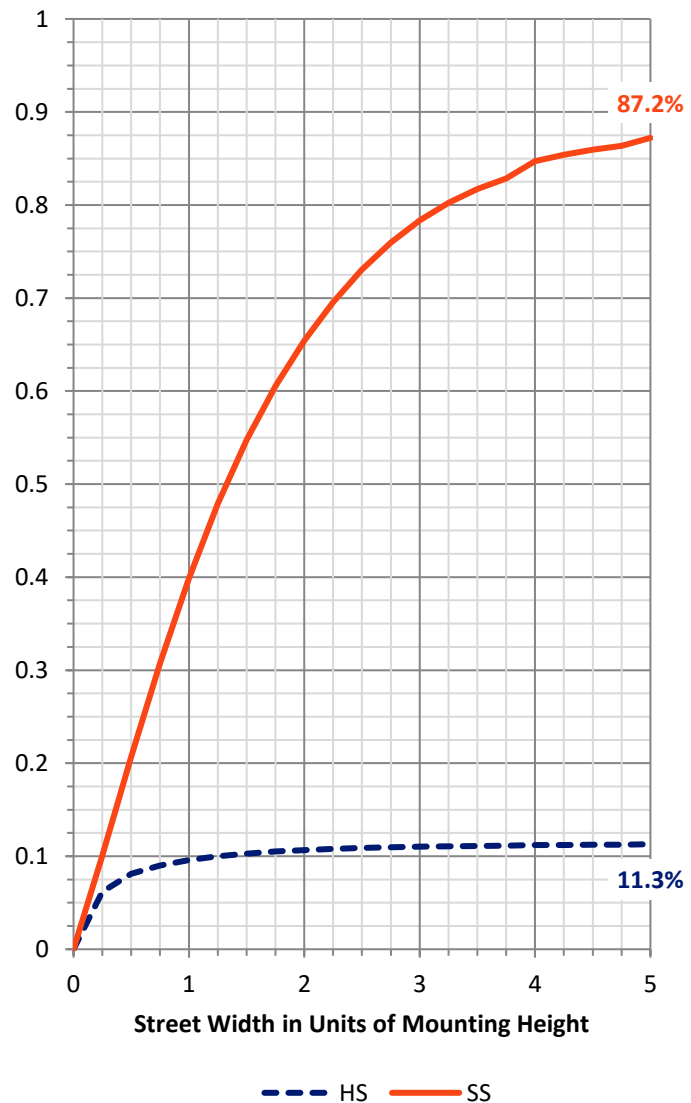
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	469.1	0.0	469.1
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	3621.7	0.0	3621.7
	% Fixture	88.5	0.0	88.5
Total	Lumens	4090.8	0.0	4090.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.7	1.3
10°-20°	134.9	3.3
20°-30°	210.2	5.1
30°-40°	323.7	7.9
40°-50°	527.7	12.9
50°-60°	820.0	20.0
60°-70°	1097.5	26.8
70°-80°	789.3	19.3
80°-90°	133.8	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°	4090.8	100.0
0°-180°	4090.8	100.0



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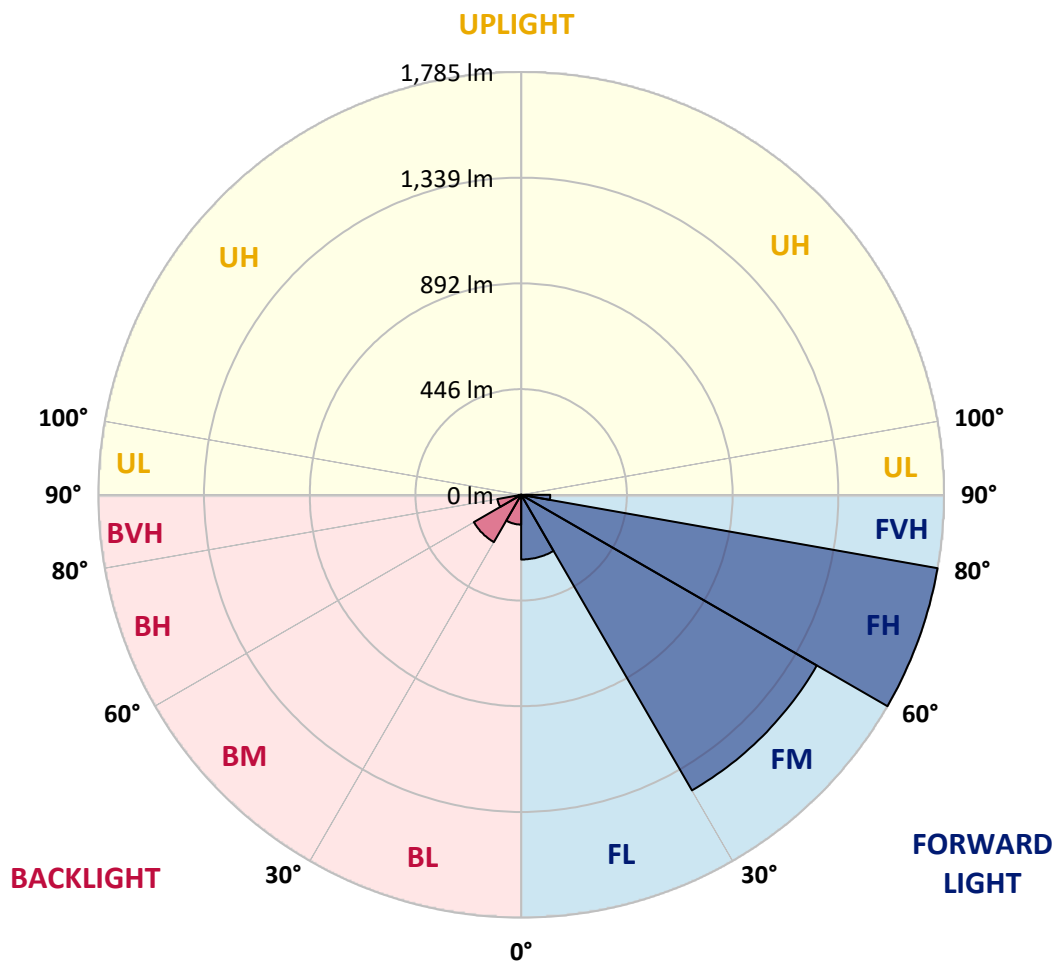
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	273.3	6.7			
FM	(30°-60°)	1440.9	35.2			
FH	(60°-80°)	1784.9	43.6			G1/1800
FVH	(80°-90°)	122.7	3.0			G2/225
BL	(0°-30°)	125.6	3.1	B1/500		
BM	(30°-60°)	230.5	5.6	B1/1000		
BH	(60°-80°)	101.9	2.5	B0/110		G0/110
BVH	(80°-90°)	11.1	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°	624.7	624.7	624.7	624.7	624.7	624.7	624.7	624.7	624.7	624.7	624.7
2.5°	638.2	638.4	637.6	635.2	632.9	631.9	629.9	626.7	622.3	619.2	616.7
5°	632.1	632.9	632.4	628.4	624.4	622.3	619.2	614.6	608.8	606.4	600.5
7.5°	627.5	628.0	626.4	621.7	614.4	611.6	606.0	600.0	594.8	591.3	584.3
10°	624.2	624.7	623.3	618.8	610.5	607.2	600.5	594.0	587.1	582.7	575.0
12.5°	619.6	620.5	620.5	618.5	613.0	610.8	604.1	597.1	590.6	586.1	576.4
15°	618.8	620.1	622.5	622.3	620.5	619.0	613.7	606.6	601.1	595.7	583.8
17.5°	625.6	628.5	633.6	635.2	634.1	630.5	624.4	617.9	611.8	606.6	592.1
20°	642.8	644.5	651.9	655.3	649.7	644.5	636.5	628.0	622.5	618.5	599.8
22.5°	669.0	671.2	677.2	677.4	666.0	659.6	649.5	639.1	633.8	632.1	610.2
25°	710.6	710.1	711.7	704.9	684.1	676.7	664.2	652.2	648.7	651.9	625.6
27.5°	760.7	759.2	754.0	736.3	704.6	695.1	680.1	669.4	669.4	677.2	646.4
30°	818.4	817.0	799.9	769.9	729.1	718.1	702.5	691.2	696.9	711.7	674.7
32.5°	879.4	874.4	850.4	810.5	764.0	751.9	736.8	725.2	736.3	761.6	715.4
35°	936.8	934.0	904.6	857.1	809.1	798.9	788.4	774.1	791.6	831.0	772.7
37.5°	996.0	993.9	957.9	907.3	863.9	857.1	848.3	838.4	866.7	918.2	850.4
40°	1062.2	1057.8	1012.5	961.9	927.9	924.6	920.0	917.2	962.9	1039.7	948.8
42.5°	1137.2	1128.6	1070.2	1022.1	997.7	1000.4	997.9	1008.9	1078.7	1179.7	1065.7
45°	1222.9	1205.9	1127.6	1086.1	1074.8	1085.8	1091.0	1119.1	1215.6	1341.4	1196.5
47.5°	1303.0	1281.1	1190.4	1155.6	1161.9	1180.8	1195.6	1245.1	1366.0	1501.2	1329.9
50°	1376.9	1352.2	1257.7	1227.5	1258.3	1285.1	1315.9	1385.6	1525.7	1665.7	1452.4
52.5°	1431.5	1413.8	1325.0	1306.0	1368.9	1404.6	1453.7	1541.9	1687.1	1822.7	1561.8
55°	1473.8	1464.2	1390.7	1396.1	1494.2	1545.3	1604.8	1706.2	1858.1	1963.2	1649.6
57.5°	1522.7	1515.6	1465.7	1504.9	1649.6	1713.8	1784.2	1896.7	2020.6	2087.0	1718.5
60°	1574.4	1574.4	1549.0	1635.9	1844.0	1917.6	1987.6	2075.3	2182.6	2198.5	1746.6
62.5°	1613.4	1623.4	1632.6	1775.4	2028.6	2120.0	2196.8	2280.9	2350.3	2253.5	1680.5
65°	1669.9	1691.6	1742.7	1936.6	2257.0	2376.7	2480.6	2551.1	2486.2	2209.8	1465.7
67.5°	1767.1	1799.2	1908.0	2176.6	2606.9	2786.3	2887.1	2765.1	2459.6	1934.9	1122.6
70°	1854.7	1900.1	2086.0	2481.1	3061.7	3247.8	3201.4	2715.3	2142.3	1418.3	690.6
72°	1796.5	1845.9	2094.2	2613.8	3304.7	3392.5	3147.9	2406.4	1655.3	865.5	340.5
72.5°	1758.3	1809.6	2067.5	2610.5	3311.2	3374.2	3073.5	2283.8	1502.7	757.5	275.4
75°	1468.9	1512.8	1777.8	2313.7	2918.1	2802.7	2398.5	1477.9	690.6	244.7	141.8
77.5°	959.2	992.7	1225.8	1602.9	2044.0	1933.1	1459.8	692.1	258.9	148.6	106.5
80°	481.9	505.8	656.0	842.8	1103.1	1014.9	673.9	334.8	173.3	107.3	83.7
82.5°	335.2	357.3	451.8	430.3	461.1	446.3	316.9	279.3	129.6	67.8	43.9
85°	281.2	303.9	373.8	306.7	250.9	228.8	227.1	263.9	85.7	33.4	37.1
87.5°	245.2	279.8	308.4	224.0	172.1	151.9	167.3	242.0	27.2	18.3	11.3
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°	624.7	624.7	624.7	624.7	624.7	624.7	624.7	624.7	624.7	624.7	624.7
2.5°	612.6	611.8	607.8	601.3	596.7	593.7	587.9	587.8	588.2	583.3	585.2
5°	595.3	592.1	581.4	566.8	555.1	543.7	531.3	527.2	523.7	516.3	517.1
7.5°	577.3	571.4	552.7	528.9	506.1	485.3	464.7	454.5	446.7	437.1	437.1
10°	566.6	557.5	528.9	494.0	457.7	427.4	396.5	378.1	364.7	352.3	351.4
12.5°	566.0	552.3	512.5	464.3	414.7	371.8	329.8	301.6	281.4	266.9	265.5
15°	570.3	551.1	498.6	436.7	374.1	318.3	266.3	230.3	204.9	188.6	186.9
17.5°	574.1	549.8	483.8	407.6	334.4	266.6	208.9	171.7	147.4	134.2	132.9
20°	577.8	546.8	465.0	376.7	290.8	218.3	163.4	133.2	117.3	109.9	109.1
22.5°	583.0	544.1	445.1	342.2	248.0	177.7	134.8	113.1	104.7	101.1	100.5
25°	591.5	544.3	425.9	306.7	208.6	148.0	116.7	103.2	98.5	96.1	96.1
27.5°	603.9	547.5	407.0	270.7	175.4	127.6	106.0	98.1	95.0	93.1	92.5
30°	621.9	553.6	386.9	236.8	149.1	113.6	99.7	94.7	92.3	90.5	90.4
32.5°	648.3	564.3	365.8	205.7	129.0	103.8	95.0	91.9	90.1	88.8	88.5
35°	687.7	583.3	345.2	179.3	114.9	96.7	91.2	88.8	87.7	87.0	86.7
37.5°	745.4	613.7	325.6	158.7	105.5	91.9	87.3	86.0	85.3	85.3	85.3
40°	817.7	653.8	308.1	144.2	100.3	88.5	84.6	83.5	83.5	83.7	83.7
42.5°	905.9	704.1	292.9	134.2	97.1	86.0	82.6	82.1	81.8	81.8	82.1
45°	1008.3	763.4	283.7	126.7	95.0	84.6	81.2	80.9	79.9	79.4	79.4
47.5°	1111.4	826.9	283.1	122.2	92.3	83.0	79.9	79.9	77.8	76.6	76.8
50°	1207.4	883.8	289.2	121.1	90.5	80.5	78.5	78.8	75.7	74.4	74.1
52.5°	1284.9	927.1	296.6	122.4	90.5	78.2	76.0	77.4	74.1	72.6	72.3
55°	1344.8	957.4	299.3	125.6	91.7	76.4	73.9	76.0	73.7	71.3	71.3
57.5°	1387.6	966.9	287.5	126.9	93.3	76.0	71.7	75.7	74.4	71.7	71.7
60°	1371.9	911.2	243.6	121.6	93.1	75.5	70.0	76.4	77.2	74.1	74.1
62.5°	1249.7	762.3	195.6	109.9	88.5	73.7	68.1	75.7	79.1	78.1	77.4
65°	1017.4	559.1	151.5	95.8	80.5	69.4	64.0	70.8	74.6	75.7	76.0
67.5°	716.9	354.0	117.8	81.6	70.5	63.4	59.3	62.6	64.0	64.6	65.7
70°	392.1	191.7	93.7	68.6	60.5	57.4	54.3	54.6	54.1	53.5	54.1
72°	196.9	125.3	79.1	59.6	53.5	51.7	50.2	49.4	49.4	48.6	48.9
72.5°	169.4	116.4	76.4	57.4	51.9	50.2	49.1	48.2	48.1	47.5	47.8
75°	112.8	92.3	63.7	48.1	44.1	43.1	43.7	42.8	43.1	42.6	42.8
77.5°	91.2	79.4	54.1	40.7	37.9	36.2	37.4	37.5	38.2	37.5	37.4
80°	76.4	67.6	45.4	33.4	31.6	30.3	30.7	32.7	33.0	31.4	31.0
82.5°	49.4	54.3	35.8	26.1	24.2	23.6	25.1	26.9	27.5	25.2	24.8
85°	41.4	43.7	25.8	17.8	15.9	15.5	18.1	20.0	21.4	19.3	18.7
87.5°	11.6	21.4	12.7	8.5	7.1	7.1	8.9	10.4	12.3	12.7	12.7
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)