

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: P270317

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270317
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)
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-T4W-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5246 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

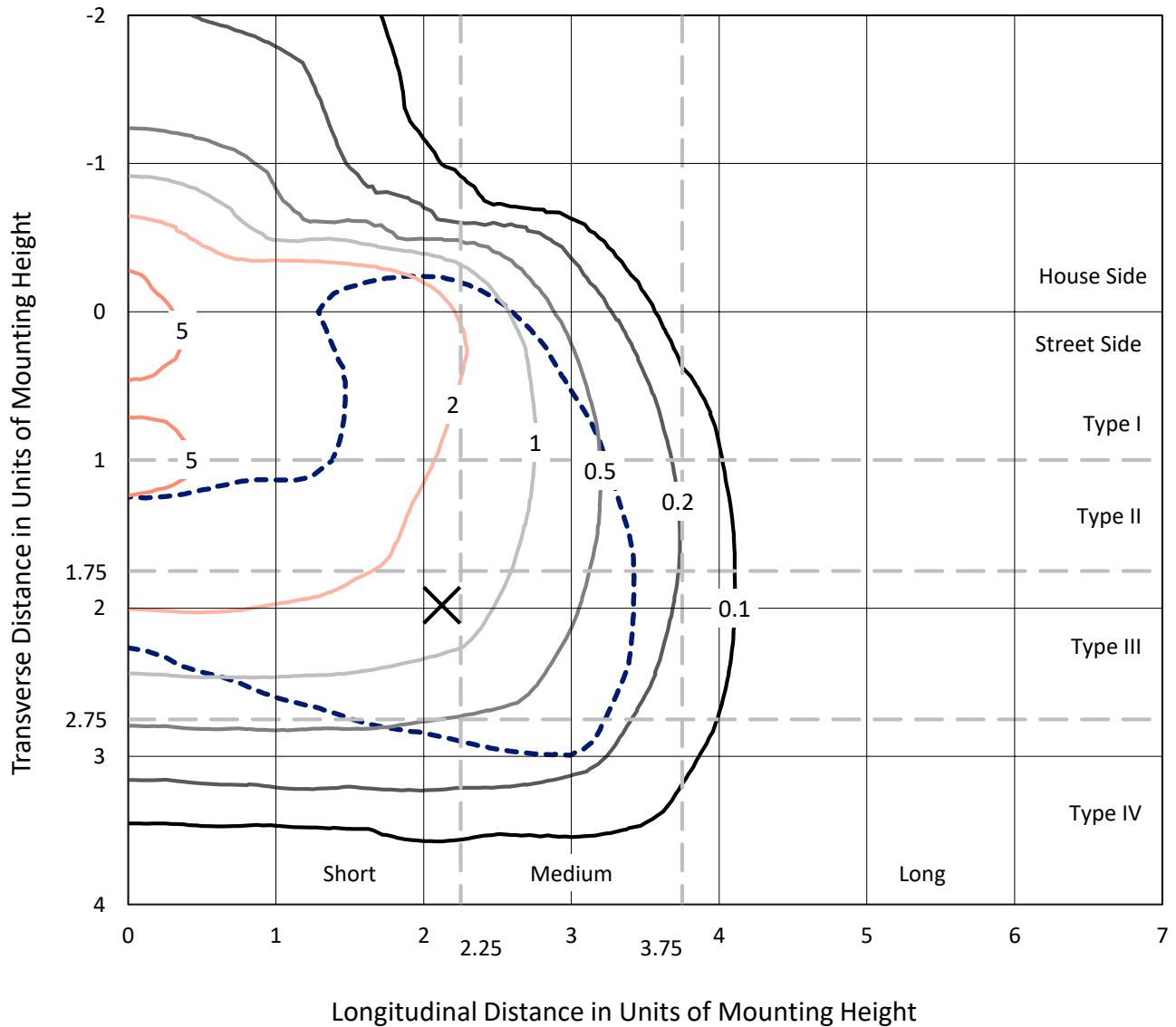
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

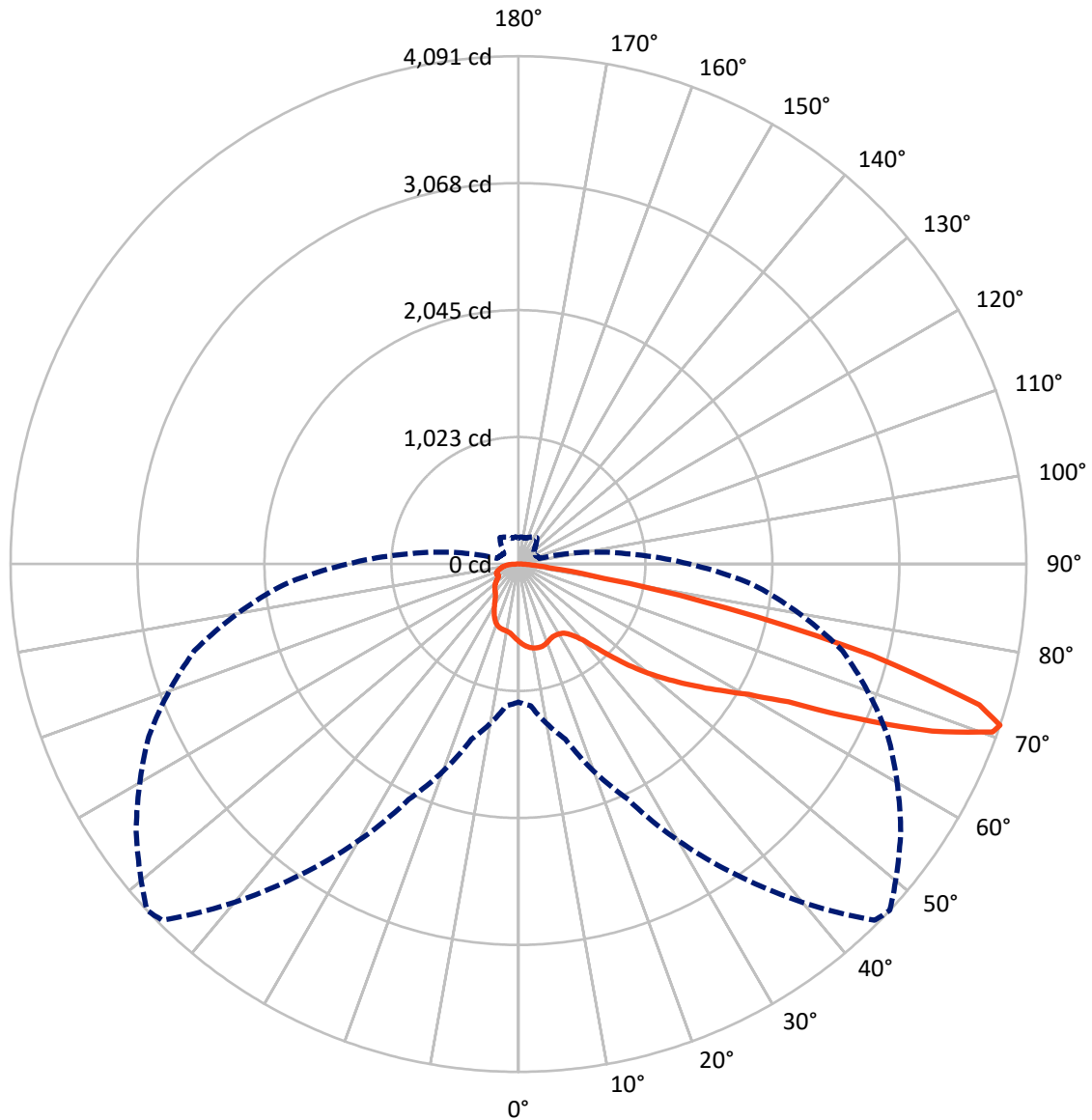
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.2 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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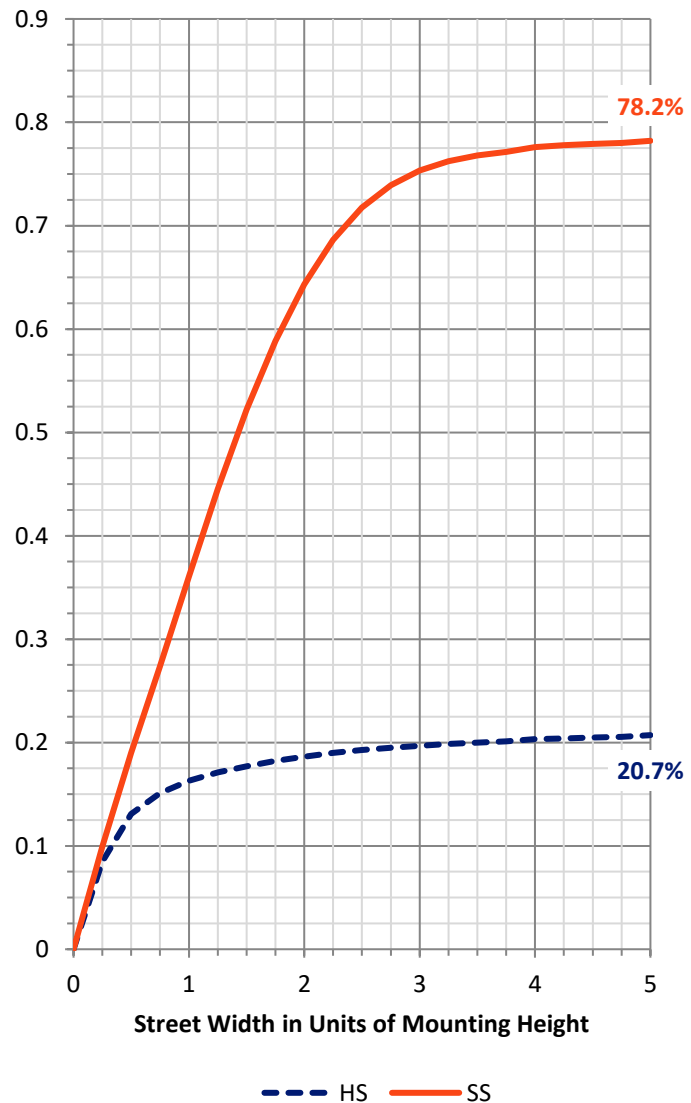
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1124.3	0.0	1124.3
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	4121.7	0.0	4121.7
	% Fixture	78.6	0.0	78.6
Total	Lumens	5246.0	0.0	5246.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.6	1.1
10°-20°	174.3	3.3
20°-30°	258.9	4.9
30°-40°	371.8	7.1
40°-50°	659.2	12.6
50°-60°	1128.0	21.5
60°-70°	1601.4	30.5
70°-80°	877.1	16.7
80°-90°	115.8	2.2
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°	5246.0	100.0
0°-180°	5246.0	100.0



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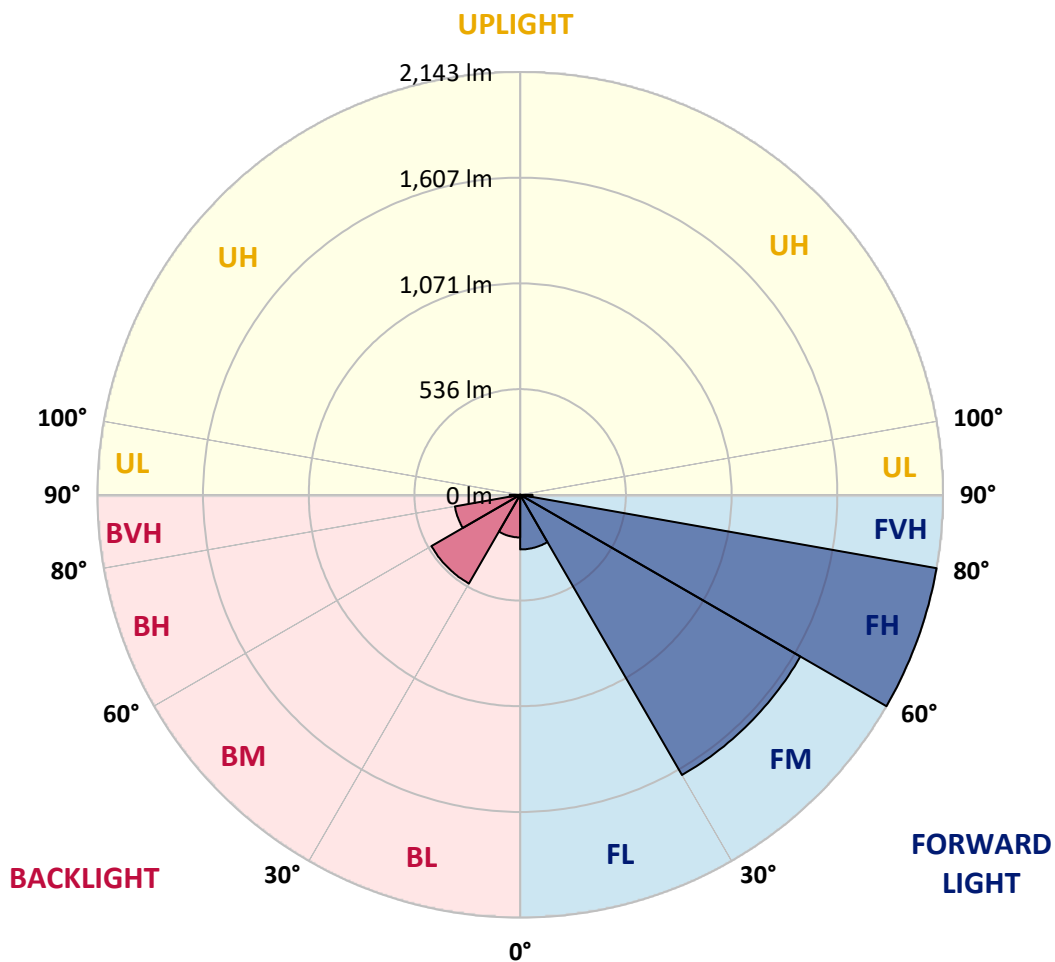
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	276.9	5.3			
FM	(30°-60°)	1639.5	31.3			
FH	(60°-80°)	2142.5	40.8			G2/5000
FVH	(80°-90°)	62.8	1.2			G1/100
BL	(0°-30°)	215.9	4.1	B1/500		
BM	(30°-60°)	519.5	9.9	B1/1000		
BH	(60°-80°)	335.9	6.4	B1/500		G1/500
BVH	(80°-90°)	53.0	1.0			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°	45°	47°	55°	65°	75°	85°
0°	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9
2.5°	662.0	660.6	661.2	658.8	653.1	647.0	647.0	640.5	633.8	626.8	619.4
5°	703.1	700.9	699.3	691.9	680.6	668.0	666.1	653.1	639.1	625.2	611.6
7.5°	737.4	735.4	730.2	716.7	700.3	681.6	679.3	662.3	643.8	624.5	605.5
10°	761.9	760.5	750.7	733.2	714.2	692.1	688.1	670.8	648.9	624.9	600.7
12.5°	775.4	773.4	761.6	741.1	718.7	696.2	692.1	675.5	650.7	624.2	595.9
15°	770.0	768.9	757.8	737.1	714.6	695.3	691.9	674.8	649.7	621.7	591.5
17.5°	746.9	749.2	740.5	720.0	701.7	688.1	684.4	668.3	644.5	616.0	584.7
20°	715.0	717.7	713.3	692.6	682.0	673.1	671.2	658.2	636.1	607.6	576.6
22.5°	680.9	683.3	683.7	664.2	661.0	657.5	655.9	646.6	628.6	602.5	571.1
25°	657.5	660.3	661.0	643.8	645.9	647.0	646.6	640.1	627.2	602.5	571.9
27.5°	651.5	652.8	652.1	636.4	640.1	645.9	646.3	645.0	632.6	609.2	581.4
30°	672.4	673.1	664.7	641.2	645.0	652.3	652.8	652.1	644.3	626.8	602.8
32.5°	763.6	762.9	733.6	673.1	660.3	662.9	663.9	670.0	670.8	656.1	633.8
35°	902.3	902.0	867.9	764.5	703.7	689.4	690.7	700.3	708.9	699.1	686.0
37.5°	1054.9	1056.0	1035.1	895.2	797.5	738.0	736.7	743.8	759.2	762.5	764.3
40°	1224.2	1229.3	1228.3	1045.1	929.1	821.1	807.4	799.2	828.9	847.6	871.6
42.5°	1417.6	1416.3	1416.9	1209.6	1079.5	951.6	926.4	888.3	922.6	955.0	1008.0
45°	1583.9	1589.3	1593.5	1384.6	1247.7	1100.9	1075.4	1005.9	1037.0	1085.2	1166.1
47.5°	1751.2	1741.6	1749.1	1579.5	1435.0	1271.1	1238.1	1144.7	1173.5	1241.5	1364.6
50°	1946.0	1941.5	1907.6	1833.8	1661.4	1443.8	1400.6	1289.4	1331.6	1422.5	1609.8
52.5°	2120.7	2097.0	2070.5	2033.8	1884.0	1618.6	1563.9	1440.2	1517.5	1630.2	1914.0
55°	2184.6	2168.7	2200.6	2248.2	2119.7	1796.7	1735.5	1616.0	1727.4	1867.8	2272.1
57.5°	2252.6	2258.1	2330.2	2426.3	2342.7	1986.8	1920.4	1823.9	1957.5	2133.7	2672.2
60°	2286.6	2308.4	2452.2	2632.8	2554.9	2195.2	2131.6	2062.9	2212.9	2427.4	3071.2
62.5°	2292.5	2321.6	2525.2	2705.2	2846.9	2514.4	2441.0	2366.6	2531.8	2752.0	3360.2
65°	2186.4	2231.2	2518.8	2794.2	3113.0	3047.8	3001.2	2871.3	2958.7	3038.0	3409.5
67.5°	1874.6	1923.5	2269.6	2757.4	3326.6	3601.2	3592.4	3400.8	3288.4	3148.4	3044.0
70°	1375.8	1415.3	1747.7	2357.3	3233.4	4035.7	4051.4	3743.7	3380.6	2913.8	2263.5
71°	1112.7	1146.6	1460.1	2092.8	3051.9	4058.3	4090.8	3759.0	3284.7	2702.0	1895.0
72.5°	692.6	711.5	969.6	1579.5	2627.9	3827.0	3882.0	3563.1	2982.9	2283.9	1339.5
75°	261.4	269.0	359.7	696.5	1568.6	2875.0	2941.7	2692.8	2095.6	1303.8	560.6
77.5°	140.4	144.2	178.6	289.7	628.6	1648.2	1733.8	1536.0	1005.4	456.2	229.2
80°	94.1	96.6	123.3	171.7	289.0	627.6	699.1	616.6	376.3	260.4	163.2
82.5°	60.8	62.3	84.0	112.8	186.7	220.7	252.0	263.2	234.8	186.7	98.6
85°	40.2	41.1	55.4	72.0	115.6	108.8	111.5	145.9	160.1	123.1	50.3
87.5°	23.1	23.7	33.2	37.1	52.0	40.9	44.1	69.3	95.2	80.2	28.8
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°	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9
2.5°	616.0	613.4	607.2	603.4	601.8	601.1	600.3	601.8	601.8	601.1	599.7
5°	604.7	599.7	589.5	582.5	578.6	577.6	579.0	580.7	581.7	581.7	580.7
7.5°	596.7	589.2	575.5	565.8	560.0	558.2	562.0	568.1	572.2	574.1	574.6
10°	589.8	579.6	564.7	554.4	549.8	549.0	553.9	561.6	570.2	573.8	574.6
12.5°	583.7	572.2	555.8	546.3	542.9	544.6	551.1	558.2	568.1	573.5	573.8
15°	577.9	566.0	548.8	538.9	538.2	540.9	547.0	552.7	560.3	567.1	567.1
17.5°	571.1	558.2	540.2	531.0	531.0	533.5	537.5	540.5	545.4	551.7	551.4
20°	563.0	549.8	531.3	521.8	519.8	518.4	518.4	519.1	523.3	529.0	530.0
22.5°	556.9	543.3	523.9	512.4	503.1	494.2	490.6	489.1	493.0	498.4	499.7
25°	556.9	543.3	521.5	502.2	479.6	462.6	455.6	453.6	457.2	462.4	464.5
27.5°	566.0	552.5	526.9	493.0	451.8	424.5	416.2	414.4	417.8	421.9	423.9
30°	587.4	574.1	542.5	482.4	420.9	385.3	375.8	374.0	375.8	377.4	379.8
32.5°	623.2	611.9	568.1	472.9	389.7	349.5	337.9	335.2	335.8	336.2	338.2
35°	681.3	676.2	602.0	461.6	360.0	320.2	308.4	302.9	302.5	304.3	306.6
37.5°	770.3	773.4	645.9	445.4	335.5	299.6	287.5	282.2	279.5	282.8	285.7
40°	896.1	903.2	696.5	423.2	315.5	287.3	274.7	269.6	265.9	264.8	266.2
42.5°	1059.7	1057.7	748.3	395.1	293.7	279.2	265.9	260.4	254.3	246.4	244.8
45°	1253.5	1224.2	791.4	360.4	269.0	271.3	257.8	250.2	240.7	229.2	227.8
47.5°	1482.3	1401.6	817.9	323.3	245.7	261.0	248.6	237.0	223.0	215.6	214.5
50°	1758.0	1609.5	836.6	285.7	225.0	248.2	235.5	220.4	206.7	204.6	204.4
52.5°	2084.3	1854.6	859.8	251.5	208.8	231.6	222.7	207.0	196.2	197.2	197.2
55°	2431.4	2108.1	860.4	224.8	194.5	212.1	213.2	200.6	192.1	195.6	196.5
57.5°	2747.9	2329.8	792.8	205.7	180.9	196.9	210.2	202.9	196.5	208.3	209.5
60°	3024.1	2500.4	647.3	190.0	169.6	191.1	216.9	217.6	216.2	248.6	250.8
62.5°	3124.9	2502.1	459.7	176.7	163.5	194.5	231.1	232.2	232.2	262.1	266.5
65°	2983.5	2293.7	306.0	169.1	159.4	201.9	242.7	238.3	227.8	248.6	243.8
67.5°	2485.2	1785.6	223.7	163.9	153.7	202.3	253.0	241.7	223.7	241.4	233.2
70°	1707.9	1136.1	187.3	159.1	146.9	193.4	258.4	240.7	217.6	225.0	214.2
71°	1374.9	906.7	177.9	157.5	144.2	188.4	259.0	239.4	214.5	219.2	209.5
72.5°	905.8	558.6	166.2	153.7	140.0	179.5	257.4	236.3	210.5	210.8	204.4
75°	357.3	231.6	149.6	145.2	128.5	165.2	249.9	229.8	202.6	195.8	193.0
77.5°	180.5	151.3	131.5	133.3	115.0	150.6	239.4	219.2	191.8	182.5	180.5
80°	132.0	115.0	112.6	115.6	99.6	136.4	226.1	205.1	177.9	187.3	183.3
82.5°	80.2	70.1	88.0	95.5	83.4	121.7	210.5	188.4	160.1	147.5	142.8
85°	38.1	41.1	63.6	70.3	61.5	97.2	192.4	170.0	139.7	120.7	122.7
87.5°	18.8	22.7	36.4	42.2	40.5	71.3	145.2	132.0	110.1	90.8	88.8
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)