

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: P196783

Luminaire Tested: **NAV-AF-01-D-UNV-T3-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196783
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4774.6 lumens
Efficiency: N/A
Efficacy: 108.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

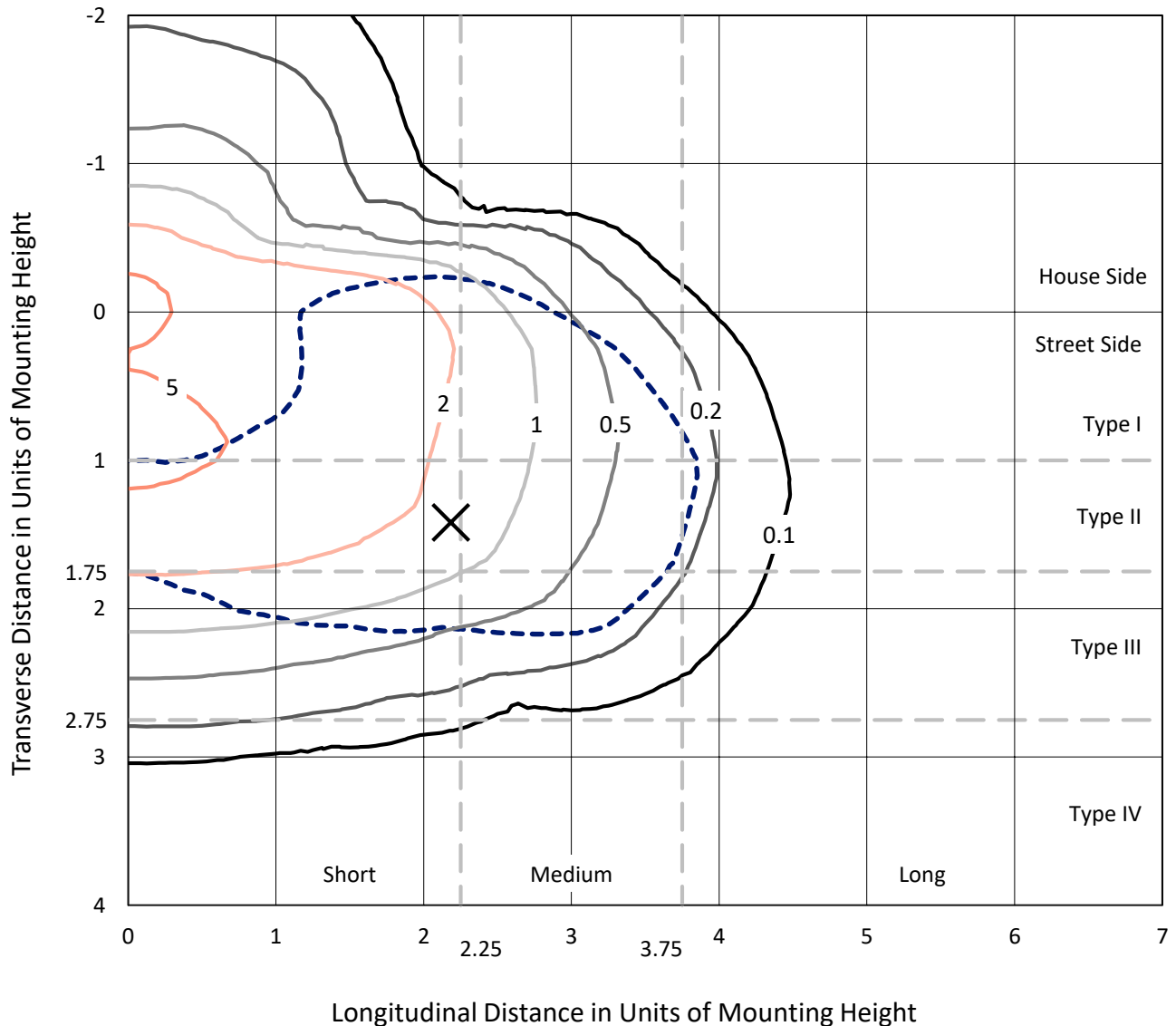
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

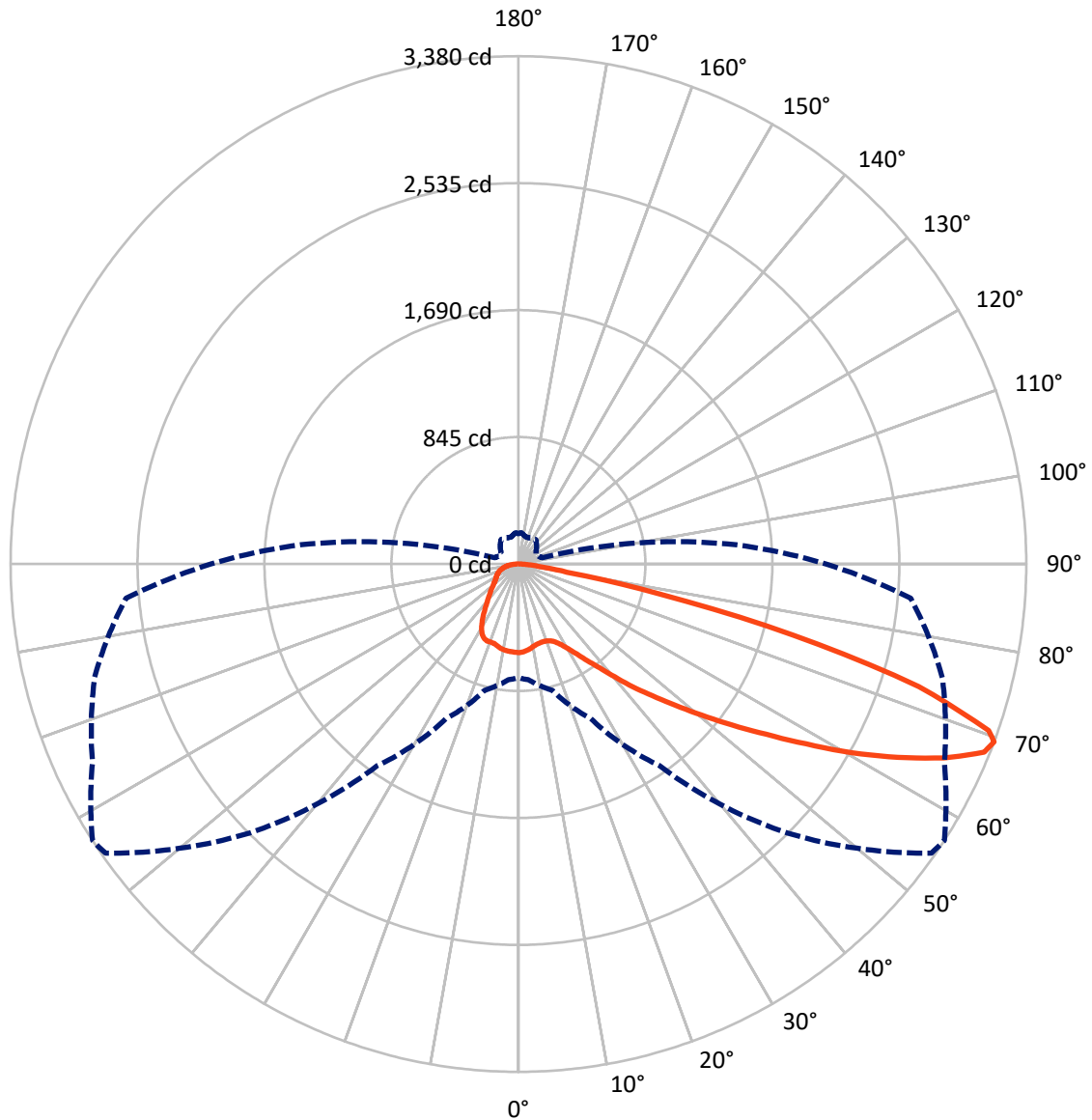
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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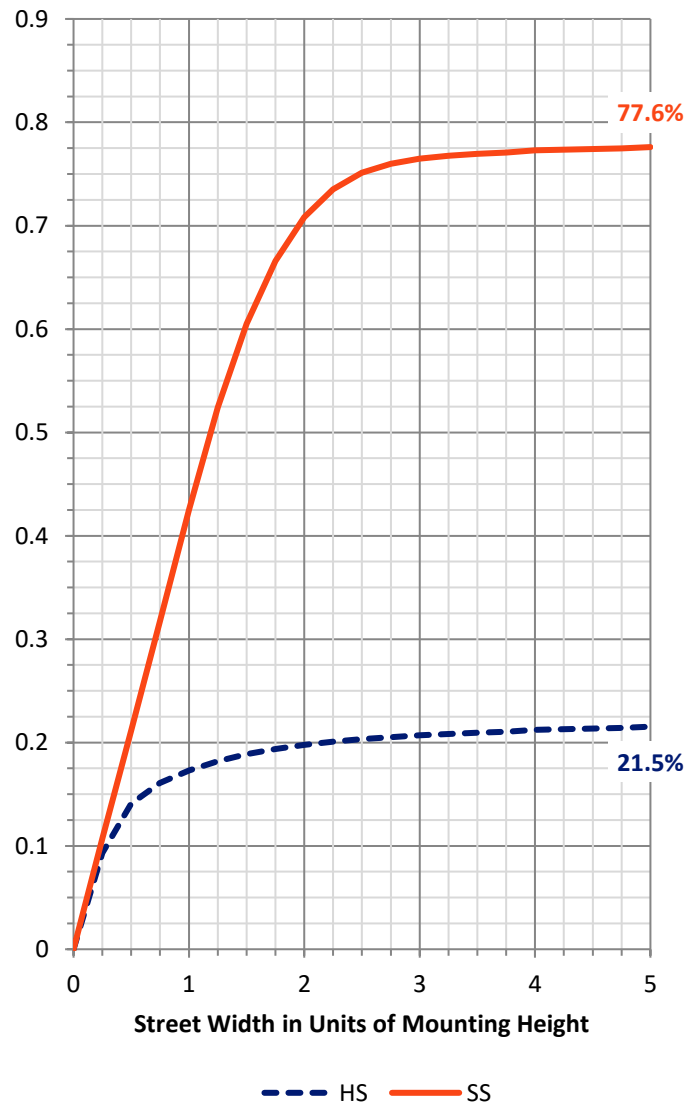
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1053.6	0.0	1053.6
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	3721.0	0.0	3721.0
	% Fixture	77.9	0.0	77.9
Total	Lumens	4774.6	0.0	4774.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.2	1.2
10°-20°	157.0	3.3
20°-30°	261.2	5.5
30°-40°	426.6	8.9
40°-50°	720.0	15.1
50°-60°	1119.9	23.5
60°-70°	1334.1	27.9
70°-80°	621.5	13.0
80°-90°	79.0	1.7
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°	4774.6	100.0
0°-180°	4774.6	100.0



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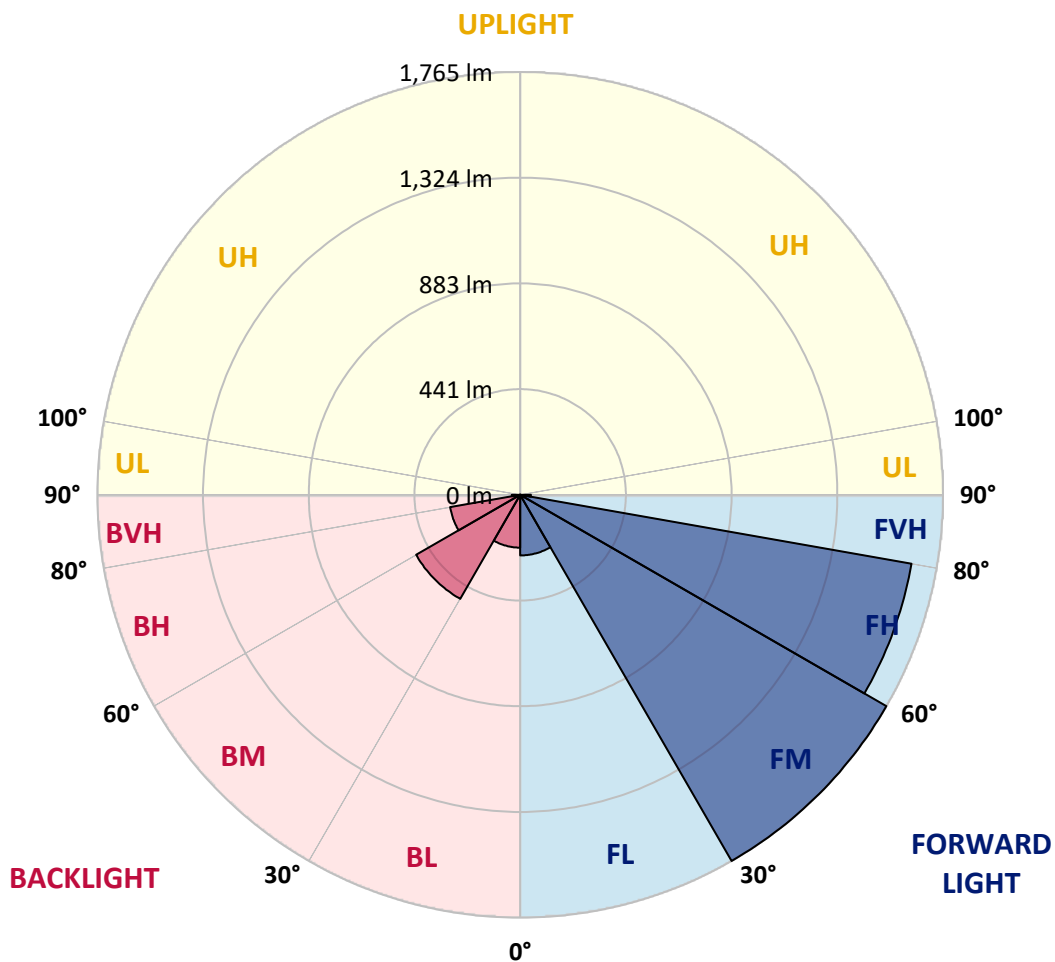
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	252.9	5.3			
FM	(30°-60°)	1765.0	37.0			
FH	(60°-80°)	1658.7	34.7			G1/1800
FVH	(80°-90°)	44.4	0.9			G1/100
BL	(0°-30°)	220.6	4.6	B1/500		
BM	(30°-60°)	501.4	10.5	B1/1000		
BH	(60°-80°)	296.9	6.2	B1/500		G1/500
BVH	(80°-90°)	34.6	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	590.0	590.0	590.0	590.0	590.0	590.0	590.0	590.0	590.0	590.0	590.0
2.5°	586.6	586.6	588.2	588.2	588.2	587.5	585.6	586.2	585.1	584.1	582.6
5°	574.7	575.2	577.1	577.8	578.6	579.0	579.0	578.6	579.0	579.0	578.0
7.5°	558.2	558.8	560.9	562.1	564.9	567.4	568.5	568.5	570.2	571.3	571.7
10°	548.1	548.1	549.2	549.2	551.4	552.7	556.6	556.3	560.6	564.6	566.4
12.5°	546.9	546.9	546.2	544.1	542.9	542.6	546.6	547.2	553.6	560.6	564.0
15°	550.7	550.7	549.0	544.7	540.2	538.0	541.9	543.2	550.2	558.5	563.7
17.5°	563.7	563.3	559.4	550.7	542.9	539.5	540.8	541.9	548.4	557.9	564.4
20°	592.0	592.0	583.6	567.9	554.2	546.2	544.4	545.3	549.9	558.8	567.0
22.5°	641.9	642.9	627.5	601.9	578.3	561.5	554.2	555.1	557.2	565.9	574.9
25°	715.3	712.8	691.2	654.8	618.1	589.4	574.3	575.2	575.2	583.2	592.7
27.5°	792.9	793.6	762.3	723.2	674.9	632.2	608.2	608.0	607.7	615.3	625.4
30°	880.6	880.9	844.9	799.7	744.3	689.7	653.8	653.5	650.7	660.3	673.4
32.5°	976.7	976.3	934.5	883.4	821.9	759.9	713.5	713.1	710.9	723.9	739.6
35°	1083.0	1083.0	1041.5	978.4	912.1	843.1	789.3	789.0	790.2	807.7	822.6
37.5°	1211.0	1213.9	1163.7	1087.2	1014.8	941.2	878.6	876.7	867.5	896.8	921.6
40°	1344.7	1352.3	1300.3	1211.0	1132.8	1056.7	987.6	986.4	978.4	1009.7	1049.7
42.5°	1489.2	1506.6	1448.9	1357.8	1272.6	1190.3	1120.9	1117.5	1087.0	1135.5	1198.2
45°	1678.8	1690.0	1606.3	1523.8	1443.5	1349.6	1267.0	1249.0	1218.5	1280.7	1362.1
47.5°	1807.8	1802.2	1750.0	1694.6	1643.0	1553.1	1426.3	1403.3	1366.1	1448.6	1538.2
50°	1887.9	1891.9	1862.5	1859.7	1857.0	1794.2	1606.0	1578.5	1535.4	1633.2	1737.8
52.5°	1940.8	1922.8	1927.9	1990.2	2065.8	2035.8	1809.4	1778.7	1734.4	1832.2	1950.2
55°	1918.7	1894.9	1942.8	2065.8	2243.3	2250.0	2032.4	2001.0	1963.1	2043.7	2205.7
57.5°	1827.6	1839.6	1915.4	2086.2	2364.7	2442.1	2288.9	2256.8	2182.2	2264.2	2448.5
60°	1699.5	1723.7	1839.6	2053.8	2449.7	2591.5	2570.5	2549.0	2420.6	2478.8	2703.4
62.5°	1562.0	1585.8	1728.3	1998.5	2411.5	2723.9	2846.8	2833.6	2683.9	2685.4	2865.1
65°	1358.7	1368.5	1514.0	1847.5	2305.4	2843.4	3123.4	3111.8	2935.4	2861.7	2910.3
67.5°	1026.2	1038.4	1157.9	1458.4	1982.6	2778.6	3344.4	3342.6	3086.7	2927.2	2802.7
69°	757.7	772.8	870.2	1132.3	1639.3	2531.6	3354.8	3379.5	3127.6	2920.4	2620.8
70°	554.5	571.7	661.8	898.6	1365.4	2258.9	3265.9	3319.0	3112.0	2877.9	2479.0
72.5°	235.7	241.5	285.8	405.7	692.7	1362.1	2675.0	2786.8	2810.7	2578.6	1936.7
75°	147.6	149.4	166.9	208.1	308.1	563.3	1732.3	1884.8	2098.5	2000.6	1296.7
77.5°	111.2	112.7	122.9	143.3	191.3	210.4	803.6	958.3	1202.0	1176.8	645.2
80°	85.3	86.2	93.0	104.3	134.8	131.7	260.7	327.7	501.6	442.6	228.4
82.5°	66.9	67.2	73.1	75.2	94.2	88.6	130.8	145.9	202.6	168.5	111.6
85°	59.3	60.2	66.0	55.0	60.2	53.5	71.8	77.9	107.6	101.5	42.2
87.5°	30.3	31.8	55.2	47.1	30.3	25.3	31.4	34.0	43.7	47.4	20.4
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°	590.0	590.0	590.0	590.0	590.0	590.0	590.0	590.0	590.0	590.0	590.0
2.5°	582.9	583.2	584.1	585.6	588.2	591.2	594.8	598.5	600.6	602.1	601.6
5°	578.0	578.3	580.1	582.9	585.9	590.5	596.7	601.3	604.6	606.7	606.5
7.5°	571.9	572.8	576.5	579.5	583.9	587.5	592.4	596.7	600.1	602.1	601.9
10°	567.4	568.2	572.8	576.8	580.5	581.0	580.1	579.0	578.6	580.1	579.5
12.5°	565.2	567.0	571.3	574.0	572.5	566.7	560.0	557.2	556.3	559.4	559.7
15°	565.9	567.4	571.0	569.1	560.9	551.1	547.5	549.6	551.4	553.3	553.6
17.5°	567.4	568.2	569.1	562.4	550.7	544.4	543.2	541.1	535.6	532.5	532.2
20°	570.2	571.3	569.8	559.1	548.7	540.2	525.4	512.3	499.8	493.1	490.3
22.5°	579.5	580.5	575.9	565.5	549.6	521.8	492.1	469.5	450.2	439.9	436.0
25°	598.2	599.8	593.3	580.1	538.6	490.0	448.1	417.6	393.5	380.9	377.5
27.5°	630.9	632.4	625.4	591.2	513.0	447.5	396.7	366.4	345.7	335.0	333.5
30°	679.8	682.0	675.6	590.9	473.7	393.5	346.7	328.9	317.0	309.6	309.3
32.5°	747.7	755.6	729.3	580.5	425.4	338.7	308.7	302.6	296.8	291.9	291.9
35°	833.8	852.6	782.6	558.8	372.3	301.4	287.7	281.8	274.5	269.4	268.7
37.5°	936.9	966.0	820.4	520.3	326.4	283.3	274.8	265.3	253.7	243.6	241.1
40°	1078.4	1085.2	839.1	457.6	292.3	273.5	262.9	251.0	236.3	225.0	223.8
42.5°	1220.5	1198.6	835.4	390.4	272.7	264.7	250.6	237.5	224.4	214.9	214.9
45°	1382.2	1297.6	807.7	322.8	254.9	254.6	239.4	226.8	216.8	209.7	208.1
47.5°	1537.0	1386.5	759.6	272.9	236.5	244.5	231.9	221.9	212.7	206.1	204.8
50°	1724.6	1489.5	708.5	238.0	218.8	235.7	228.9	223.8	214.9	203.2	202.0
52.5°	1911.1	1609.9	669.1	211.9	203.2	228.7	230.7	231.4	223.1	200.5	199.0
55°	2111.3	1738.7	627.5	191.3	190.4	225.3	235.0	234.5	230.4	201.1	198.8
57.5°	2301.8	1868.0	565.5	177.0	180.4	221.9	236.0	226.1	219.2	204.2	200.2
60°	2459.4	1975.0	474.4	166.9	171.7	215.2	229.9	215.2	203.2	203.5	200.0
62.5°	2536.2	2004.9	362.8	155.2	164.8	204.2	221.0	206.9	195.9	204.8	202.6
65°	2477.8	1919.6	258.6	144.5	156.2	191.3	215.8	200.0	192.3	210.9	208.4
67.5°	2268.1	1687.3	187.7	135.2	147.9	178.2	206.1	193.5	188.6	215.5	210.0
69°	2045.3	1456.9	162.6	129.6	142.1	171.2	199.6	190.1	185.8	209.1	201.1
70°	1860.0	1279.2	150.1	126.2	137.2	167.1	194.7	188.0	183.1	201.5	192.0
72.5°	1333.6	826.9	126.2	116.2	124.4	158.3	184.0	180.1	172.7	181.9	175.8
75°	805.8	431.6	107.3	105.8	111.0	146.1	171.5	166.6	159.3	160.2	157.2
77.5°	370.2	199.3	89.9	93.5	96.9	130.8	156.2	150.7	144.0	141.5	141.8
80°	162.4	116.5	75.2	79.8	81.6	117.7	139.8	133.7	126.2	139.5	129.3
82.5°	87.7	67.5	58.7	61.7	66.9	102.3	121.4	113.4	106.4	123.8	100.0
85°	35.5	34.5	39.8	42.8	46.4	73.6	101.5	93.2	84.6	75.8	74.0
87.5°	15.3	16.5	19.5	20.8	24.8	45.9	68.2	59.6	59.9	51.4	50.5
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)