

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: P196063

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196063
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
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-SL2-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4118.4 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G1

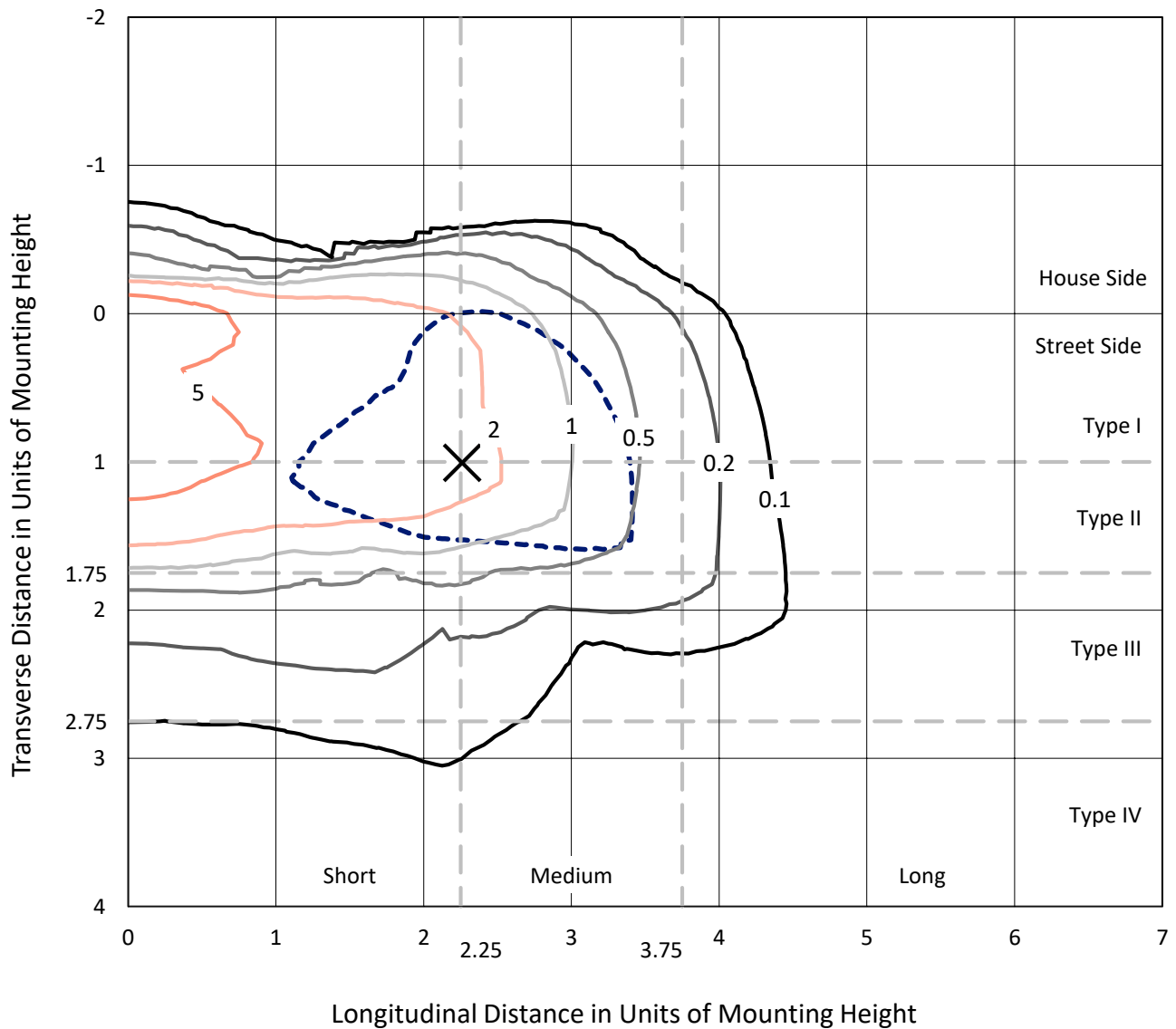
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

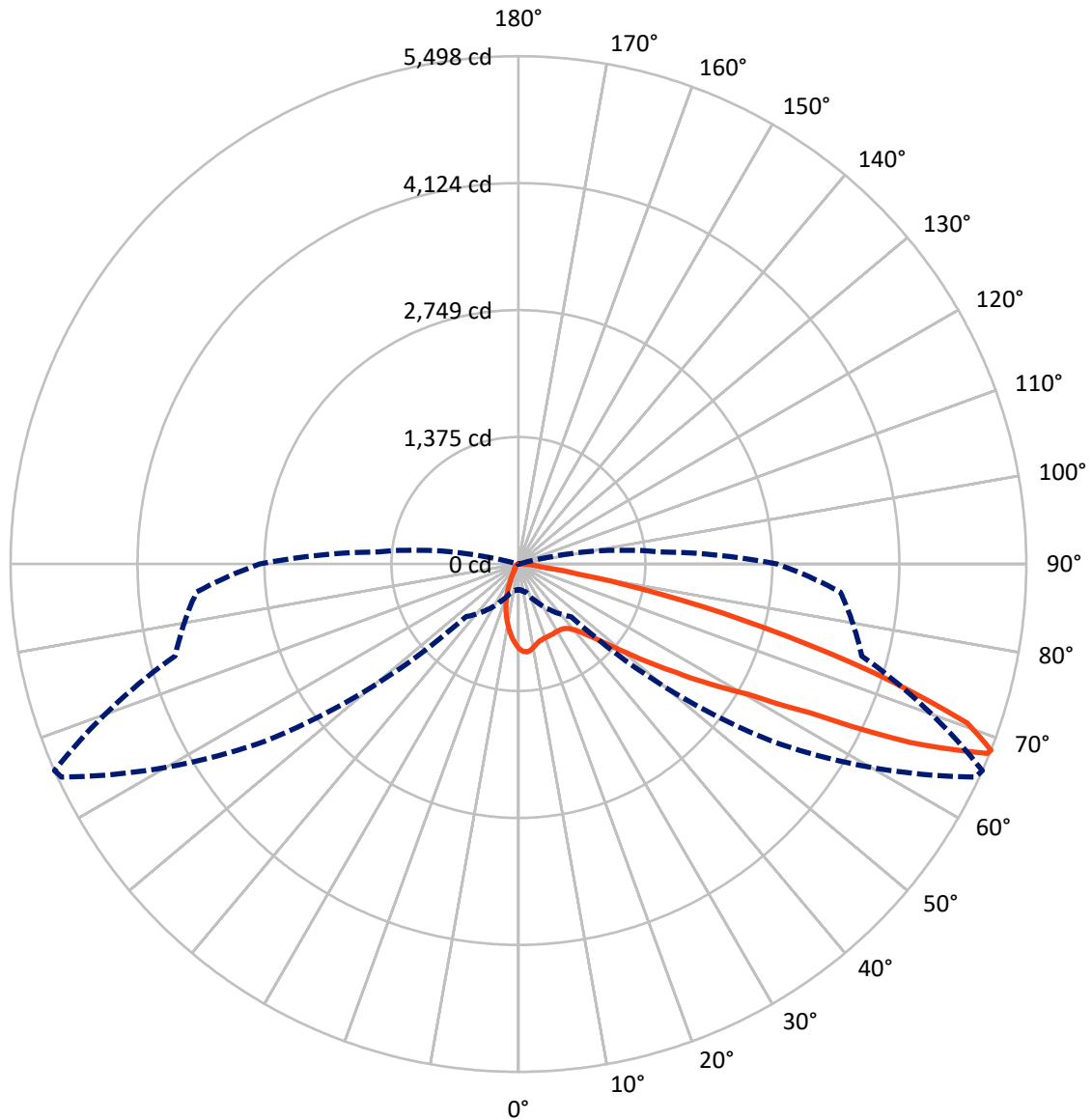
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.2 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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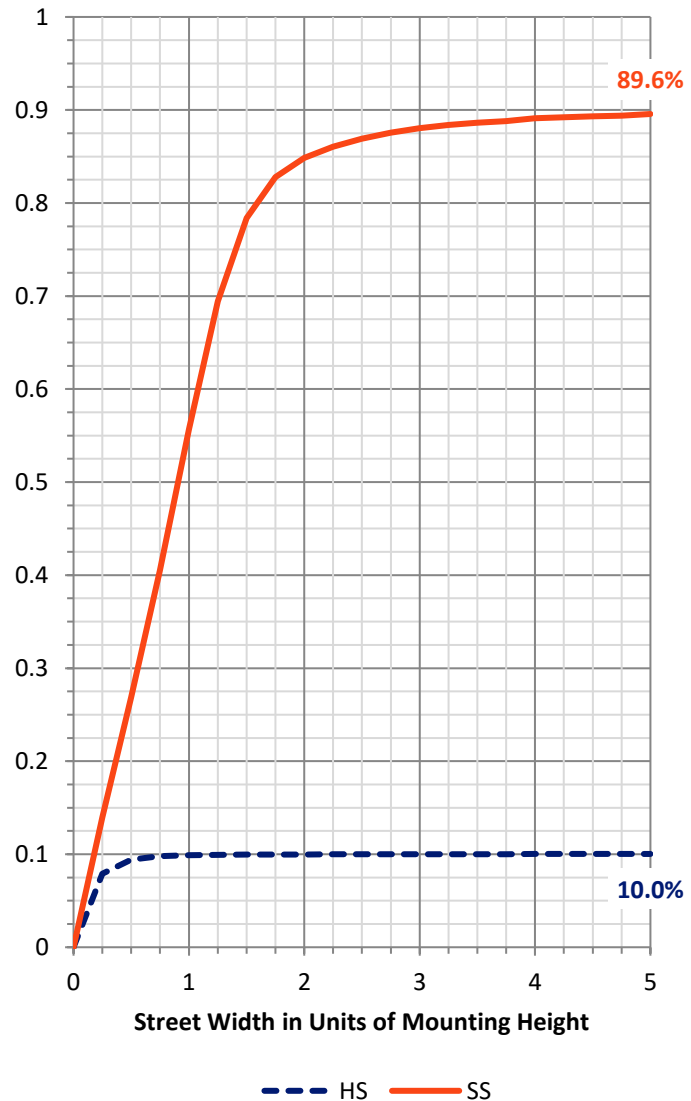
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	417.1	0.0	417.1
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	3701.2	0.0	3701.2
	% Fixture	89.9	0.0	89.9
Total	Lumens	4118.4	0.0	4118.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.2	1.8
10°-20°	161.8	3.9
20°-30°	234.5	5.7
30°-40°	359.0	8.7
40°-50°	614.1	14.9
50°-60°	960.6	23.3
60°-70°	1106.1	26.9
70°-80°	553.5	13.4
80°-90°	53.6	1.3
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°	4118.4	100.0
0°-180°	4118.4	100.0



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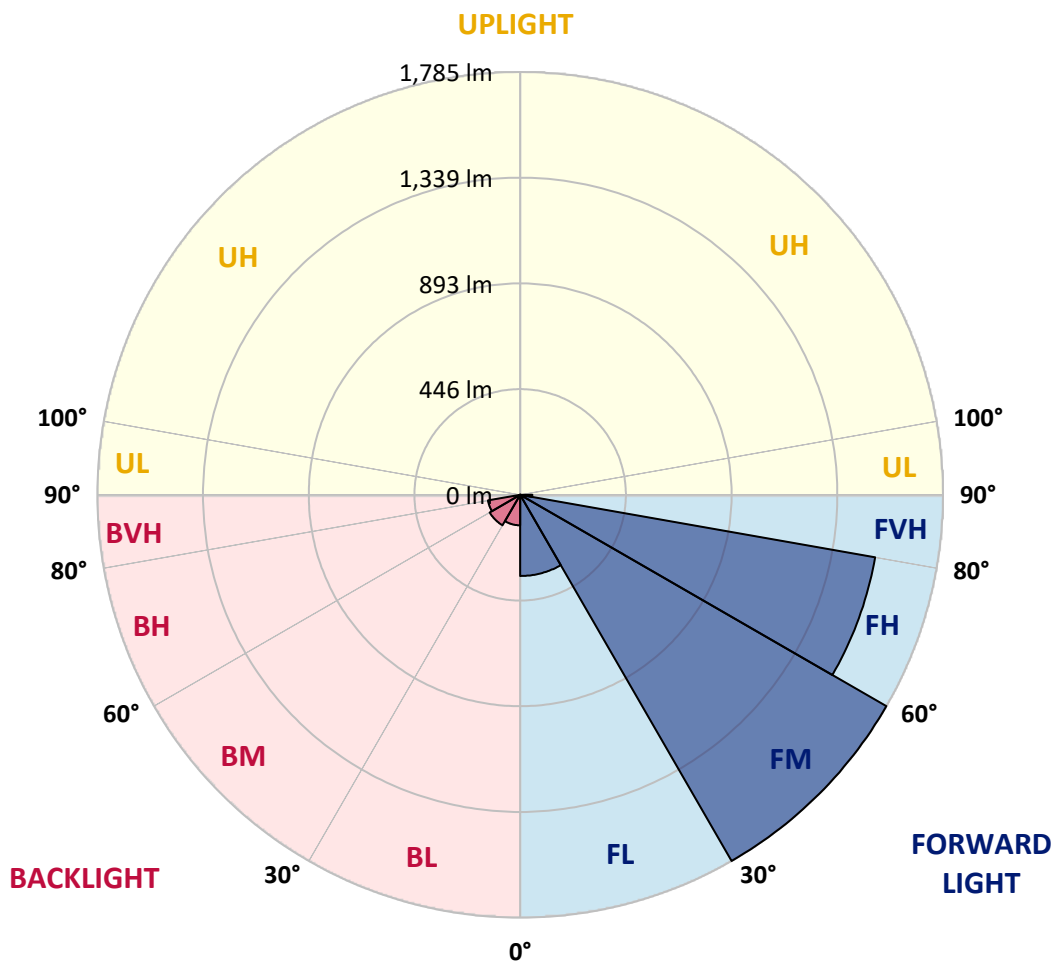
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	342.8	8.3			
FM	(30°-60°)	1785.1	43.3			
FH	(60°-80°)	1521.7	36.9			G1/1800
FVH	(80°-90°)	51.6	1.3			G1/100
BL	(0°-30°)	128.7	3.1	B1/500		
BM	(30°-60°)	148.5	3.6	B0/220		
BH	(60°-80°)	137.8	3.3	B1/500		G1/500
BVH	(80°-90°)	2.0	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	917.6	917.6	917.6	917.6	917.6	917.6	917.6	917.6	917.6	917.6	917.6
2.5°	965.1	965.7	965.4	966.4	965.7	960.9	955.6	944.7	945.7	931.4	915.6
5°	897.1	902.7	908.2	913.7	926.9	938.6	952.5	955.6	955.6	943.4	920.1
7.5°	828.0	828.3	834.4	841.9	859.7	881.0	913.3	942.4	943.1	946.3	920.8
10°	775.9	777.5	781.7	789.8	807.6	828.6	864.8	910.4	914.0	937.9	914.3
12.5°	735.5	737.4	741.9	751.4	767.5	789.2	827.4	879.4	884.2	929.9	912.4
15°	704.5	707.1	710.6	720.0	737.4	760.5	802.1	858.7	864.5	926.6	918.5
17.5°	691.5	691.5	691.2	697.7	715.1	738.5	782.0	847.7	855.2	929.1	928.8
20°	697.0	696.1	689.3	687.6	698.4	721.6	766.2	840.6	849.0	934.1	941.4
22.5°	726.2	724.2	709.0	696.4	693.2	708.7	755.6	835.8	845.8	944.1	958.3
25°	787.9	782.0	761.1	732.6	707.1	705.4	748.1	833.2	843.8	955.6	976.7
27.5°	868.1	866.4	832.8	794.7	745.5	716.2	745.8	831.2	841.9	964.1	991.5
30°	967.6	968.3	929.5	879.7	805.4	746.1	753.0	830.2	841.3	964.7	998.1
32.5°	1070.4	1071.1	1038.8	985.4	887.1	797.9	773.0	834.7	844.8	962.2	997.7
35°	1169.4	1170.4	1150.9	1108.0	996.5	869.7	810.9	850.3	857.4	963.8	997.1
37.5°	1294.5	1298.4	1274.5	1234.4	1133.5	975.1	872.6	881.7	887.5	977.0	1001.9
40°	1507.9	1502.7	1434.2	1366.3	1282.3	1103.5	961.9	935.7	937.5	1011.3	1020.4
42.5°	1756.5	1750.1	1632.7	1515.7	1435.2	1258.3	1075.9	1018.4	1018.0	1068.9	1060.4
45°	1970.5	1966.6	1843.2	1687.1	1604.6	1429.4	1216.6	1137.7	1133.8	1168.4	1133.5
47.5°	2122.5	2119.2	2025.9	1869.3	1800.5	1617.5	1392.1	1300.4	1292.3	1298.7	1252.2
50°	2137.4	2133.8	2101.1	2000.6	2029.4	1893.6	1609.1	1513.4	1503.0	1493.0	1431.6
52.5°	1998.3	1998.0	2015.2	2008.7	2189.7	2249.0	1875.2	1776.9	1764.6	1739.0	1677.9
55°	1714.2	1712.5	1777.6	1871.9	2186.1	2615.6	2280.9	2090.5	2074.3	2023.3	1943.1
57.5°	1252.5	1244.1	1379.9	1579.9	2032.6	2775.9	2925.2	2480.0	2453.2	2291.3	2167.7
60°	691.5	694.8	869.4	1106.3	1668.9	2744.2	3518.2	2934.3	2863.9	2522.4	2398.0
62.5°	387.6	395.7	525.7	719.0	1064.0	2487.2	3836.4	3716.1	3546.4	2792.0	2688.9
65°	293.3	298.1	363.4	554.7	670.9	1738.1	3887.1	4809.2	4662.7	3200.7	3152.2
67.5°	276.1	280.0	312.0	460.0	611.0	901.4	3504.9	5455.8	5474.2	3758.1	3511.1
68°	278.0	282.8	314.9	442.6	610.1	806.3	3342.0	5459.0	5498.2	3847.9	3498.8
70°	255.4	256.7	333.0	434.2	591.4	635.3	2417.6	5085.0	5155.1	3955.0	3176.2
72.5°	97.6	98.0	149.4	376.0	619.5	638.8	1217.9	4019.0	4022.5	3441.9	2476.2
75°	50.7	42.7	46.9	117.6	591.7	622.7	611.0	2744.2	2727.1	2327.8	1517.2
77.5°	34.9	29.8	31.4	40.7	246.0	622.4	441.3	1578.0	1574.5	990.3	432.9
80°	19.7	17.2	18.7	34.3	86.3	584.2	411.2	678.3	639.1	173.9	70.2
82.5°	10.0	8.4	10.0	28.7	53.7	367.6	400.0	266.1	237.0	41.4	45.6
85°	2.6	2.6	4.8	20.0	33.3	120.6	358.5	192.0	172.7	18.1	32.3
87.5°	0.6	0.3	1.9	7.5	12.0	26.2	198.9	107.0	92.2	9.4	18.7
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°	917.6	917.6	917.6	917.6	917.6	917.6	917.6	917.6	917.6	917.6	917.6
2.5°	909.1	900.1	882.3	862.2	848.0	832.5	823.5	812.4	804.0	796.7	802.1
5°	905.9	888.4	849.0	804.8	767.5	731.9	705.4	680.3	661.1	649.2	654.1
7.5°	897.5	871.7	807.6	738.5	677.6	620.4	573.9	532.1	499.8	482.3	487.8
10°	883.3	846.7	760.8	664.7	579.7	498.9	429.6	367.6	320.7	298.7	303.9
12.5°	872.9	824.7	712.3	593.6	481.7	366.9	275.2	204.0	167.5	145.5	147.4
15°	868.4	807.6	667.0	518.5	374.7	235.7	148.7	107.6	95.0	90.5	90.8
17.5°	869.0	794.0	624.0	440.7	266.7	135.4	91.1	82.1	80.2	79.2	79.2
20°	870.6	780.4	579.4	359.5	170.7	87.3	76.0	73.0	72.1	70.8	71.1
22.5°	875.5	770.1	534.4	278.0	105.1	71.1	67.2	64.7	63.0	61.1	61.4
25°	882.9	762.3	490.1	200.1	74.1	62.1	58.5	54.9	52.1	49.8	50.1
27.5°	887.5	751.4	442.9	136.5	61.4	54.3	49.5	44.6	41.4	39.5	39.1
30°	884.2	733.6	389.2	89.5	54.3	46.9	41.0	35.6	32.3	30.7	30.7
32.5°	875.5	710.6	330.1	65.3	48.2	40.4	33.3	28.4	26.2	25.3	25.6
35°	865.5	686.7	267.1	55.2	43.4	34.3	27.1	23.3	22.3	22.0	22.0
37.5°	860.0	666.0	206.6	50.1	38.8	28.4	22.3	20.0	19.0	19.0	19.0
40°	866.1	650.2	152.9	46.2	34.3	23.6	18.7	17.2	16.8	16.8	16.8
42.5°	892.3	644.7	111.9	43.0	29.8	19.7	16.2	14.8	14.5	14.8	14.8
45°	943.4	656.6	84.7	39.8	25.6	16.2	13.9	12.9	12.9	13.3	13.3
47.5°	1030.0	687.3	69.6	36.5	21.4	13.6	12.0	11.4	11.4	11.7	11.7
50°	1164.5	744.3	62.4	32.9	17.8	11.7	10.0	9.7	9.7	10.0	10.3
52.5°	1368.9	852.5	58.8	29.5	14.5	9.7	8.4	8.1	8.4	8.7	8.7
55°	1596.1	991.2	54.6	25.9	12.3	8.1	6.8	6.8	7.2	7.8	7.8
57.5°	1808.0	1125.1	50.7	21.4	10.6	6.4	5.5	5.5	6.1	6.8	6.8
60°	2031.7	1256.4	45.6	17.2	9.0	5.2	4.5	4.5	5.5	6.1	6.4
62.5°	2308.1	1409.0	38.8	13.6	7.2	3.9	3.3	4.2	5.2	6.1	6.1
65°	2707.6	1598.8	30.4	10.6	5.5	2.9	2.6	3.9	4.8	5.8	6.1
67.5°	2852.8	1574.5	22.9	8.7	4.2	2.3	2.3	3.6	4.8	5.8	5.8
68°	2799.8	1521.4	22.0	8.4	3.9	2.3	2.3	3.6	4.8	5.8	5.8
70°	2439.6	1243.8	18.1	6.4	3.3	1.9	1.9	3.3	4.8	5.5	5.8
72.5°	1826.7	826.3	15.5	4.2	2.9	1.9	1.6	3.3	4.5	5.5	5.5
75°	1047.8	343.0	13.3	3.3	2.6	1.6	1.6	2.9	4.5	5.5	5.5
77.5°	296.1	80.2	10.6	2.6	2.3	1.6	1.3	2.9	4.2	5.2	5.2
80°	54.3	23.9	8.4	2.3	1.9	1.6	1.3	2.9	4.2	5.2	5.2
82.5°	35.9	11.4	6.1	2.3	1.9	1.6	1.3	2.6	3.9	4.8	4.8
85°	26.8	8.1	3.9	2.3	1.9	1.6	1.3	2.6	3.9	4.8	4.8
87.5°	14.8	3.6	2.9	2.6	2.3	1.6	1.3	2.3	3.6	4.5	4.5
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)