

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: P196140

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196140
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL3-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29733.1 lumens
Efficiency: N/A
Efficacy: 119.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

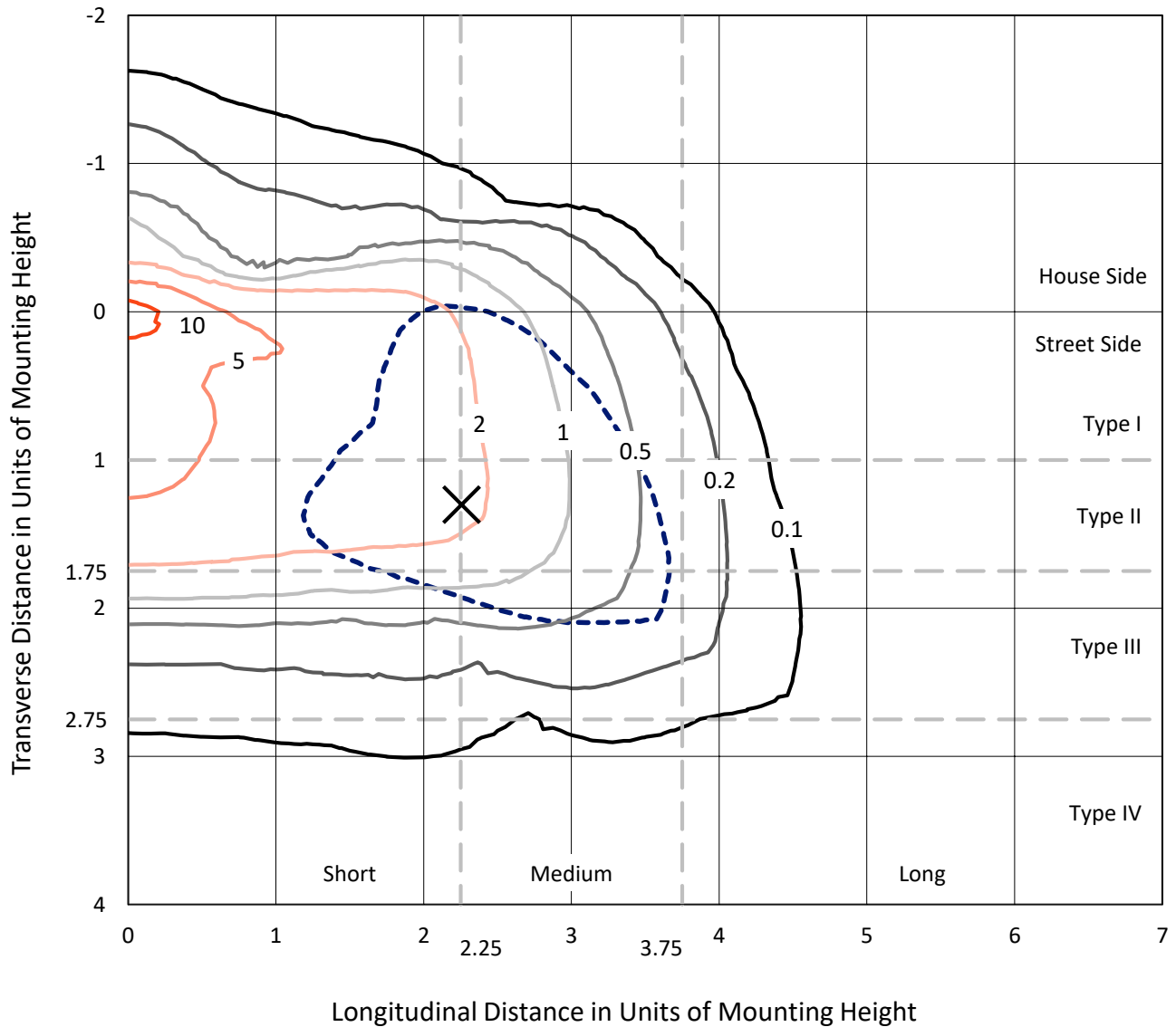
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196140
 CATALOG NUMBER: NAV-AF-06-D-UNV-SL3-800

Iso-Footcandle Lines of Horizontal Illumination

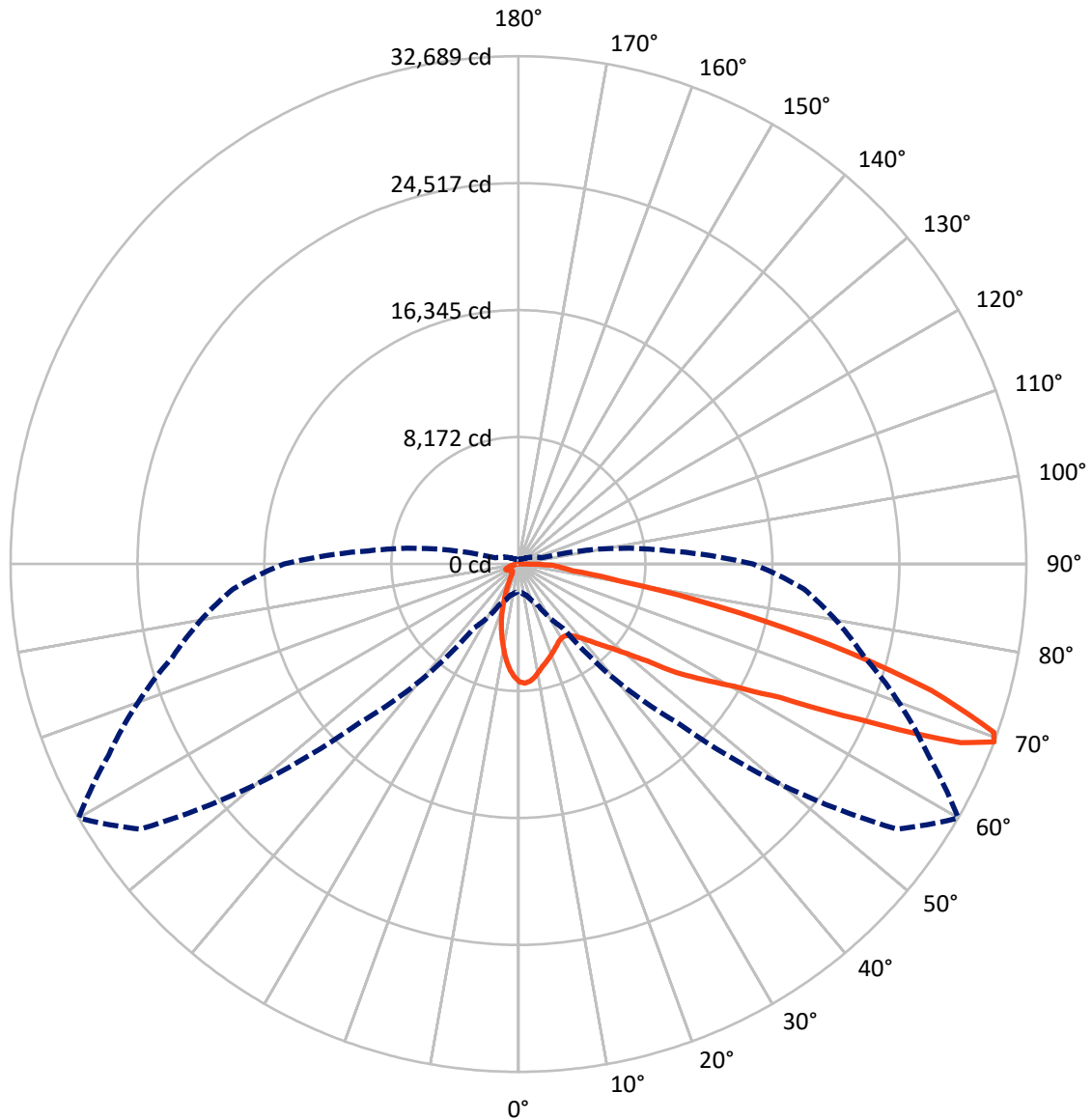
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.1 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P196140
CATALOG NUMBER: NAV-AF-06-D-UNV-SL3-800

Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P196140

CATALOG NUMBER: NAV-AF-06-D-UNV-SL3-800

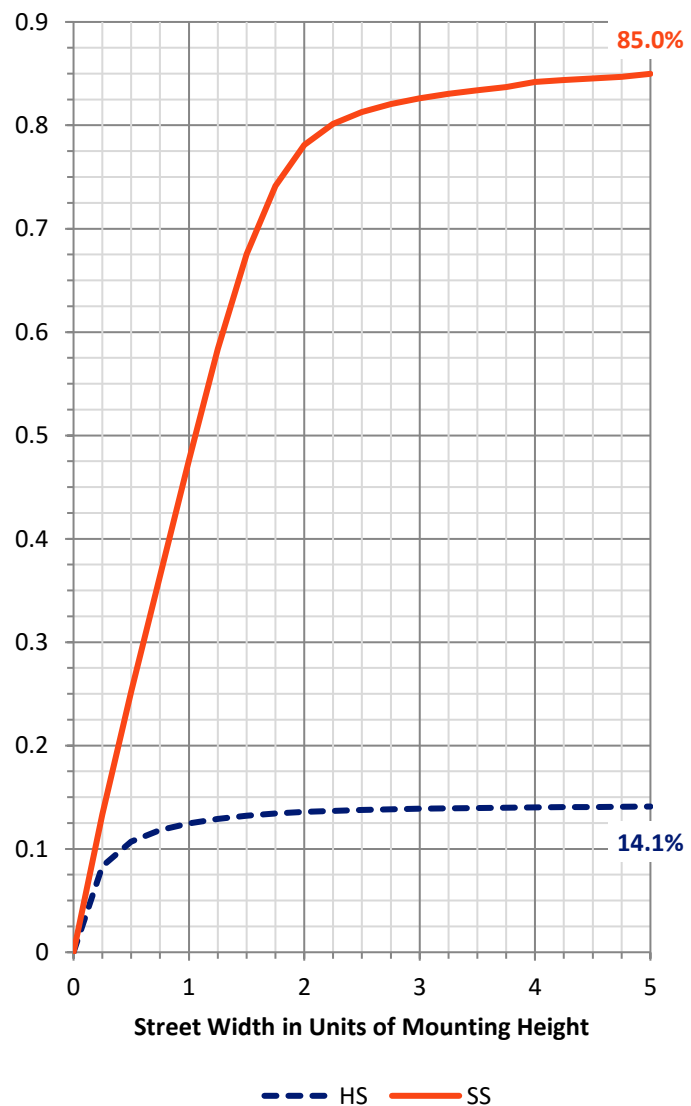
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4240.9	0.0	4240.9
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	25492.2	0.0	25492.2
	% Fixture	85.7	0.0	85.7
Total	Lumens	29733.1	0.0	29733.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	643.6	2.2
10°-20°	1378.0	4.6
20°-30°	1757.9	5.9
30°-40°	2419.0	8.1
40°-50°	3918.4	13.2
50°-60°	6149.8	20.7
60°-70°	8198.7	27.6
70°-80°	4560.4	15.3
80°-90°	707.3	2.4
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°	29733.1	100.0
0°-180°	29733.1	100.0

Coefficient of Utilization



REPORT NUMBER: P196140

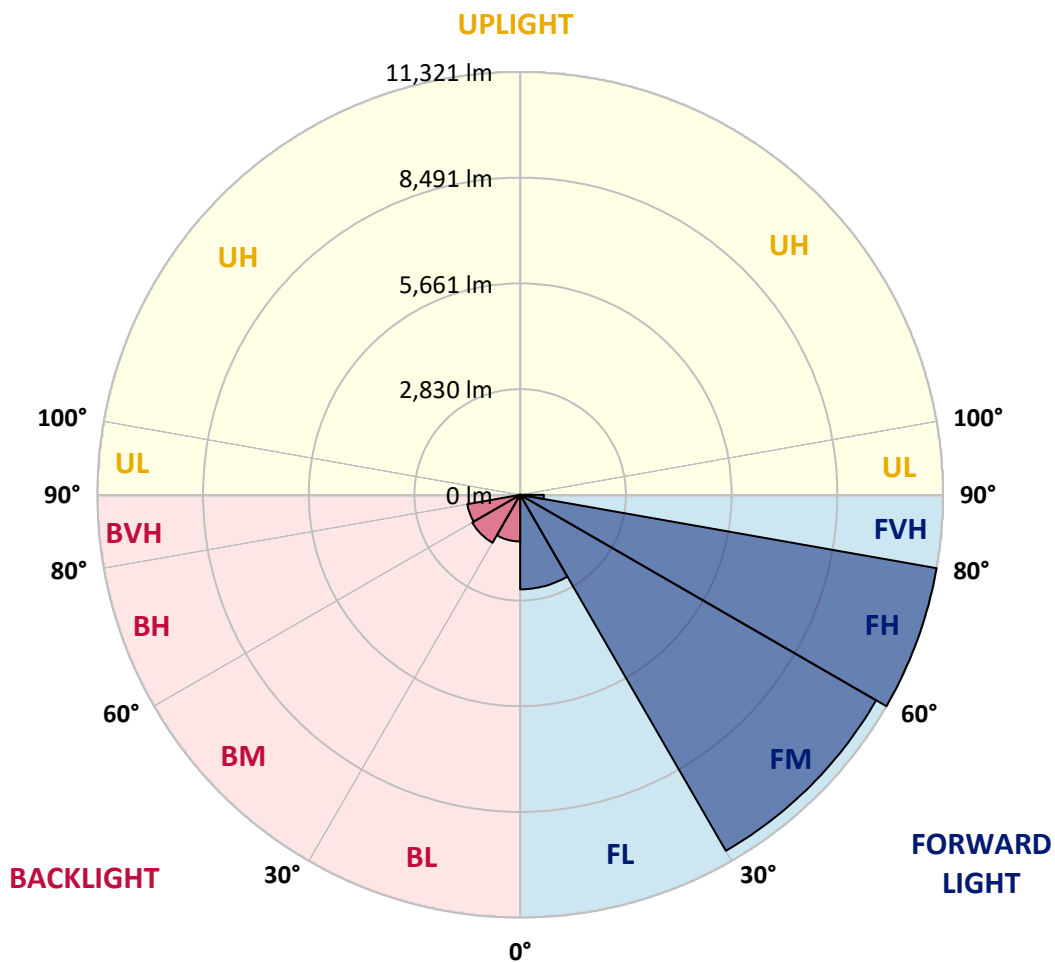
CATALOG NUMBER: NAV-AF-06-D-UNV-SL3-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2529.7	8.5			
FM (30°-60°)	11005.6	37.0			
FH (60°-80°)	11321.2	38.1			G4/12000
FVH (80°-90°)	635.6	2.1			G4/750
BL (0°-30°)	1249.8	4.2	B3/2500		
BM (30°-60°)	1481.5	5.0	B2/2500		
BH (60°-80°)	1437.9	4.8	B3/2500		G3/2500
BVH (80°-90°)	71.7	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Medium





REPORT NUMBER: P196140

CATALOG NUMBER: NAV-AF-06-D-UNV-SL3-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5
2.5°	7788.6	7809.6	7809.6	7792.4	7782.9	7727.6	7695.1	7672.3	7632.2	7557.9	7491.2
5°	7510.2	7550.3	7567.4	7575.1	7624.7	7607.5	7609.3	7594.1	7559.8	7479.7	7371.1
7.5°	6999.2	7006.9	7037.4	7088.8	7208.9	7292.8	7361.5	7374.9	7367.2	7308.2	7155.6
10°	6495.9	6509.2	6545.5	6633.2	6747.6	6867.7	7016.4	7077.4	7123.2	7104.1	6911.6
12.5°	6078.4	6080.2	6120.3	6221.4	6349.0	6499.7	6701.9	6797.1	6905.8	6949.7	6734.2
15°	5676.0	5702.7	5740.9	5862.9	6021.2	6211.8	6444.4	6575.9	6718.9	6844.8	6596.9
17.5°	5371.0	5392.0	5414.9	5515.9	5699.0	5937.2	6225.2	6366.2	6555.0	6747.6	6455.8
20°	5203.2	5210.8	5193.6	5243.2	5397.7	5655.1	5988.8	6158.5	6383.4	6654.2	6311.0
22.5°	5168.9	5168.9	5106.0	5096.4	5165.1	5382.5	5744.7	5952.6	6227.1	6589.3	6181.3
25°	5329.1	5317.6	5199.4	5090.7	5066.0	5176.5	5512.1	5767.6	6093.6	6587.4	6084.1
27.5°	5632.2	5616.9	5470.1	5287.1	5128.9	5081.2	5332.8	5594.1	5988.8	6652.2	6034.5
30°	6009.7	6004.0	5855.3	5626.4	5365.3	5119.4	5262.3	5504.5	5918.2	6772.3	6032.5
32.5°	6423.4	6396.7	6305.3	6076.4	5737.0	5330.9	5304.2	5508.3	5899.2	6947.8	6076.4
35°	6863.9	6844.8	6822.0	6591.2	6209.9	5704.7	5489.2	5639.8	5992.5	7191.9	6200.4
37.5°	7424.5	7403.5	7441.6	7189.9	6772.3	6194.7	5801.9	5902.9	6183.2	7546.4	6431.1
40°	8421.6	8360.6	8253.8	7866.8	7428.3	6795.3	6253.7	6269.1	6509.2	8021.2	6801.0
42.5°	10059.4	9863.0	9334.8	8623.7	8120.4	7493.1	6842.9	6770.5	6959.2	8648.4	7338.6
45°	11701.0	11479.9	10587.5	9449.3	8837.3	8242.3	7571.3	7397.8	7519.7	9378.7	8030.8
47.5°	12761.1	12652.4	11645.7	10274.8	9588.4	9058.4	8404.5	8118.4	8206.1	10206.2	8884.9
50°	13071.9	12978.5	12187.2	10921.2	10297.7	10044.1	9435.9	9056.5	9071.7	11172.9	9908.8
52.5°	12839.3	12801.1	12276.8	11321.6	10949.8	11083.3	10864.0	10335.9	10210.0	12233.0	11018.4
55°	12528.5	12541.8	12339.8	11723.8	11613.3	12051.8	12732.5	12307.3	11773.4	13336.9	12173.8
57.5°	11550.3	11560.0	12089.9	12490.3	12879.3	13409.4	14187.3	14008.0	13386.4	14528.6	13468.5
60°	9300.6	9374.9	10555.1	12332.1	14326.4	16084.4	16275.0	15966.1	15102.4	15901.4	15152.0
62.5°	6644.6	6711.4	8078.4	10705.8	14156.7	19112.1	20130.2	18902.4	17430.5	17954.7	17520.1
65°	3491.0	3479.6	4537.8	7397.8	11924.1	19813.7	26204.7	24115.0	21352.4	20778.5	19808.0
67.5°	1950.5	2013.4	2423.4	3731.3	7771.5	17438.0	30084.8	30700.6	26805.3	23018.7	19708.9
69°	1803.7	1824.6	2099.2	2884.7	5066.0	14387.5	29751.1	32689.2	29104.8	23028.3	18439.0
70°	1752.2	1775.0	2024.8	2657.8	4255.6	11788.7	28536.5	32456.6	29663.4	22517.3	17283.7
72.5°	1571.0	1601.5	1843.7	2389.0	3586.4	6076.4	22986.3	27779.7	26870.2	19680.2	13401.7
75°	1340.4	1391.8	1757.9	2371.8	3397.6	3862.9	15329.3	20696.5	19998.7	14074.8	7603.7
77.5°	554.8	560.6	768.3	1737.0	3565.4	3696.9	8238.5	13110.0	11605.7	6171.8	2289.9
80°	387.1	379.4	383.2	507.2	2877.2	3721.7	4227.0	6667.5	5182.3	1628.2	1071.5
82.5°	326.0	322.2	337.5	318.4	974.3	4223.2	3534.9	3475.8	2440.5	877.1	511.0
85°	215.4	209.7	276.5	289.8	463.3	3353.7	3801.8	2732.2	1818.9	469.0	217.4
87.5°	104.9	106.8	158.3	196.4	245.9	1062.0	3641.7	2160.2	1405.2	204.0	87.7
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: P196140

CATALOG NUMBER: NAV-AF-06-D-UNV-SL3-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5	7586.5
2.5°	7464.5	7407.3	7355.8	7291.0	7241.4	7199.4	7142.2	7140.3	7130.8	7144.2	7148.0
5°	7298.5	7203.2	7058.4	6896.3	6781.9	6631.3	6484.5	6434.9	6379.6	6373.9	6391.0
7.5°	7048.8	6900.1	6652.2	6404.4	6156.5	5902.9	5662.7	5540.7	5422.5	5386.2	5403.4
10°	6770.5	6581.7	6202.3	5798.1	5449.2	5071.7	4705.6	4469.2	4253.7	4162.2	4185.1
12.5°	6553.1	6312.8	5779.0	5254.7	4732.3	4190.8	3708.4	3241.3	2888.5	2730.3	2739.9
15°	6366.2	6059.2	5382.5	4684.6	4030.6	3289.0	2619.7	2078.2	1769.4	1654.9	1651.1
17.5°	6164.1	5792.4	4968.7	4154.5	3306.1	2389.0	1754.1	1433.8	1311.7	1273.7	1273.7
20°	5948.7	5517.8	4535.9	3576.8	2543.5	1668.3	1319.4	1195.4	1149.7	1138.2	1136.4
22.5°	5748.5	5249.0	4101.2	2961.0	1839.9	1266.0	1123.0	1075.3	1067.8	1077.3	1077.3
25°	5590.2	5012.6	3660.7	2312.8	1338.4	1060.1	999.1	993.4	1021.9	1056.3	1062.0
27.5°	5472.1	4800.9	3226.0	1689.3	1052.4	922.8	901.8	926.6	993.4	1062.0	1075.3
30°	5390.0	4619.7	2705.5	1214.5	877.1	808.4	818.0	861.8	962.8	1067.8	1096.3
32.5°	5353.8	4473.0	2181.2	932.3	749.3	711.2	735.9	793.2	898.0	1002.9	1037.2
35°	5388.2	4366.2	1696.9	774.1	655.9	627.3	655.9	714.9	783.6	835.1	856.1
37.5°	5512.1	4328.1	1277.5	686.4	594.8	566.3	589.1	629.2	659.7	678.7	688.3
40°	5773.3	4368.1	1001.0	640.7	560.6	528.1	533.9	552.9	573.9	589.1	591.1
42.5°	6189.0	4499.7	890.4	623.5	539.6	497.7	488.0	501.5	524.4	545.3	549.1
45°	6741.9	4718.9	878.9	629.2	530.1	472.8	453.8	467.1	497.7	531.9	537.7
47.5°	7456.8	5066.0	932.3	659.7	535.7	459.5	430.9	444.3	484.3	530.1	537.7
50°	8303.4	5546.4	1031.4	705.4	562.4	459.5	421.4	432.8	474.8	526.2	533.9
52.5°	9300.6	6215.7	1134.5	751.3	600.6	476.7	425.1	423.3	461.5	509.0	518.6
55°	10400.6	7046.9	1233.6	791.3	621.5	499.5	434.8	411.8	442.3	480.5	488.0
57.5°	11695.3	8185.1	1407.1	829.4	633.0	516.7	446.1	400.4	417.6	444.3	450.0
60°	13451.3	9857.3	1744.5	894.2	654.0	524.4	448.1	388.9	387.1	406.1	408.1
62.5°	15741.2	11815.4	2066.8	970.5	695.9	526.2	440.5	381.4	362.2	368.0	368.0
65°	17369.4	12536.2	1973.4	1035.3	734.1	524.4	432.8	375.6	343.2	333.7	333.7
67.5°	16442.8	11073.7	1675.9	1052.4	737.9	503.4	415.6	362.2	326.0	303.2	303.2
69°	15081.5	9706.7	1538.6	1021.9	707.4	478.5	396.6	348.9	314.6	287.9	287.9
70°	13971.8	8671.3	1454.7	985.7	671.2	457.6	379.4	335.5	303.2	280.3	278.3
72.5°	10431.2	5786.6	1243.1	850.4	551.1	387.1	331.7	299.3	272.6	257.4	257.4
75°	5504.5	2900.0	1018.1	694.0	425.1	308.8	272.6	251.6	236.4	234.6	232.6
77.5°	1803.7	1311.7	732.1	522.4	312.7	240.2	217.4	204.0	202.1	209.7	209.7
80°	974.3	783.6	471.0	352.7	217.4	179.2	167.8	165.9	171.5	183.0	183.0
82.5°	472.8	387.1	280.3	217.4	148.7	131.6	131.6	133.5	141.1	154.5	154.5
85°	204.0	183.0	162.0	122.0	91.6	81.9	93.4	102.9	108.6	118.3	122.0
87.5°	97.3	85.8	74.4	47.7	40.0	41.9	49.6	61.0	72.4	80.1	81.9
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)