

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: P270287

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7027-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270287  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)  
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-SL4-7027-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 2700K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4743.5 lumens  
Efficiency: N/A  
Efficacy: 70.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B0 - U0 - G2

Input Watts (W): 67  
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

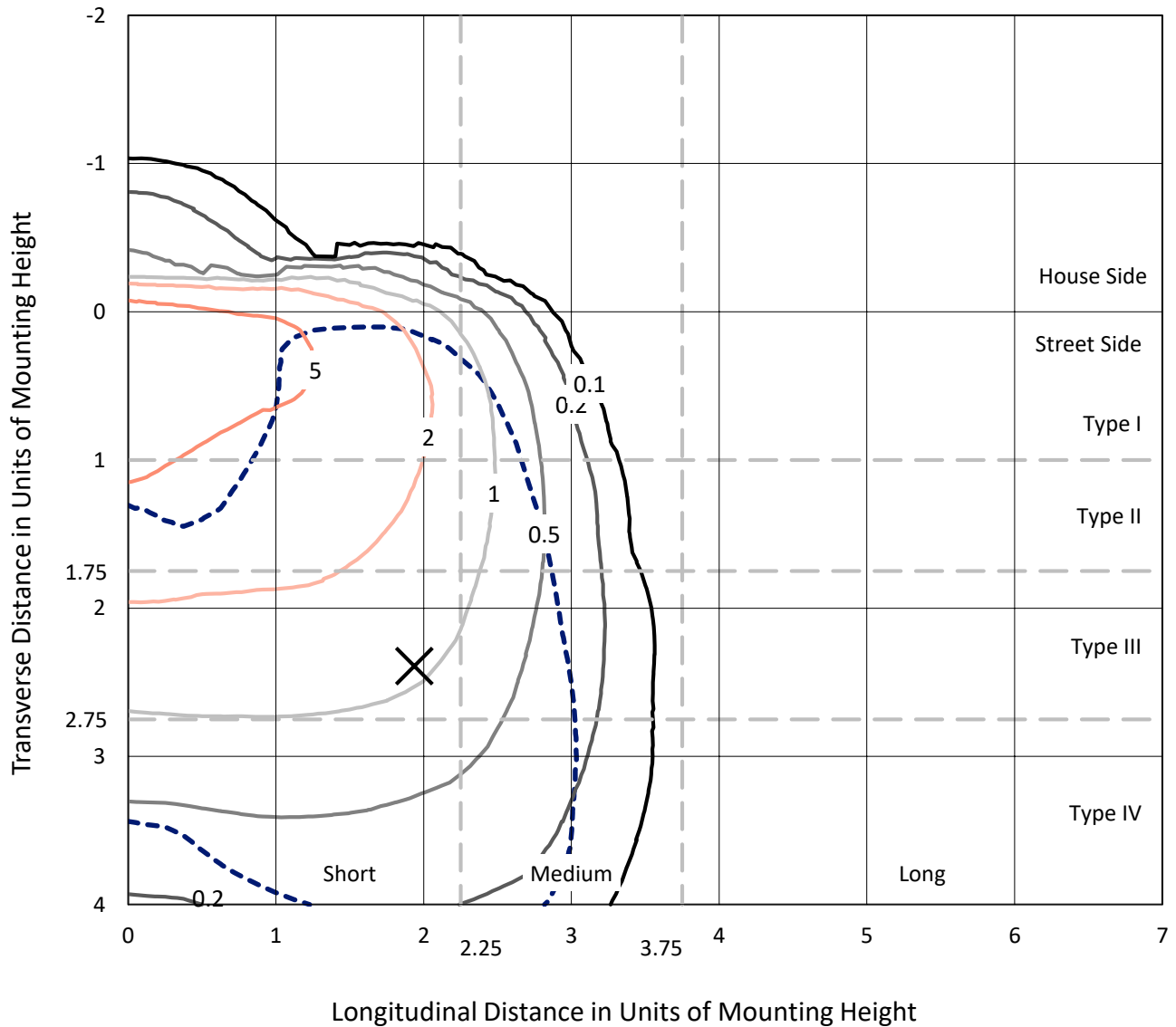


REPORT NUMBER: P270287

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-7027-1200-HSS

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

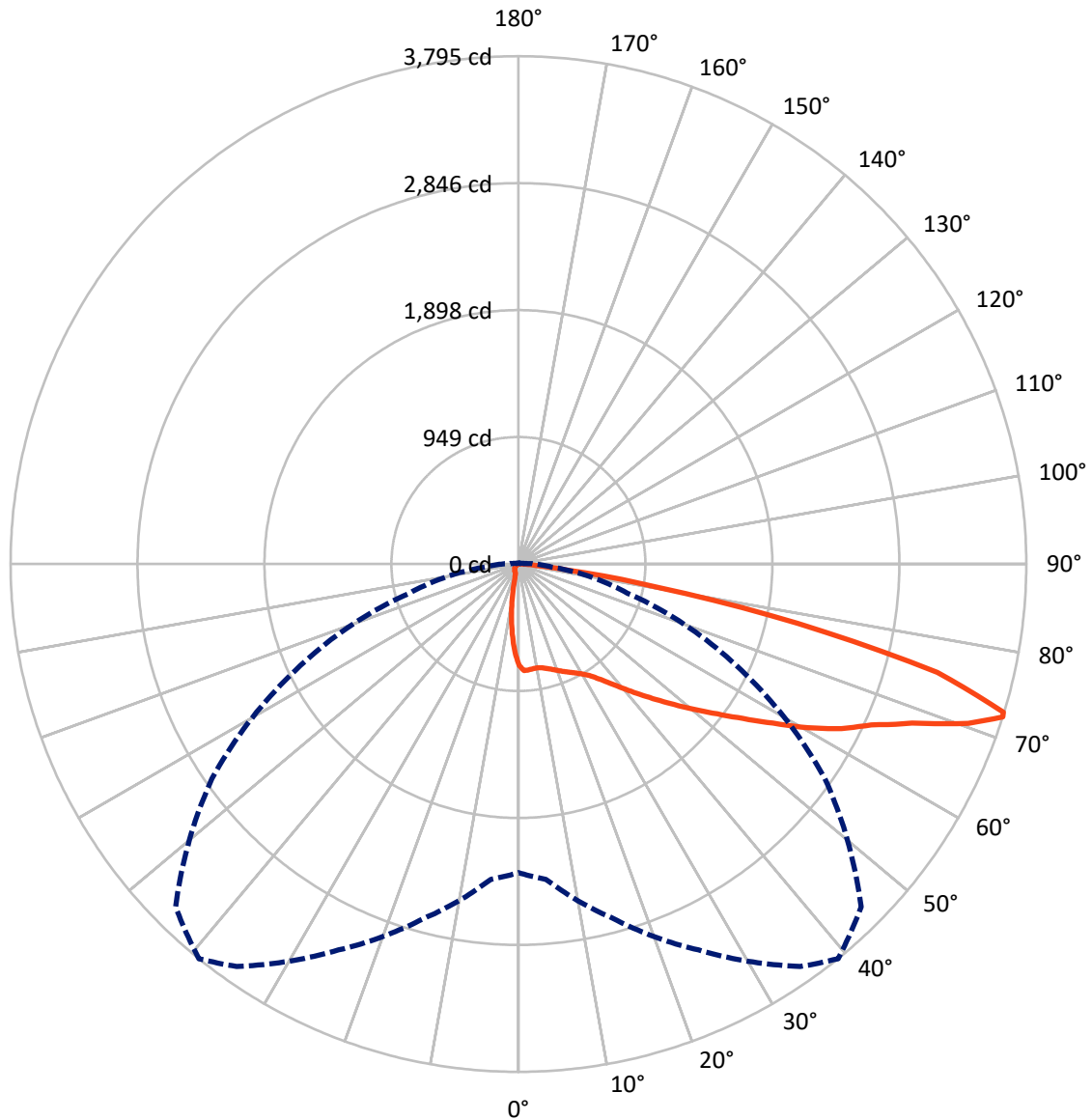


Based on 10 foot mounting height. Maximum calculated value = 8 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270287

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-7027-1200-HSS

### Luminous Intensity Polar Plot



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

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CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-7027-1200-HSS

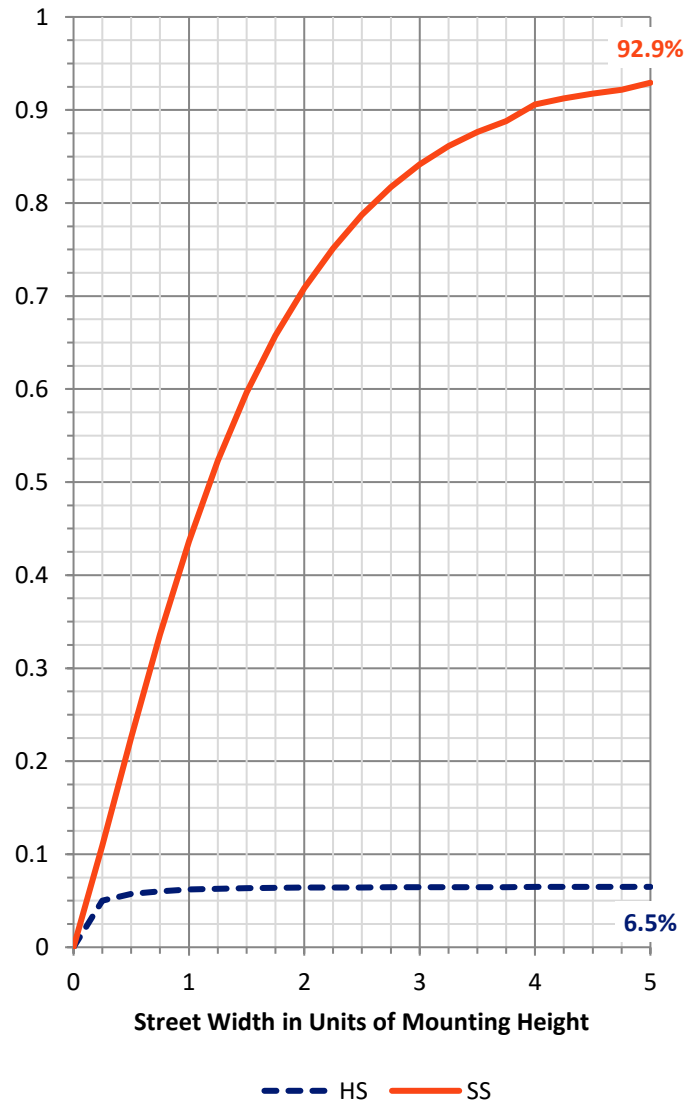
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	310.9	0.0	310.9
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	4432.6	0.0	4432.6
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	4743.5	0.0	4743.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.8	1.3
10°-20°	149.5	3.2
20°-30°	248.3	5.2
30°-40°	395.7	8.3
40°-50°	653.2	13.8
50°-60°	986.5	20.8
60°-70°	1285.1	27.1
70°-80°	868.3	18.3
80°-90°	95.1	2.0
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°	4743.5	100.0
0°-180°	4743.5	100.0

**Coefficient of Utilization**



REPORT NUMBER: P270287

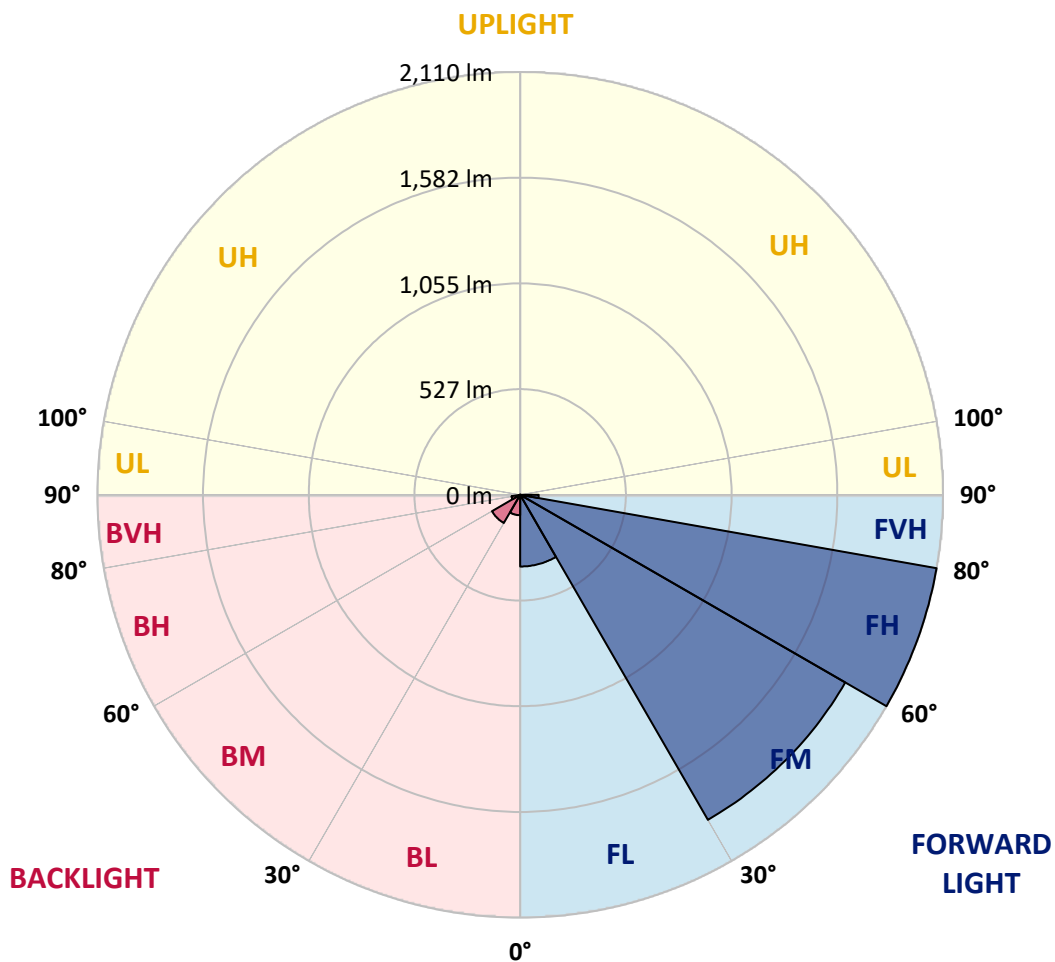
CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-7027-1200-HSS

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	357.8	7.5			
FM (30°-60°)	1872.8	39.5			
FH (60°-80°)	2109.7	44.5			G2/5000
FVH (80°-90°)	92.4	1.9			G1/100
BL (0°-30°)	101.8	2.1	B0/110		
BM (30°-60°)	162.7	3.4	B0/220		
BH (60°-80°)	43.7	0.9	B0/110		G0/110
BVH (80°-90°)	2.7	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G2**

Type IV Short





REPORT NUMBER: P270287

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-7027-1200-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	759.2	759.2	759.2	759.2	759.2	759.2	759.2	759.2	759.2	759.2	759.2
2.5°	808.5	809.9	808.0	804.7	799.9	796.8	792.8	783.9	772.6	763.0	751.8
5°	814.9	815.5	813.2	806.9	799.5	795.4	790.1	780.4	768.9	755.6	735.4
7.5°	816.6	816.3	813.7	805.8	794.3	789.0	780.1	768.2	756.3	743.9	721.2
10°	815.9	815.9	814.0	806.6	793.6	788.7	778.7	766.0	751.1	738.8	714.5
12.5°	813.2	814.9	813.7	809.6	799.9	796.2	787.2	774.5	760.3	747.7	722.0
15°	816.6	818.9	821.1	819.7	814.0	810.7	802.5	789.4	777.8	764.5	736.9
17.5°	830.0	835.0	840.2	840.5	834.5	828.5	819.3	805.8	794.6	782.3	752.5
20°	855.5	859.1	868.9	870.7	858.8	850.2	837.2	821.5	810.4	799.9	767.1
22.5°	893.2	897.1	905.0	902.3	882.2	872.3	855.8	837.8	826.4	820.4	783.9
25°	950.1	951.2	953.1	941.6	908.4	897.1	877.0	857.0	847.6	846.8	807.7
27.5°	1017.3	1018.8	1010.6	984.8	937.6	922.9	900.2	882.0	877.5	883.0	837.8
30°	1094.0	1094.5	1071.7	1029.9	971.1	955.0	931.5	911.4	915.5	929.2	876.7
32.5°	1172.7	1169.1	1137.8	1083.3	1016.9	997.5	977.4	957.2	969.2	997.2	933.3
35°	1244.7	1243.3	1206.3	1143.0	1076.6	1059.5	1044.9	1023.6	1043.0	1088.4	1010.6
37.5°	1316.7	1315.6	1273.4	1207.4	1150.0	1137.8	1127.0	1110.6	1142.1	1208.9	1113.9
40°	1396.1	1394.3	1342.4	1279.0	1235.3	1228.7	1222.4	1215.2	1269.3	1362.2	1242.5
42.5°	1494.2	1486.1	1415.5	1357.0	1329.4	1331.3	1331.6	1338.7	1423.4	1544.5	1394.3
45°	1606.9	1588.6	1489.0	1440.5	1432.6	1443.8	1455.1	1484.4	1602.8	1754.5	1562.2
47.5°	1716.1	1686.7	1573.7	1530.4	1546.4	1569.6	1596.4	1653.8	1804.1	1974.1	1714.2
50°	1810.1	1779.8	1657.6	1621.7	1672.9	1707.1	1754.8	1841.7	2016.7	2159.9	1810.1
52.5°	1883.8	1860.0	1746.2	1722.4	1813.0	1860.0	1934.9	2049.2	2217.2	2282.1	1877.2
55°	1938.4	1926.4	1831.4	1834.7	1968.9	2036.7	2130.1	2259.1	2386.5	2377.3	1927.6
57.5°	1999.8	1990.6	1920.4	1967.1	2156.6	2244.1	2351.9	2455.5	2509.7	2453.7	1976.7
60°	2062.9	2065.9	2028.6	2127.4	2388.5	2485.4	2579.4	2605.1	2615.1	2531.2	2028.6
62.5°	2110.6	2123.4	2126.6	2300.4	2626.4	2709.1	2749.8	2731.4	2729.3	2635.3	2024.5
65°	2165.5	2198.6	2253.8	2490.2	2842.6	2897.0	2926.1	2952.5	2896.8	2666.3	1825.4
67.5°	2260.1	2312.3	2436.6	2722.9	3092.4	3173.1	3255.5	3227.5	2921.6	2351.9	1390.5
70°	2387.7	2451.5	2670.8	3026.8	3431.4	3566.5	3635.4	3205.4	2480.5	1625.2	733.5
72°	2307.1	2365.0	2743.1	3181.9	3671.6	3795.3	3622.8	2796.1	1798.1	842.4	245.7
72.5°	2228.9	2288.5	2720.0	3180.1	3695.4	3790.2	3540.3	2634.5	1591.2	655.6	169.3
75°	1546.4	1621.7	2331.7	2858.6	3337.2	3233.1	2708.7	1595.3	576.5	112.6	56.0
77.5°	799.5	857.7	1414.4	2020.0	2325.8	2130.1	1600.9	692.1	159.5	59.6	36.9
80°	495.5	524.3	661.5	995.3	1208.2	1056.8	706.2	279.7	102.1	35.5	29.5
82.5°	256.6	278.6	416.5	401.6	446.4	371.0	260.7	234.2	63.1	22.0	30.3
85°	84.4	89.6	255.7	266.9	190.9	128.3	115.6	223.4	18.2	14.2	25.7
87.5°	11.1	13.0	89.9	152.9	94.0	58.2	69.3	78.7	6.4	7.8	7.0
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: P270287

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-7027-1200-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	759.2	759.2	759.2	759.2	759.2	759.2	759.2	759.2	759.2	759.2	759.2
2.5°	744.3	739.5	724.2	708.9	691.3	675.3	662.6	654.4	658.2	645.9	647.8
5°	723.0	710.7	677.2	641.0	601.9	565.4	536.3	514.5	510.4	491.8	492.6
7.5°	702.6	682.4	627.9	568.3	503.4	450.8	403.1	361.4	346.4	331.1	322.2
10°	691.3	663.8	586.6	499.6	408.3	331.1	264.0	211.5	189.5	173.5	165.6
12.5°	694.7	658.2	555.6	437.5	317.3	219.2	149.2	110.8	97.3	89.9	87.2
15°	705.9	659.3	527.7	376.6	230.9	132.8	87.7	75.0	73.8	73.4	73.1
17.5°	716.4	660.4	498.2	313.1	154.4	84.6	70.4	69.3	69.3	69.3	69.3
20°	727.2	660.8	465.7	246.9	101.4	69.3	66.4	65.7	66.4	66.4	66.4
22.5°	739.8	663.4	434.4	182.4	75.0	65.2	63.4	63.1	63.4	63.4	63.1
25°	755.6	669.0	400.6	130.6	67.8	62.6	60.7	60.4	60.7	60.4	60.4
27.5°	776.3	676.5	360.9	93.7	64.9	60.0	58.2	58.2	58.2	57.9	57.9
30°	803.3	685.3	307.9	73.8	62.0	57.4	56.0	56.0	55.5	55.2	55.2
32.5°	841.6	699.9	250.2	66.7	58.6	54.1	52.6	53.0	52.6	52.2	51.8
35°	896.1	722.6	193.1	63.1	55.2	50.8	49.2	49.2	49.2	48.5	48.5
37.5°	973.3	757.5	144.6	59.3	51.8	47.4	45.5	45.5	45.2	44.3	44.7
40°	1068.8	801.0	104.8	56.0	48.5	43.7	42.1	41.4	40.7	40.0	40.0
42.5°	1183.5	843.5	78.7	52.6	45.2	40.7	38.7	38.1	36.6	35.8	35.5
45°	1312.2	888.7	65.2	48.5	41.4	37.3	35.8	34.3	32.5	31.4	30.9
47.5°	1420.8	916.2	58.2	44.3	37.6	34.0	32.5	30.3	27.9	27.2	27.2
50°	1486.1	904.7	52.2	40.2	34.0	30.6	28.7	25.7	24.3	23.4	23.1
52.5°	1522.5	870.4	47.4	36.9	30.6	26.9	24.3	21.6	20.9	20.1	20.1
55°	1547.5	820.7	42.1	33.5	27.6	23.4	20.5	18.7	17.8	17.5	17.2
57.5°	1571.5	760.3	37.3	30.6	24.7	20.9	17.5	16.8	15.4	14.9	14.9
60°	1578.5	677.2	32.8	27.2	22.0	18.2	15.4	14.2	12.7	12.2	12.2
62.5°	1488.2	538.9	29.0	23.1	19.5	15.7	13.5	11.9	10.4	10.4	10.4
65°	1243.7	365.8	25.1	20.1	17.2	13.5	11.6	9.7	9.0	9.0	9.0
67.5°	866.2	203.9	21.3	17.2	14.6	11.1	9.7	8.3	7.8	8.3	8.3
70°	390.5	80.8	17.8	14.2	11.9	9.3	8.3	7.0	7.8	7.8	7.8
72°	117.0	43.3	14.9	11.6	9.7	8.3	7.0	6.6	7.5	7.8	7.8
72.5°	86.9	38.7	14.2	11.1	9.7	7.8	6.6	6.6	7.5	7.8	7.8
75°	44.7	26.5	10.8	8.3	7.0	6.4	5.6	6.4	7.5	7.5	7.5
77.5°	35.0	21.6	9.0	6.4	6.0	5.6	5.2	6.0	6.6	6.6	6.6
80°	32.8	14.2	7.0	6.0	5.2	4.9	4.9	5.2	6.0	6.4	6.4
82.5°	33.1	11.6	6.4	5.6	4.9	4.5	4.5	4.9	5.6	6.0	6.0
85°	21.3	7.8	5.6	4.9	4.5	4.1	4.1	4.5	5.2	5.6	5.6
87.5°	7.0	6.0	4.9	4.5	3.8	3.8	3.8	3.8	4.5	4.9	5.2
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)