

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: P195991

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195991  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)  
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-AFL-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4238.1 lumens  
Efficiency: N/A  
Efficacy: 96.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G0

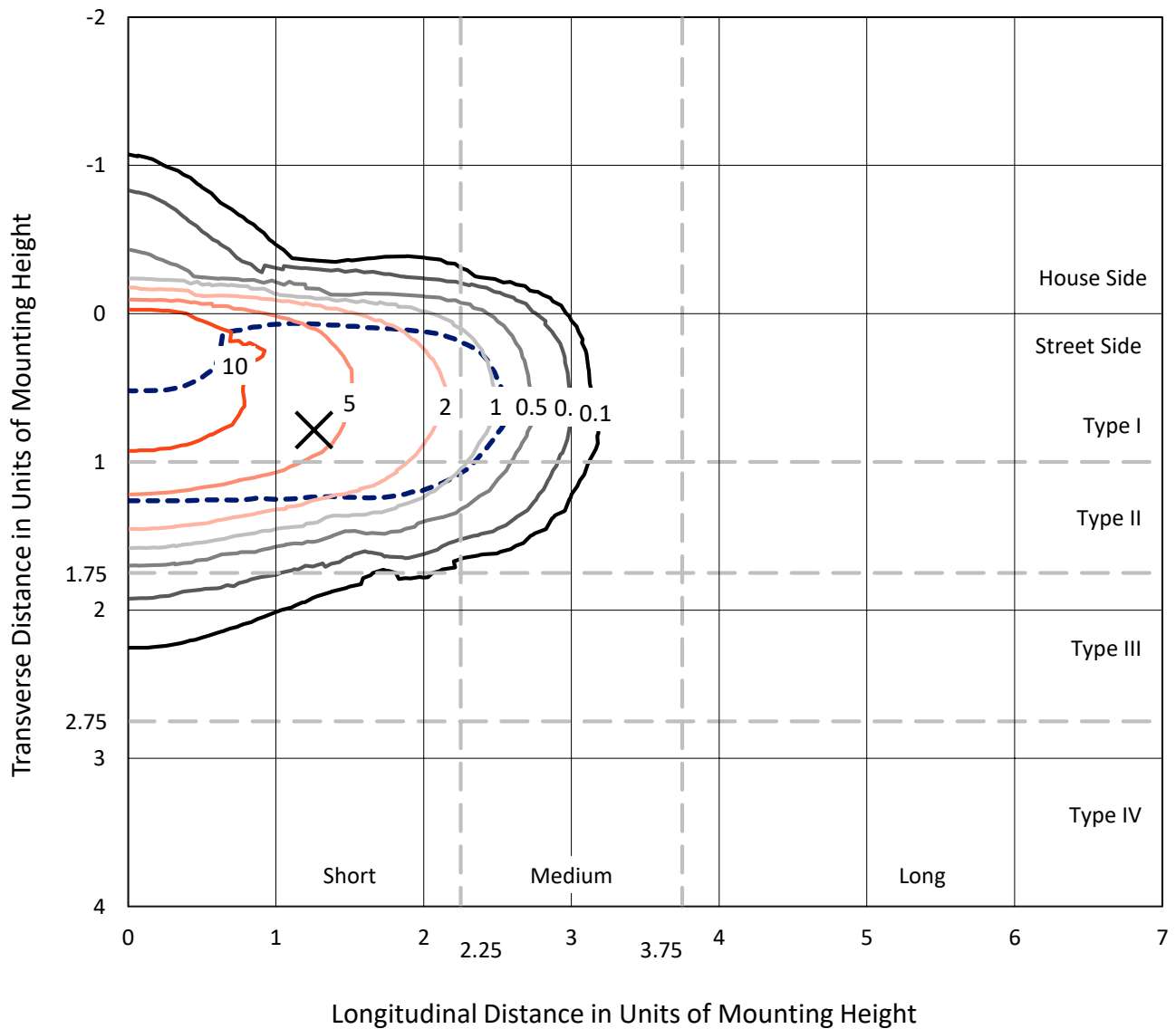
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

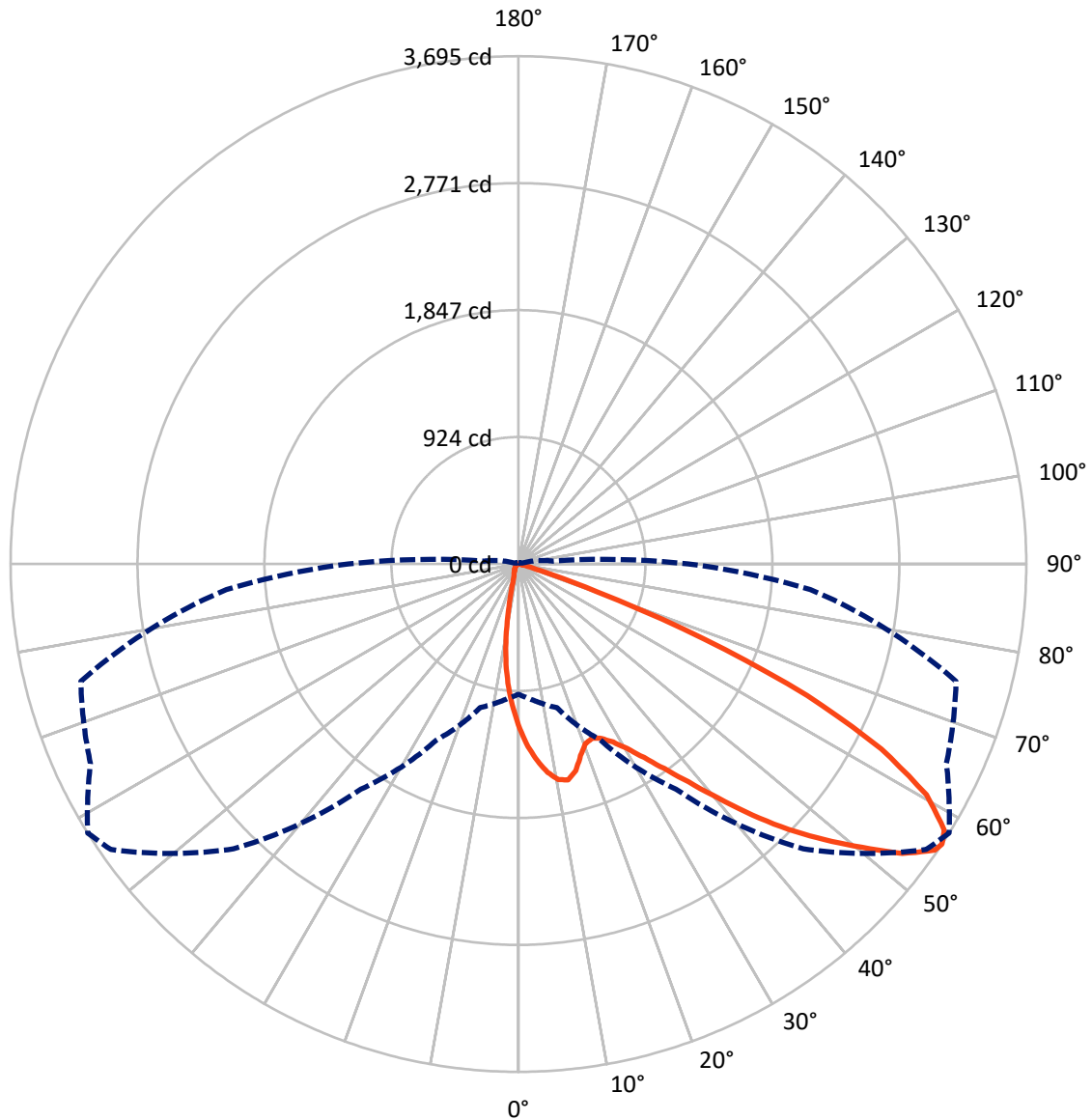
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.9 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 56-Deg Vertical

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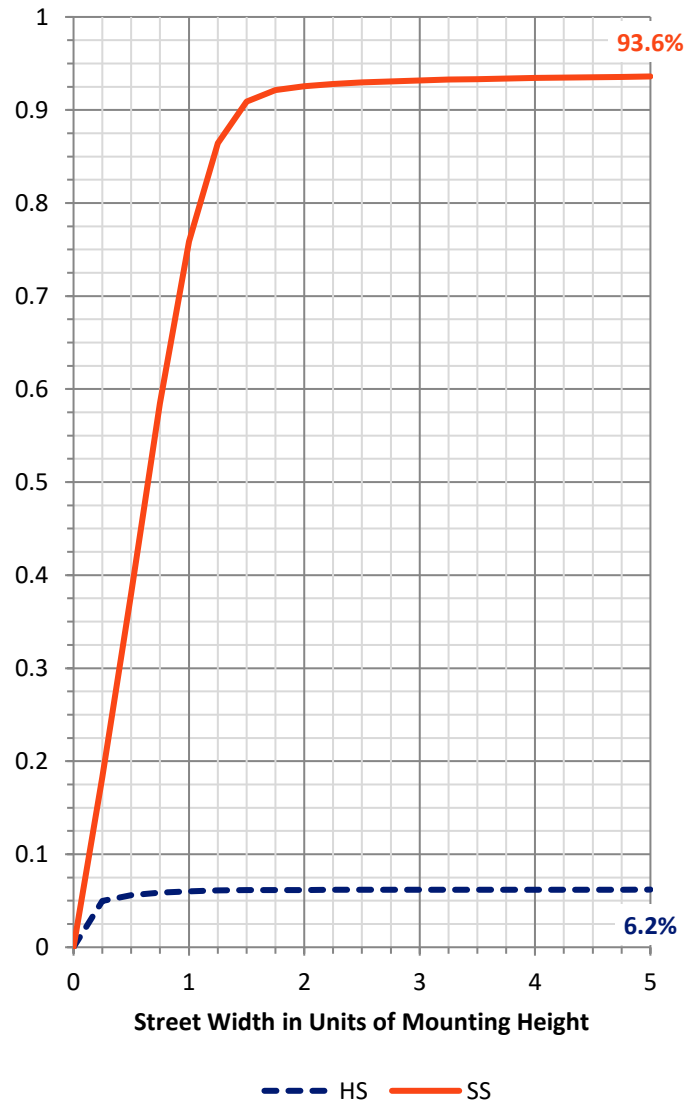
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	264.6	0.0	264.6
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	3973.5	0.0	3973.5
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	4238.1	0.0	4238.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.4	2.4
10°-20°	238.2	5.6
20°-30°	400.8	9.5
30°-40°	686.3	16.2
40°-50°	1035.6	24.4
50°-60°	1076.5	25.4
60°-70°	604.3	14.3
70°-80°	82.8	2.0
80°-90°	11.2	0.3
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°	4238.1	100.0
0°-180°	4238.1	100.0

**Coefficient of Utilization**



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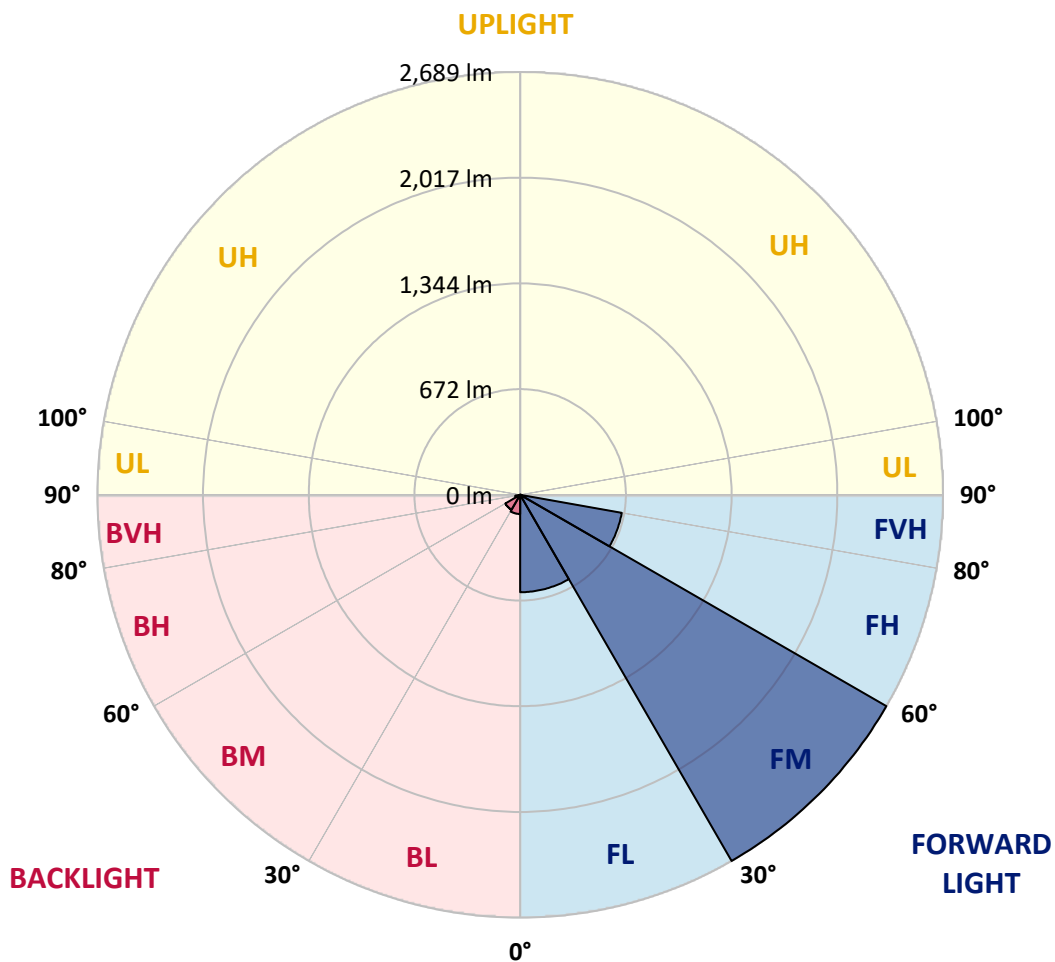
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	619.3	14.6			
FM	(30°-60°)	2688.8	63.4			
FH	(60°-80°)	655.8	15.5			G0/660
FVH	(80°-90°)	9.7	0.2			G0/10
BL	(0°-30°)	122.0	2.9	B1/500		
BM	(30°-60°)	109.6	2.6	B0/220		
BH	(60°-80°)	31.4	0.7	B0/110		G0/110
BVH	(80°-90°)	1.6	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-G0**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9
2.5°	1443.7	1435.0	1426.0	1409.1	1393.6	1369.7	1336.7	1328.6	1302.7	1260.1	1220.3
5°	1568.2	1566.6	1560.4	1546.9	1530.0	1501.0	1463.7	1438.9	1398.8	1331.6	1254.9
7.5°	1494.5	1508.0	1530.4	1562.0	1583.4	1580.5	1552.0	1530.4	1490.6	1398.8	1288.8
10°	1259.8	1262.3	1293.0	1359.7	1465.1	1563.4	1600.5	1594.8	1558.2	1457.6	1318.6
12.5°	1177.0	1178.5	1185.7	1207.1	1275.6	1412.7	1581.2	1611.6	1608.6	1513.9	1350.3
15°	1183.5	1184.4	1186.3	1193.2	1212.5	1281.5	1482.9	1560.1	1641.0	1567.3	1381.3
17.5°	1234.5	1233.9	1227.7	1221.3	1227.4	1250.0	1382.6	1464.1	1634.2	1612.2	1406.9
20°	1334.1	1337.3	1316.6	1287.9	1273.0	1274.0	1333.1	1394.3	1596.0	1647.2	1426.0
22.5°	1474.2	1476.4	1442.5	1392.6	1349.0	1327.0	1343.5	1375.9	1552.0	1679.5	1441.4
25°	1641.3	1641.3	1593.8	1523.0	1455.4	1407.2	1393.0	1405.2	1535.2	1716.0	1457.0
27.5°	1821.7	1828.2	1766.1	1673.3	1584.0	1513.6	1469.0	1466.7	1548.1	1761.9	1474.5
30°	2018.0	2023.8	1950.1	1836.6	1730.8	1640.6	1572.1	1557.2	1597.6	1823.6	1500.0
32.5°	2213.3	2218.2	2136.6	2020.9	1897.7	1791.7	1701.5	1677.8	1686.5	1913.8	1537.5
35°	2461.6	2462.5	2359.4	2221.7	2090.1	1965.6	1851.4	1828.2	1818.5	2027.7	1591.5
37.5°	2659.2	2651.4	2586.1	2455.8	2304.8	2174.8	2040.6	2010.2	1987.0	2187.8	1675.3
40°	2705.7	2705.7	2696.1	2656.9	2536.9	2411.8	2281.8	2236.6	2185.1	2376.2	1787.8
42.5°	2584.5	2592.3	2656.3	2741.3	2742.3	2662.1	2535.0	2496.8	2406.3	2590.9	1910.7
45°	2313.2	2315.4	2469.1	2698.6	2854.4	2900.4	2806.7	2753.9	2628.5	2814.0	2023.2
47.5°	2215.5	2222.7	2288.0	2568.6	2862.9	3093.4	3067.2	2994.8	2834.1	3017.8	2128.2
50°	2065.5	2074.2	2154.1	2377.2	2787.2	3217.3	3316.5	3239.0	3021.3	3187.5	2180.3
52.5°	1706.6	1720.2	1833.0	2124.1	2598.1	3222.4	3544.8	3498.3	3213.1	3278.4	2174.2
55°	1174.3	1184.4	1316.0	1658.1	2216.5	3064.4	3643.1	3675.2	3384.1	3298.7	2144.4
56°	947.4	984.9	1081.3	1412.7	1999.3	2929.8	3620.5	3694.5	3434.9	3295.5	2131.5
57.5°	626.4	633.4	738.5	1023.7	1605.4	2637.9	3518.3	3653.2	3500.2	3279.1	2122.1
60°	294.6	297.8	335.6	472.4	868.8	1922.3	3186.2	3410.0	3524.2	3244.4	2121.8
62.5°	192.1	192.7	197.2	225.4	355.4	1047.0	2641.4	2963.5	3325.9	3240.6	2115.7
65°	158.1	159.7	154.3	157.8	186.0	394.8	1863.1	2310.3	2860.6	3149.4	2046.4
67.5°	139.3	139.7	132.3	128.1	136.2	173.3	938.7	1457.3	2139.6	2676.0	1685.6
70°	127.1	126.7	118.4	108.6	108.9	115.1	305.9	605.3	1183.8	1588.9	967.8
72.5°	112.8	113.4	108.6	95.0	90.5	81.5	115.1	163.3	402.8	510.2	255.1
75°	98.9	97.7	92.8	84.1	75.7	54.6	57.9	69.6	105.1	104.1	54.9
77.5°	75.0	73.8	76.0	71.8	59.1	38.2	31.7	36.2	47.6	44.3	22.3
80°	57.2	56.6	51.8	61.5	54.0	28.7	21.7	22.3	25.9	23.6	10.9
82.5°	41.4	41.0	39.1	37.8	34.3	21.0	16.5	17.5	19.4	16.5	8.1
85°	15.9	15.9	30.7	25.9	23.6	14.2	11.7	12.6	14.8	12.0	5.5
87.5°	2.6	2.6	20.7	17.2	10.6	7.2	7.5	8.1	8.7	7.2	4.2
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°	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9	1199.9
2.5°	1196.6	1175.1	1127.5	1081.6	1041.5	997.5	975.2	949.3	939.7	920.2	922.2
5°	1209.0	1163.7	1068.4	967.8	875.6	781.8	715.2	652.5	617.6	583.0	583.0
7.5°	1221.6	1152.4	1004.9	844.2	689.1	528.4	414.5	323.4	272.6	238.7	237.6
10°	1230.3	1137.8	932.8	701.0	472.1	272.2	164.3	129.3	116.7	111.2	110.9
12.5°	1241.7	1123.3	850.7	532.2	262.2	129.3	102.5	97.0	94.7	93.4	93.4
15°	1251.4	1102.6	751.2	357.9	137.8	97.0	88.3	86.3	86.0	85.7	86.0
17.5°	1253.6	1073.2	631.8	209.5	99.9	84.7	80.8	79.2	79.2	78.9	78.9
20°	1248.4	1034.4	499.9	129.3	86.3	77.9	73.8	71.8	71.5	71.5	71.5
22.5°	1237.8	984.9	369.6	98.0	78.6	71.8	66.3	64.3	64.3	64.7	65.0
25°	1224.5	926.4	253.8	84.4	72.7	65.4	59.8	57.9	58.5	59.1	59.5
27.5°	1207.7	856.5	166.2	73.0	65.0	58.8	54.0	52.7	54.0	55.3	56.0
30°	1190.9	779.9	112.5	63.4	56.3	51.8	48.8	48.5	50.4	53.4	53.7
32.5°	1179.9	701.3	85.0	56.9	49.5	45.6	44.3	44.9	47.9	51.0	51.8
35°	1179.0	624.7	72.4	51.8	44.9	41.4	40.7	42.7	45.9	48.5	49.1
37.5°	1194.1	552.9	65.7	47.9	41.4	37.8	36.8	40.4	43.4	45.9	46.5
40°	1224.8	488.6	61.1	44.3	38.5	34.3	33.7	36.5	39.5	42.4	43.4
42.5°	1263.3	428.4	56.0	40.7	35.3	30.4	29.8	32.0	34.9	39.1	39.8
45°	1296.6	372.5	50.4	36.8	31.7	26.2	25.9	28.4	30.7	34.6	35.3
47.5°	1324.7	325.9	45.3	32.6	27.2	23.3	22.9	24.2	25.6	29.1	29.8
50°	1309.9	286.5	40.1	26.8	22.0	20.0	19.7	19.7	21.4	24.9	25.6
52.5°	1273.4	261.9	35.3	22.3	18.1	17.2	16.2	16.5	18.1	19.7	20.0
55°	1243.9	250.3	31.0	19.7	15.2	14.2	13.3	12.9	13.3	12.6	12.0
56°	1236.7	249.0	30.1	19.0	14.5	13.3	12.0	11.4	10.9	9.7	9.4
57.5°	1233.6	249.0	28.4	17.8	13.6	12.0	10.3	9.1	7.8	6.8	6.8
60°	1231.0	250.6	26.5	15.5	11.7	9.7	7.5	5.5	4.5	4.5	4.5
62.5°	1225.5	249.9	24.2	12.9	10.0	7.5	4.5	3.6	3.3	3.6	3.9
65°	1163.7	232.2	21.4	10.3	7.8	5.2	2.6	2.6	2.9	3.6	3.9
67.5°	937.7	175.9	17.5	8.1	5.5	3.9	2.3	2.3	2.9	3.6	3.9
70°	515.1	92.8	14.8	5.8	4.2	3.3	2.3	1.9	2.9	3.6	3.9
72.5°	125.8	38.8	13.6	4.5	3.9	2.9	1.9	1.9	2.9	3.6	3.9
75°	31.0	29.1	10.9	3.6	3.3	2.6	1.9	1.9	2.9	3.6	3.9
77.5°	14.5	38.5	7.5	3.3	2.9	2.3	1.9	1.9	2.9	3.6	3.6
80°	8.7	29.1	4.5	2.9	2.6	2.3	1.9	1.9	2.9	3.6	3.9
82.5°	5.2	8.4	3.3	2.9	2.6	1.9	1.9	1.9	2.9	3.6	3.9
85°	4.5	4.2	3.3	2.9	2.6	2.3	1.9	1.9	3.3	3.9	3.9
87.5°	3.6	3.3	2.9	2.6	2.6	2.3	1.9	1.9	2.9	3.6	3.9
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)