

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: P196951

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-8030-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196951  
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-8030-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 3000K, 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: 3381 lumens  
Efficiency: N/A  
Efficacy: 76.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B0 - 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

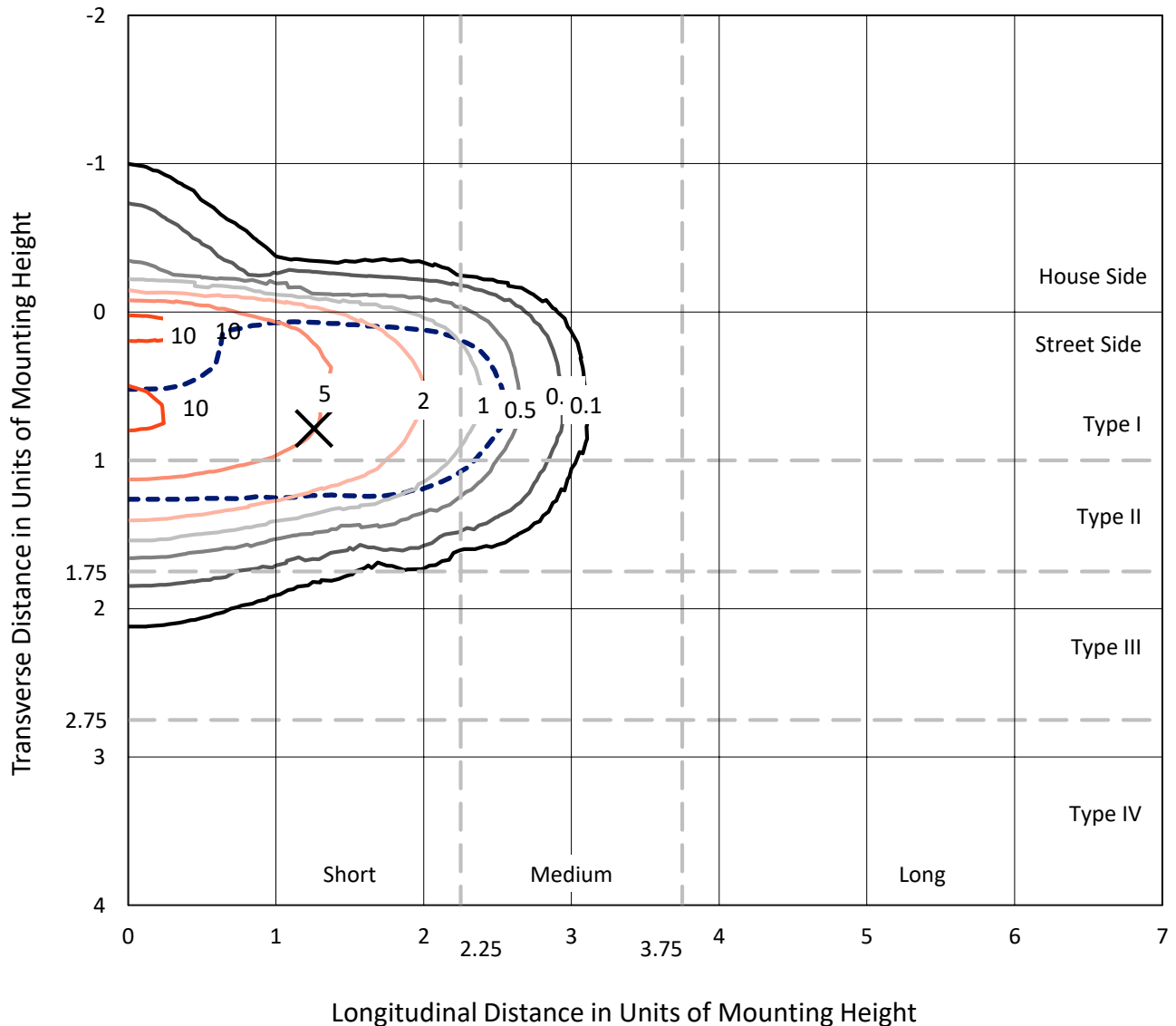


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

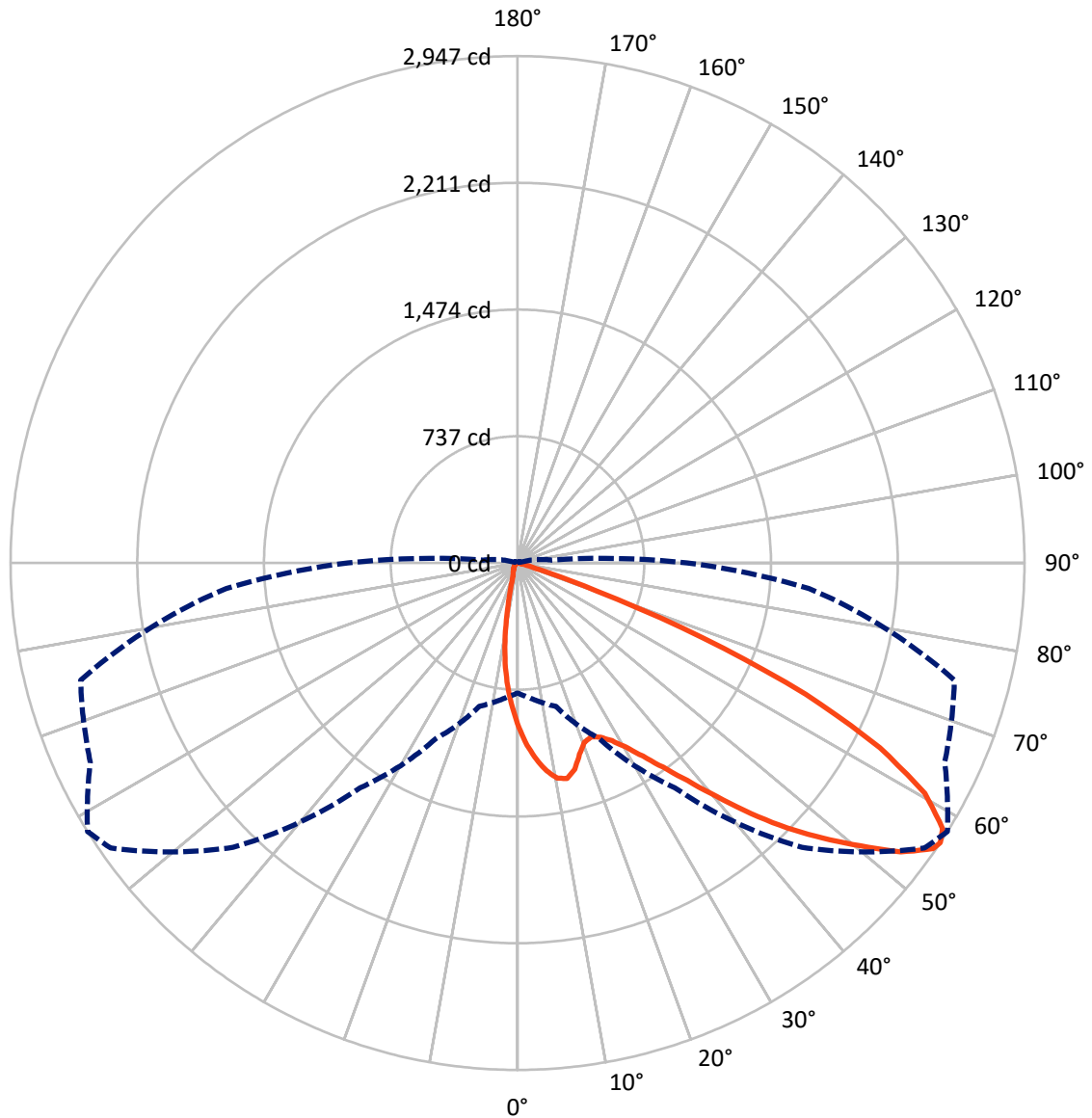


Based on 10 foot mounting height. Maximum calculated value = 11.9 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



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

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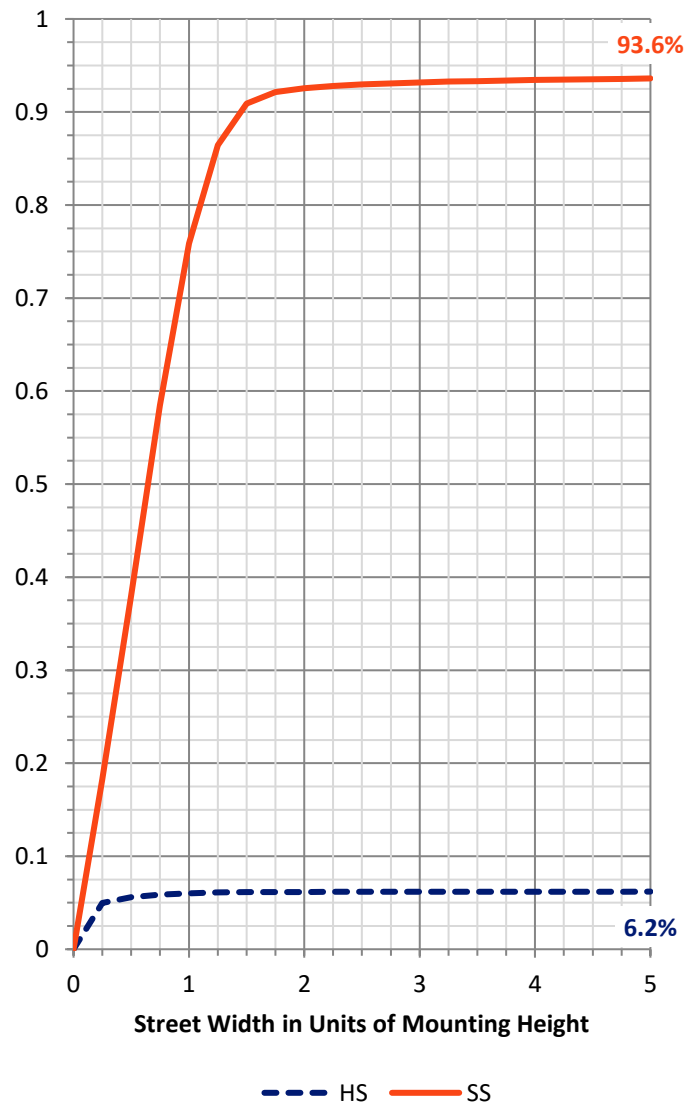
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	211.0	0.0	211.0
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	3170.0	0.0	3170.0
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	3381.0	0.0	3381.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.7	2.4
10°-20°	190.0	5.6
20°-30°	319.7	9.5
30°-40°	547.5	16.2
40°-50°	826.2	24.4
50°-60°	858.8	25.4
60°-70°	482.1	14.3
70°-80°	66.1	2.0
80°-90°	8.9	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°	3381.0	100.0
0°-180°	3381.0	100.0

**Coefficient of Utilization**



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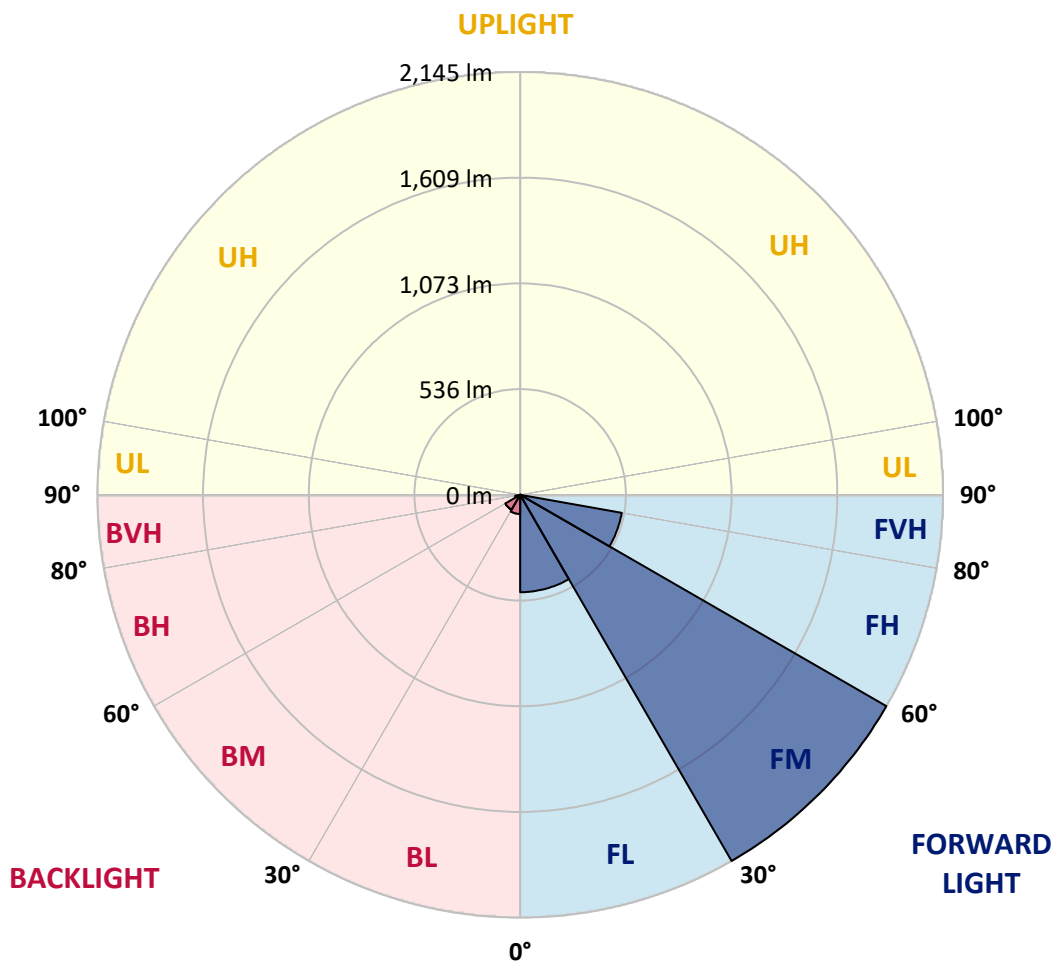
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	494.0	14.6			
FM	(30°-60°)	2145.0	63.4			
FH	(60°-80°)	523.2	15.5			G0/660
FVH	(80°-90°)	7.7	0.2			G0/10
BL	(0°-30°)	97.4	2.9	B0/110		
BM	(30°-60°)	87.4	2.6	B0/220		
BH	(60°-80°)	25.0	0.7	B0/110		G0/110
BVH	(80°-90°)	1.2	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G0**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	957.3	957.3	957.3	957.3	957.3	957.3	957.3	957.3	957.3	957.3	957.3
2.5°	1151.8	1144.8	1137.6	1124.2	1111.8	1092.7	1066.4	1059.9	1039.3	1005.2	973.5
5°	1251.1	1249.8	1244.9	1234.0	1220.6	1197.4	1167.8	1147.9	1115.9	1062.3	1001.1
7.5°	1192.3	1203.1	1220.9	1246.2	1263.2	1260.9	1238.2	1220.9	1189.2	1115.9	1028.2
10°	1005.0	1007.0	1031.6	1084.7	1168.8	1247.2	1276.9	1272.2	1243.1	1162.9	1051.9
12.5°	938.9	940.2	945.9	962.9	1017.6	1127.0	1261.4	1285.6	1283.3	1207.7	1077.2
15°	944.1	944.9	946.4	951.8	967.3	1022.3	1183.0	1244.6	1309.1	1250.3	1102.0
17.5°	984.9	984.3	979.4	974.3	979.2	997.2	1103.0	1168.0	1303.7	1286.2	1122.4
20°	1064.3	1066.9	1050.4	1027.4	1015.6	1016.3	1063.5	1112.3	1273.3	1314.0	1137.6
22.5°	1176.0	1177.8	1150.7	1111.0	1076.2	1058.6	1071.8	1097.6	1238.2	1339.8	1150.0
25°	1309.4	1309.4	1271.5	1215.0	1161.0	1122.6	1111.3	1121.1	1224.8	1369.0	1162.3
27.5°	1453.3	1458.5	1408.9	1334.9	1263.7	1207.5	1171.9	1170.1	1235.1	1405.6	1176.3
30°	1609.9	1614.5	1555.7	1465.2	1380.8	1308.9	1254.2	1242.3	1274.5	1454.9	1196.6
32.5°	1765.7	1769.6	1704.6	1612.2	1513.9	1429.3	1357.3	1338.5	1345.5	1526.8	1226.6
35°	1963.8	1964.6	1882.3	1772.4	1667.4	1568.1	1477.0	1458.5	1450.7	1617.6	1269.6
37.5°	2121.4	2115.2	2063.1	1959.2	1838.7	1735.0	1627.9	1603.7	1585.1	1745.3	1336.5
40°	2158.6	2158.6	2150.8	2119.6	2023.9	1924.1	1820.4	1784.3	1743.2	1895.7	1426.2
42.5°	2061.8	2068.0	2119.1	2186.9	2187.7	2123.7	2022.4	1991.9	1919.7	2067.0	1524.2
45°	1845.4	1847.2	1969.7	2152.9	2277.2	2313.8	2239.0	2197.0	2096.9	2245.0	1614.0
47.5°	1767.5	1773.2	1825.3	2049.2	2283.9	2467.8	2446.9	2389.2	2261.0	2407.5	1697.8
50°	1647.8	1654.8	1718.5	1896.5	2223.6	2566.6	2645.8	2583.9	2410.3	2542.9	1739.4
52.5°	1361.5	1372.3	1462.3	1694.5	2072.7	2570.8	2827.9	2790.8	2563.3	2615.4	1734.5
55°	936.9	944.9	1049.9	1322.8	1768.3	2444.6	2906.4	2931.9	2699.7	2631.6	1710.7
56°	755.8	785.7	862.6	1127.0	1594.9	2337.3	2888.3	2947.4	2740.2	2629.1	1700.4
57.5°	499.7	505.3	589.2	816.7	1280.7	2104.4	2806.8	2914.4	2792.3	2615.9	1692.9
60°	235.0	237.6	267.8	376.9	693.1	1533.5	2541.9	2720.4	2811.4	2588.3	1692.7
62.5°	153.2	153.7	157.4	179.8	283.5	835.3	2107.2	2364.1	2653.3	2585.2	1687.8
65°	126.1	127.4	123.0	125.9	148.3	315.0	1486.3	1843.1	2282.1	2512.5	1632.6
67.5°	111.2	111.4	105.5	102.1	108.6	138.3	748.8	1162.6	1706.9	2134.8	1344.7
70°	101.4	101.1	94.4	86.7	86.9	91.8	244.0	482.9	944.4	1267.6	772.1
72.5°	90.0	90.5	86.7	75.8	72.2	65.0	91.8	130.3	321.4	407.0	203.5
75°	78.9	77.9	74.0	67.1	60.4	43.6	46.2	55.5	83.8	83.1	43.9
77.5°	59.8	58.8	60.6	57.3	47.2	30.4	25.3	28.9	37.9	35.3	17.8
80°	45.7	45.1	41.3	49.0	43.1	23.0	17.3	17.8	20.6	18.8	8.8
82.5°	33.0	32.8	31.2	30.2	27.3	16.8	13.2	13.9	15.5	13.2	6.4
85°	12.6	12.6	24.5	20.6	18.8	11.3	9.3	10.1	11.9	9.5	4.4
87.5°	2.1	2.1	16.5	13.7	8.5	5.7	5.9	6.4	7.0	5.7	3.4
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°	957.3	957.3	957.3	957.3	957.3	957.3	957.3	957.3	957.3	957.3	957.3
2.5°	954.7	937.4	899.5	862.9	830.9	795.8	778.0	757.3	749.6	734.1	735.7
5°	964.5	928.4	852.3	772.1	698.5	623.7	570.6	520.5	492.7	465.1	465.1
7.5°	974.5	919.3	801.7	673.5	549.7	421.5	330.7	258.0	217.5	190.4	189.6
10°	981.5	907.7	744.2	559.2	376.6	217.2	131.0	103.2	93.1	88.7	88.5
12.5°	990.5	896.1	678.7	424.6	209.2	103.2	81.8	77.4	75.6	74.5	74.5
15°	998.3	879.6	599.2	285.6	109.9	77.4	70.4	68.9	68.6	68.4	68.6
17.5°	1000.1	856.1	504.0	167.2	79.7	67.6	64.5	63.2	63.2	62.9	62.9
20°	996.0	825.2	398.8	103.2	68.9	62.2	58.8	57.3	57.0	57.0	57.0
22.5°	987.4	785.7	294.8	78.2	62.7	57.3	52.9	51.3	51.3	51.6	51.8
25°	976.9	739.0	202.5	67.3	58.0	52.1	47.7	46.2	46.7	47.2	47.5
27.5°	963.5	683.3	132.6	58.3	51.8	46.9	43.1	42.0	43.1	44.1	44.6
30°	950.0	622.2	89.8	50.6	44.9	41.3	39.0	38.7	40.2	42.6	42.8
32.5°	941.3	559.5	67.8	45.4	39.5	36.4	35.3	35.9	38.2	40.8	41.3
35°	940.5	498.4	57.8	41.3	35.9	33.0	32.5	34.0	36.6	38.7	39.2
37.5°	952.6	441.1	52.4	38.2	33.0	30.2	29.4	32.2	34.6	36.6	37.1
40°	977.1	389.8	48.8	35.3	30.7	27.3	26.8	29.1	31.5	33.8	34.6
42.5°	1007.8	341.8	44.6	32.5	28.1	24.2	23.7	25.5	27.9	31.2	31.7
45°	1034.4	297.2	40.2	29.4	25.3	20.9	20.6	22.7	24.5	27.6	28.1
47.5°	1056.8	260.0	36.1	26.1	21.7	18.6	18.3	19.3	20.4	23.2	23.7
50°	1045.0	228.5	32.0	21.4	17.5	16.0	15.7	15.7	17.0	19.9	20.4
52.5°	1015.8	208.9	28.1	17.8	14.4	13.7	12.9	13.2	14.4	15.7	16.0
55°	992.3	199.7	24.8	15.7	12.1	11.3	10.6	10.3	10.6	10.1	9.5
56°	986.7	198.6	24.0	15.2	11.6	10.6	9.5	9.0	8.8	7.7	7.5
57.5°	984.1	198.6	22.7	14.2	10.8	9.5	8.3	7.2	6.2	5.4	5.4
60°	982.0	199.9	21.2	12.4	9.3	7.7	5.9	4.4	3.6	3.6	3.6
62.5°	977.6	199.4	19.3	10.3	8.0	5.9	3.6	2.8	2.6	2.8	3.1
65°	928.4	185.2	17.0	8.3	6.2	4.1	2.1	2.1	2.3	2.8	3.1
67.5°	748.1	140.3	13.9	6.4	4.4	3.1	1.8	1.8	2.3	2.8	3.1
70°	410.9	74.0	11.9	4.6	3.4	2.6	1.8	1.5	2.3	2.8	3.1
72.5°	100.3	31.0	10.8	3.6	3.1	2.3	1.5	1.5	2.3	2.8	3.1
75°	24.8	23.2	8.8	2.8	2.6	2.1	1.5	1.5	2.3	2.8	3.1
77.5°	11.6	30.7	5.9	2.6	2.3	1.8	1.5	1.5	2.3	2.8	2.8
80°	7.0	23.2	3.6	2.3	2.1	1.8	1.5	1.5	2.3	2.8	3.1
82.5°	4.1	6.7	2.6	2.3	2.1	1.5	1.5	1.5	2.3	2.8	3.1
85°	3.6	3.4	2.6	2.3	2.1	1.8	1.5	1.5	2.6	3.1	3.1
87.5°	2.8	2.6	2.3	2.1	2.1	1.8	1.5	1.5	2.3	2.8	3.1
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)