

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: P195505

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7050-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195505
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-7050-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 615mA 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: 3379 lumens
Efficiency: N/A
Efficacy: 99.4 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): 34
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

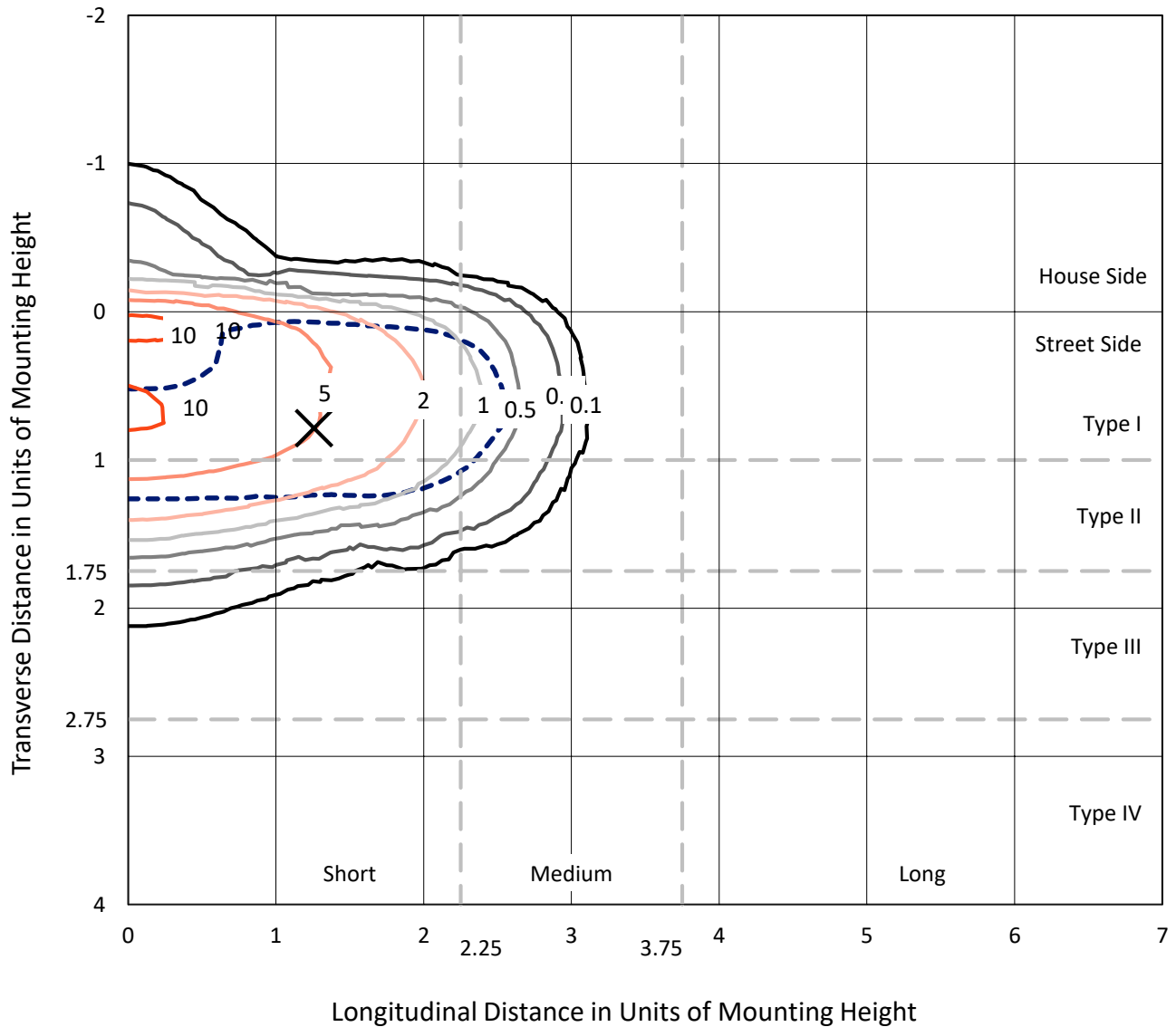


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

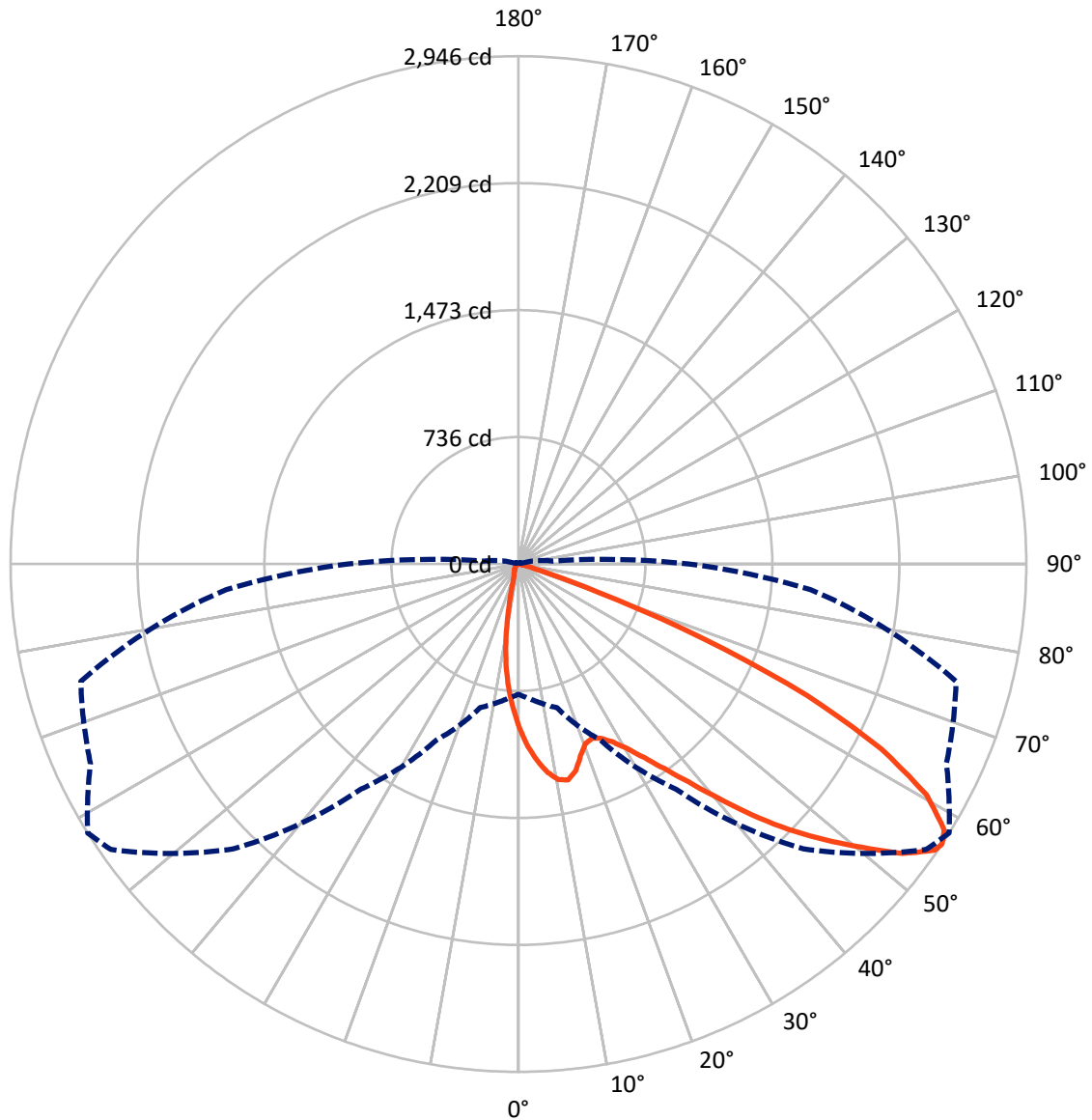


Based on 10 foot mounting height. Maximum calculated value = 11.9 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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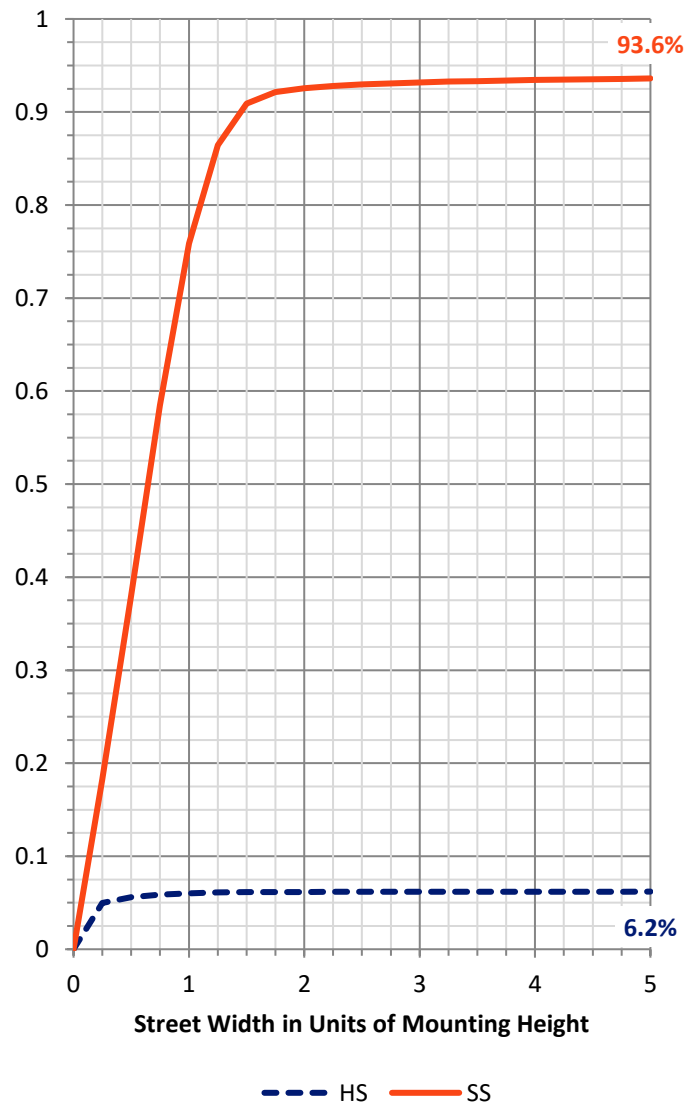
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	210.9	0.0	210.9
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	3168.1	0.0	3168.1
	% Fixture	93.8	0.0	93.8
Total	Lumens	3379.0	0.0	3379.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.6	2.4
10°-20°	189.9	5.6
20°-30°	319.5	9.5
30°-40°	547.2	16.2
40°-50°	825.7	24.4
50°-60°	858.3	25.4
60°-70°	481.8	14.3
70°-80°	66.0	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°	3379.0	100.0
0°-180°	3379.0	100.0

Coefficient of Utilization



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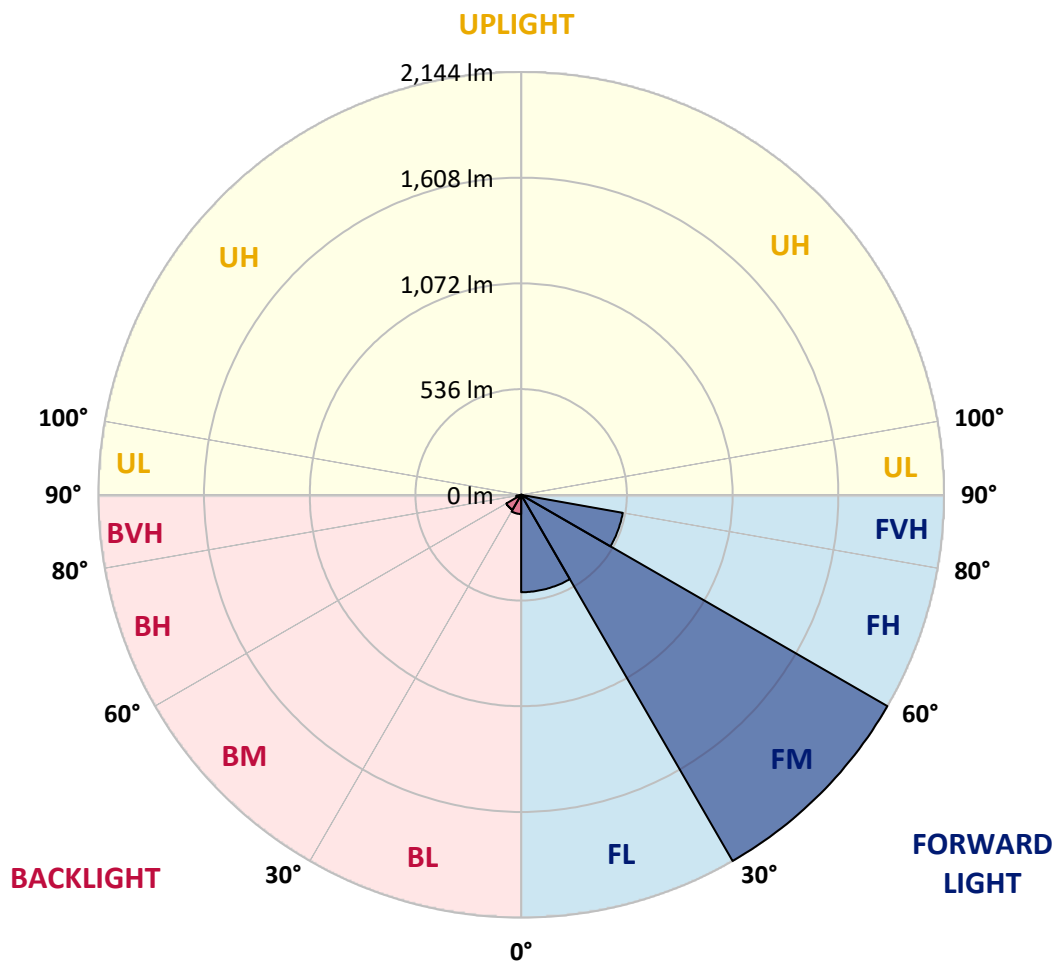
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	493.7	14.6			
FM	(30°-60°)	2143.8	63.4			
FH	(60°-80°)	522.8	15.5			G0/660
FVH	(80°-90°)	7.7	0.2			G0/10
BL	(0°-30°)	97.3	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°	956.7	956.7	956.7	956.7	956.7	956.7	956.7	956.7	956.7	956.7	956.7
2.5°	1151.1	1144.1	1136.9	1123.5	1111.1	1092.0	1065.7	1059.3	1038.7	1004.6	972.9
5°	1250.3	1249.0	1244.1	1233.3	1219.9	1196.7	1167.1	1147.2	1115.2	1061.6	1000.5
7.5°	1191.6	1202.4	1220.2	1245.4	1262.4	1260.1	1237.4	1220.2	1188.5	1115.2	1027.6
10°	1004.4	1006.5	1030.9	1084.1	1168.1	1246.5	1276.1	1271.5	1242.3	1162.2	1051.3
12.5°	938.4	939.7	945.4	962.4	1017.0	1126.3	1260.6	1284.9	1282.6	1207.0	1076.6
15°	943.5	944.3	945.9	951.3	966.8	1021.7	1182.3	1243.9	1308.3	1249.6	1101.3
17.5°	984.3	983.8	978.9	973.7	978.6	996.7	1102.4	1167.3	1302.9	1285.4	1121.7
20°	1063.7	1066.3	1049.8	1026.8	1015.0	1015.7	1062.9	1111.6	1272.5	1313.2	1136.9
22.5°	1175.3	1177.1	1150.0	1110.3	1075.5	1058.0	1071.2	1096.9	1237.4	1339.0	1149.3
25°	1308.6	1308.6	1270.7	1214.2	1160.4	1121.9	1110.6	1120.4	1224.0	1368.1	1161.6
27.5°	1452.4	1457.6	1408.1	1334.1	1263.0	1206.8	1171.2	1169.4	1234.3	1404.8	1175.6
30°	1608.9	1613.6	1554.8	1464.3	1380.0	1308.1	1253.4	1241.6	1273.8	1454.0	1195.9
32.5°	1764.6	1768.5	1703.5	1611.3	1513.0	1428.5	1356.5	1337.7	1344.7	1525.9	1225.8
35°	1962.6	1963.4	1881.2	1771.3	1666.4	1567.2	1476.2	1457.6	1449.9	1616.7	1268.9
37.5°	2120.2	2114.0	2061.9	1958.0	1837.6	1734.0	1627.0	1602.7	1584.2	1744.3	1335.7
40°	2157.3	2157.3	2149.5	2118.3	2022.7	1922.9	1819.3	1783.2	1742.2	1894.6	1425.4
42.5°	2060.6	2066.8	2117.8	2185.6	2186.4	2122.5	2021.2	1990.7	1918.6	2065.8	1523.3
45°	1844.3	1846.1	1968.6	2151.6	2275.9	2312.5	2237.7	2195.7	2095.7	2243.6	1613.1
47.5°	1766.4	1772.1	1824.2	2048.0	2282.6	2466.4	2445.5	2387.7	2259.6	2406.1	1696.8
50°	1646.8	1653.8	1717.5	1895.3	2222.2	2565.1	2644.3	2582.4	2408.9	2541.4	1738.3
52.5°	1360.7	1371.5	1461.5	1693.5	2071.4	2569.2	2826.3	2789.1	2561.8	2613.8	1733.4
55°	936.3	944.3	1049.2	1322.0	1767.2	2443.2	2904.6	2930.2	2698.1	2630.1	1709.7
56°	755.4	785.3	862.1	1126.3	1594.0	2335.9	2886.6	2945.6	2738.6	2627.5	1699.4
57.5°	499.4	505.0	588.8	816.2	1280.0	2103.1	2805.1	2912.6	2790.7	2614.4	1691.9
60°	234.9	237.4	267.6	376.6	692.7	1532.6	2540.4	2718.8	2809.8	2586.8	1691.7
62.5°	153.1	153.6	157.3	179.7	283.3	834.8	2106.0	2362.7	2651.7	2583.7	1686.8
65°	126.1	127.4	123.0	125.8	148.2	314.8	1485.4	1842.0	2280.8	2511.0	1631.6
67.5°	111.1	111.4	105.4	102.1	108.5	138.2	748.4	1161.9	1705.9	2133.6	1343.9
70°	101.3	101.1	94.4	86.6	86.9	91.8	243.9	482.6	943.8	1266.8	771.6
72.5°	90.0	90.5	86.6	75.8	72.2	65.0	91.8	130.2	321.2	406.8	203.4
75°	78.9	77.9	74.0	67.0	60.3	43.6	46.1	55.4	83.8	83.0	43.8
77.5°	59.8	58.8	60.6	57.2	47.2	30.4	25.3	28.9	37.9	35.3	17.8
80°	45.6	45.1	41.2	49.0	43.1	22.9	17.3	17.8	20.6	18.8	8.8
82.5°	33.0	32.7	31.2	30.2	27.3	16.8	13.1	13.9	15.5	13.1	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°	956.7	956.7	956.7	956.7	956.7	956.7	956.7	956.7	956.7	956.7	956.7
2.5°	954.1	936.8	898.9	862.3	830.4	795.3	777.5	756.9	749.2	733.7	735.2
5°	963.9	927.8	851.8	771.6	698.1	623.4	570.3	520.2	492.4	464.8	464.8
7.5°	974.0	918.8	801.2	673.1	549.4	421.2	330.5	257.8	217.3	190.3	189.5
10°	980.9	907.2	743.8	558.9	376.4	217.1	131.0	103.1	93.1	88.7	88.4
12.5°	990.0	895.6	678.3	424.3	209.1	103.1	81.7	77.3	75.5	74.5	74.5
15°	997.7	879.1	598.9	285.4	109.8	77.3	70.4	68.8	68.6	68.3	68.6
17.5°	999.5	855.6	503.7	167.1	79.7	67.5	64.5	63.2	63.2	62.9	62.9
20°	995.4	824.7	398.6	103.1	68.8	62.1	58.8	57.2	57.0	57.0	57.0
22.5°	986.9	785.3	294.7	78.1	62.6	57.2	52.8	51.3	51.3	51.6	51.8
25°	976.3	738.6	202.4	67.3	58.0	52.1	47.7	46.1	46.7	47.2	47.4
27.5°	962.9	682.9	132.5	58.3	51.8	46.9	43.1	42.0	43.1	44.1	44.6
30°	949.5	621.8	89.7	50.5	44.9	41.2	38.9	38.7	40.2	42.5	42.8
32.5°	940.7	559.2	67.8	45.4	39.4	36.3	35.3	35.8	38.2	40.7	41.2
35°	939.9	498.1	57.7	41.2	35.8	33.0	32.5	34.0	36.6	38.7	39.2
37.5°	952.1	440.8	52.3	38.2	33.0	30.2	29.4	32.2	34.5	36.6	37.1
40°	976.5	389.5	48.7	35.3	30.7	27.3	26.8	29.1	31.5	33.8	34.5
42.5°	1007.2	341.6	44.6	32.5	28.1	24.2	23.7	25.5	27.8	31.2	31.7
45°	1033.8	297.0	40.2	29.4	25.3	20.9	20.6	22.7	24.5	27.6	28.1
47.5°	1056.2	259.9	36.1	26.0	21.7	18.6	18.3	19.3	20.4	23.2	23.7
50°	1044.3	228.4	32.0	21.4	17.5	16.0	15.7	15.7	17.0	19.9	20.4
52.5°	1015.2	208.8	28.1	17.8	14.4	13.7	12.9	13.1	14.4	15.7	16.0
55°	991.8	199.5	24.7	15.7	12.1	11.3	10.6	10.3	10.6	10.1	9.5
56°	986.1	198.5	24.0	15.2	11.6	10.6	9.5	9.0	8.8	7.7	7.5
57.5°	983.5	198.5	22.7	14.2	10.8	9.5	8.2	7.2	6.2	5.4	5.4
60°	981.4	199.8	21.1	12.4	9.3	7.7	5.9	4.4	3.6	3.6	3.6
62.5°	977.1	199.3	19.3	10.3	8.0	5.9	3.6	2.8	2.6	2.8	3.1
65°	927.8	185.1	17.0	8.2	6.2	4.1	2.1	2.1	2.3	2.8	3.1
67.5°	747.6	140.2	13.9	6.4	4.4	3.1	1.8	1.8	2.3	2.8	3.1
70°	410.7	74.0	11.9	4.6	3.4	2.6	1.8	1.5	2.3	2.8	3.1
72.5°	100.3	30.9	10.8	3.6	3.1	2.3	1.5	1.5	2.3	2.8	3.1
75°	24.7	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)