

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: P270260

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270260
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-7027-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 1050mA 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: 4455 lumens
Efficiency: N/A
Efficacy: 75.5 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 - G1

Input Watts (W): 59
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

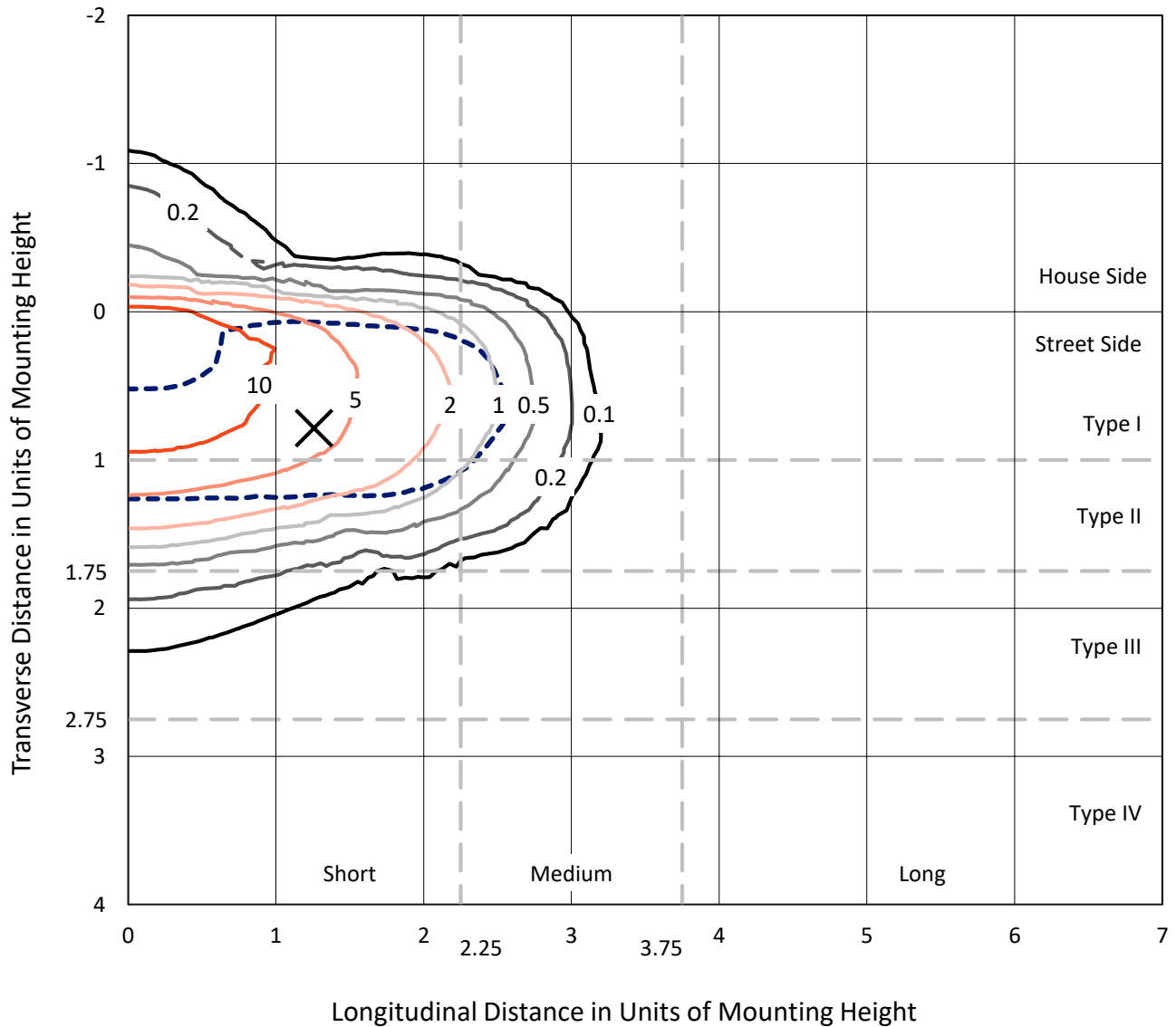


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Iso-Footcandle Lines of Horizontal Illumination

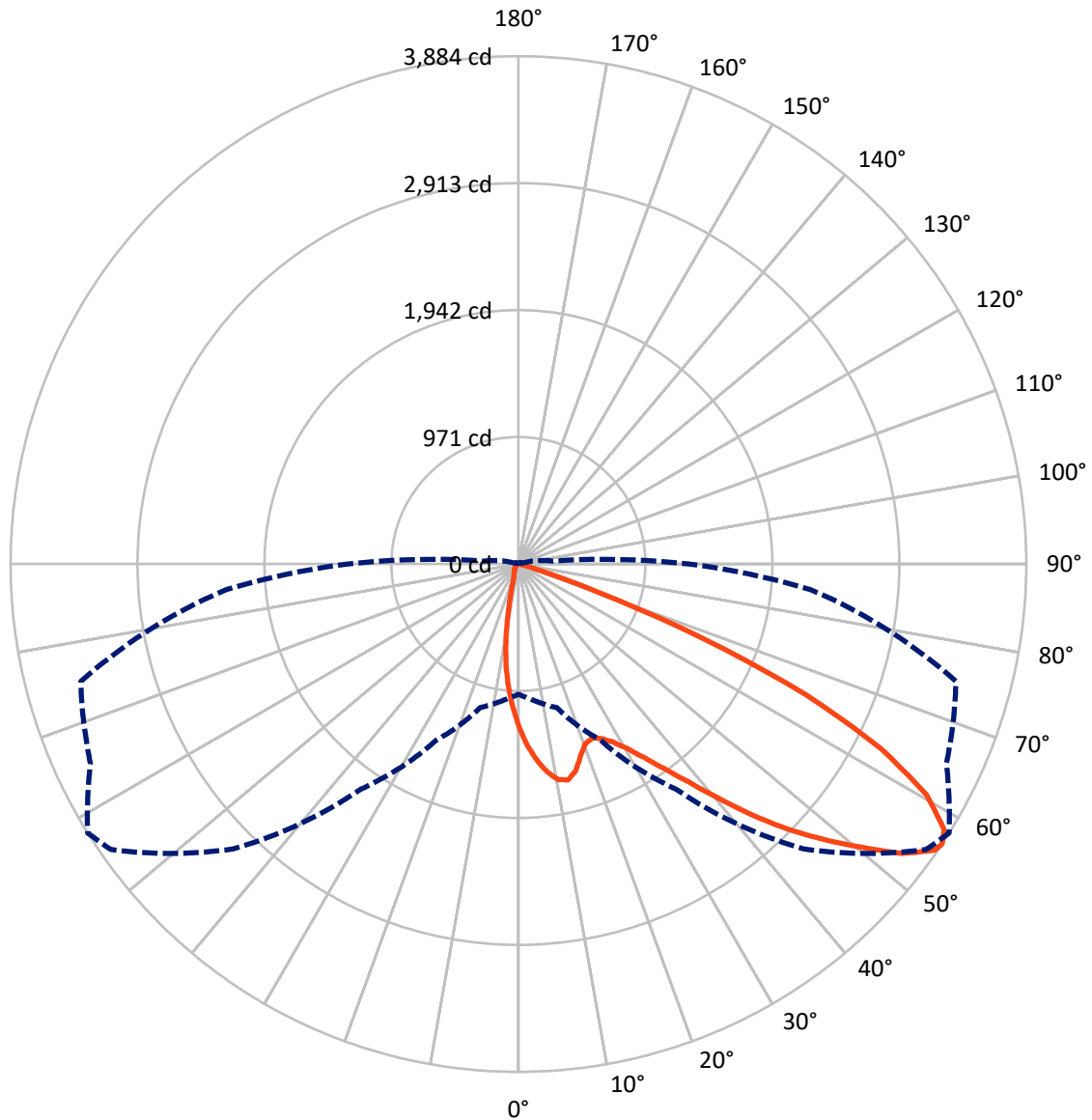
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.7 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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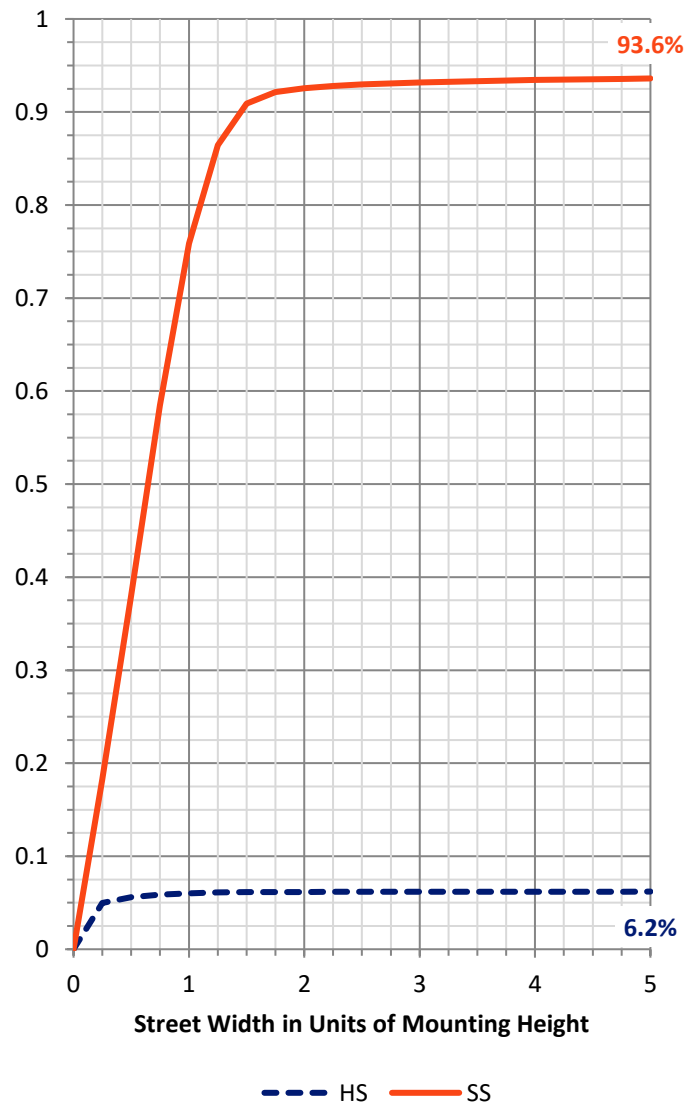
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	278.1	0.0	278.1
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	4176.9	0.0	4176.9
	% Fixture	93.8	0.0	93.8
Total	Lumens	4455.0	0.0	4455.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.6	2.4
10°-20°	250.4	5.6
20°-30°	421.3	9.5
30°-40°	721.4	16.2
40°-50°	1088.6	24.4
50°-60°	1131.6	25.4
60°-70°	635.3	14.3
70°-80°	87.1	2.0
80°-90°	11.8	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°	4455.0	100.0
0°-180°	4455.0	100.0

Coefficient of Utilization



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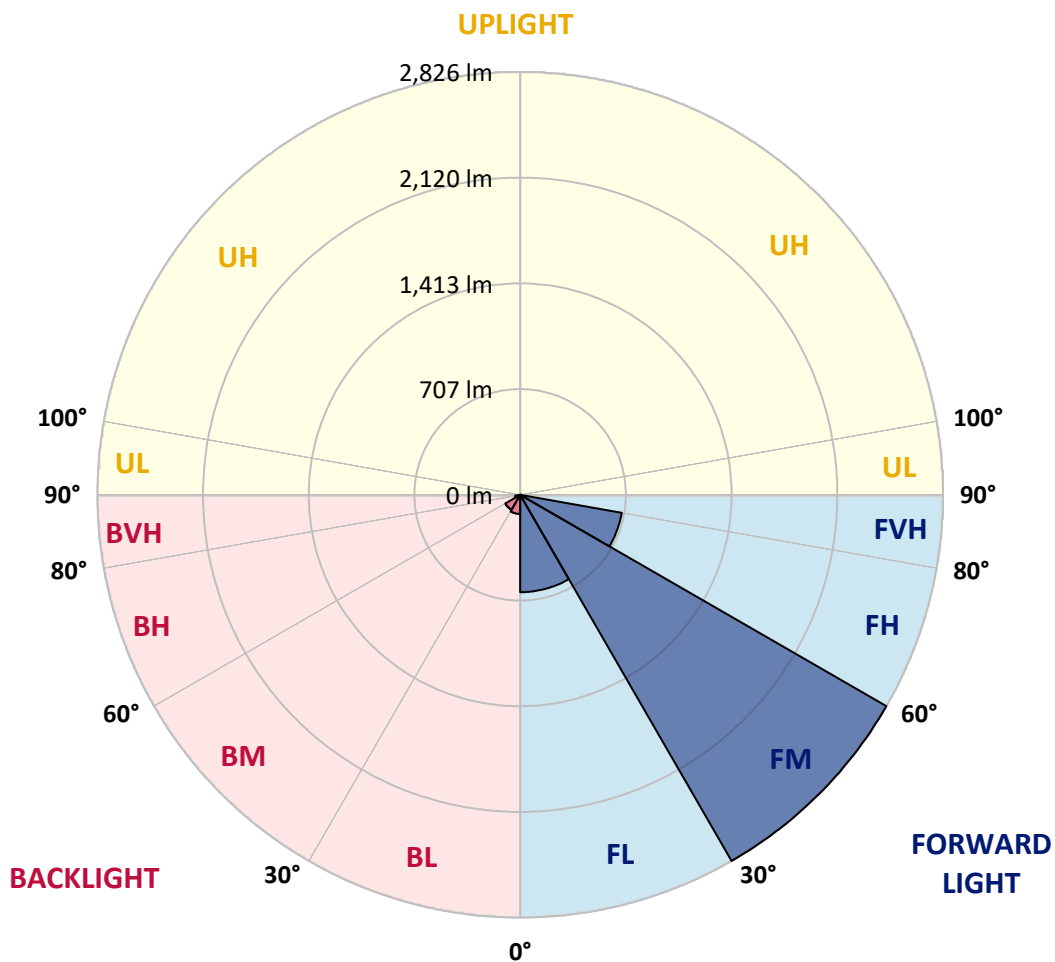
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	651.0	14.6			
FM	(30°-60°)	2826.4	63.4			
FH	(60°-80°)	689.3	15.5			G1/1800
FVH	(80°-90°)	10.2	0.2			G1/100
BL	(0°-30°)	128.3	2.9	B1/500		
BM	(30°-60°)	115.2	2.6	B0/220		
BH	(60°-80°)	33.0	0.7	B0/110		G0/110
BVH	(80°-90°)	1.7	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-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3
2.5°	1517.5	1508.4	1498.9	1481.2	1465.0	1439.8	1405.0	1396.7	1369.5	1324.6	1282.7
5°	1648.5	1646.8	1640.3	1626.0	1608.3	1577.8	1538.6	1512.4	1470.3	1399.6	1319.2
7.5°	1571.0	1585.2	1608.7	1642.0	1664.4	1661.3	1631.5	1608.7	1567.0	1470.3	1354.9
10°	1324.2	1326.9	1359.2	1429.3	1540.1	1643.4	1682.4	1676.3	1637.9	1532.1	1386.1
12.5°	1237.1	1238.9	1246.4	1268.8	1340.9	1485.0	1662.0	1694.1	1691.0	1591.3	1419.4
15°	1244.1	1245.1	1247.0	1254.3	1274.5	1347.0	1558.6	1639.9	1724.9	1647.4	1452.0
17.5°	1297.7	1297.1	1290.5	1283.8	1290.2	1314.0	1453.4	1539.1	1717.7	1694.7	1478.9
20°	1402.3	1405.8	1384.0	1353.7	1338.1	1339.2	1401.4	1465.7	1677.7	1731.5	1498.9
22.5°	1549.5	1551.9	1516.2	1463.9	1418.1	1394.9	1412.2	1446.2	1631.5	1765.3	1515.3
25°	1725.3	1725.3	1675.2	1600.9	1529.9	1479.1	1464.2	1477.2	1613.7	1803.7	1531.5
27.5°	1914.9	1921.7	1856.4	1758.9	1665.1	1591.0	1544.1	1541.8	1627.4	1852.0	1549.8
30°	2121.3	2127.4	2049.8	1930.5	1819.4	1724.6	1652.5	1636.9	1679.4	1917.0	1576.7
32.5°	2326.5	2331.6	2246.0	2124.3	1994.7	1883.3	1788.4	1763.7	1772.8	2011.8	1616.2
35°	2587.6	2588.6	2480.2	2335.4	2197.1	2066.2	1946.2	1921.7	1911.6	2131.5	1673.0
37.5°	2795.3	2787.1	2718.5	2581.5	2422.6	2286.0	2145.1	2113.2	2088.6	2299.8	1760.9
40°	2844.3	2844.3	2834.1	2792.9	2666.8	2535.2	2398.7	2351.0	2297.0	2497.8	1879.3
42.5°	2716.7	2724.9	2792.2	2881.7	2882.7	2798.3	2664.7	2624.6	2529.4	2723.5	2008.4
45°	2431.5	2434.0	2595.5	2836.7	3000.6	3048.8	2950.3	2894.9	2762.9	2958.1	2126.6
47.5°	2328.9	2336.4	2405.0	2700.0	3009.4	3251.8	3224.1	3148.1	2979.0	3172.2	2237.1
50°	2171.3	2180.4	2264.4	2498.8	2929.8	3381.8	3486.2	3404.7	3175.9	3350.6	2291.8
52.5°	1793.9	1808.2	1926.9	2232.7	2730.9	3387.2	3726.2	3677.2	3377.4	3446.2	2285.4
55°	1234.5	1245.1	1383.4	1742.9	2329.9	3221.1	3829.6	3863.3	3557.3	3467.5	2254.1
56°	996.0	1035.2	1136.5	1485.0	2101.6	3079.7	3805.7	3883.6	3610.6	3464.1	2240.6
57.5°	658.4	665.9	776.3	1076.1	1687.6	2772.8	3698.3	3840.1	3679.3	3446.8	2230.8
60°	309.6	313.0	352.9	496.6	913.2	2020.6	3349.3	3584.4	3704.4	3410.4	2230.3
62.5°	201.8	202.6	207.2	237.0	373.5	1100.6	2776.5	3115.1	3496.2	3406.4	2223.9
65°	166.1	168.0	162.1	165.8	195.4	414.9	1958.5	2428.5	3006.9	3310.6	2151.1
67.5°	146.6	146.9	139.0	134.6	143.1	182.1	986.7	1531.9	2249.0	2813.0	1771.8
70°	133.6	133.3	124.3	114.3	114.5	121.0	321.6	636.3	1244.3	1670.2	1017.3
72.5°	118.7	119.4	114.3	99.9	95.2	85.7	121.0	171.7	423.6	536.4	268.1
75°	104.1	102.6	97.6	88.4	79.5	57.4	60.8	73.1	110.4	109.5	57.9
77.5°	78.8	77.6	79.9	75.5	62.3	40.2	33.2	38.1	49.9	46.5	23.4
80°	60.1	59.5	54.3	64.6	56.8	30.3	22.7	23.4	27.2	24.9	11.6
82.5°	43.5	43.2	41.1	39.7	36.0	22.1	17.3	18.3	20.4	17.3	8.5
85°	16.7	16.7	32.2	27.2	24.9	14.9	12.2	13.2	15.6	12.5	5.7
87.5°	2.8	2.8	21.7	18.1	11.1	7.5	7.8	8.5	9.3	7.5	4.4
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°	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3
2.5°	1257.9	1235.2	1185.3	1137.0	1094.8	1048.5	1025.1	997.8	987.7	967.4	969.5
5°	1270.8	1223.2	1123.1	1017.3	920.5	821.9	751.8	685.9	649.1	612.9	612.9
7.5°	1284.0	1211.4	1056.3	887.4	724.4	555.4	435.8	339.9	286.5	250.8	249.8
10°	1293.3	1196.1	980.6	736.9	496.3	286.2	172.7	136.0	122.7	116.9	116.6
12.5°	1305.1	1180.8	894.3	559.5	275.7	136.0	107.7	102.0	99.6	98.3	98.3
15°	1315.4	1159.1	789.6	376.3	144.7	102.0	92.7	90.8	90.4	90.1	90.4
17.5°	1317.8	1128.1	664.1	220.3	105.0	89.0	85.0	83.3	83.3	83.0	83.0
20°	1312.3	1087.3	525.5	136.0	90.8	81.9	77.6	75.5	75.1	75.1	75.1
22.5°	1301.0	1035.2	388.4	102.9	82.6	75.5	69.7	67.6	67.6	68.0	68.4
25°	1287.1	973.9	266.7	88.8	76.4	68.7	62.9	60.8	61.5	62.3	62.5
27.5°	1269.5	900.5	174.7	76.8	68.4	61.9	56.8	55.3	56.8	58.1	58.7
30°	1251.8	819.9	118.2	66.7	59.2	54.3	51.4	50.9	53.0	56.1	56.5
32.5°	1240.3	737.1	89.4	59.7	52.0	47.9	46.5	47.3	50.3	53.7	54.3
35°	1239.2	656.8	76.1	54.3	47.3	43.5	42.8	44.8	48.2	50.9	51.7
37.5°	1255.2	581.3	69.0	50.3	43.5	39.7	38.7	42.5	45.5	48.2	49.0
40°	1287.5	513.7	64.3	46.5	40.5	36.0	35.4	38.4	41.4	44.6	45.5
42.5°	1328.0	450.4	58.7	42.8	37.0	32.0	31.4	33.6	36.7	41.1	41.9
45°	1363.0	391.5	53.0	38.7	33.2	27.6	27.2	30.0	32.2	36.4	37.0
47.5°	1392.6	342.7	47.6	34.3	28.6	24.4	24.2	25.5	26.9	30.6	31.4
50°	1376.9	301.1	42.1	28.1	23.0	21.1	20.8	20.8	22.5	26.2	26.9
52.5°	1338.5	275.3	37.0	23.4	19.0	18.1	17.0	17.3	19.0	20.8	21.1
55°	1307.6	263.1	32.6	20.8	16.0	14.9	14.0	13.7	14.0	13.2	12.5
56°	1300.0	261.8	31.6	20.0	15.4	14.0	12.5	11.9	11.6	10.2	9.8
57.5°	1296.7	261.8	30.0	18.7	14.3	12.5	10.9	9.5	8.2	7.1	7.1
60°	1294.0	263.5	27.8	16.3	12.2	10.2	7.8	5.7	4.8	4.8	4.8
62.5°	1288.2	262.8	25.5	13.7	10.5	7.8	4.8	3.8	3.5	3.8	4.1
65°	1223.2	244.0	22.5	10.9	8.2	5.4	2.8	2.8	3.1	3.8	4.1
67.5°	985.7	185.0	18.3	8.5	5.7	4.1	2.3	2.3	3.1	3.8	4.1
70°	541.5	97.6	15.6	6.1	4.4	3.5	2.3	2.1	3.1	3.8	4.1
72.5°	132.2	40.9	14.3	4.8	4.1	3.1	2.1	2.1	3.1	3.8	4.1
75°	32.6	30.6	11.6	3.8	3.5	2.8	2.1	2.1	3.1	3.8	4.1
77.5°	15.4	40.5	7.8	3.5	3.1	2.3	2.1	2.1	3.1	3.8	3.8
80°	9.3	30.6	4.8	3.1	2.8	2.3	2.1	2.1	3.1	3.8	4.1
82.5°	5.4	8.9	3.5	3.1	2.8	2.1	2.1	2.1	3.1	3.8	4.1
85°	4.8	4.4	3.5	3.1	2.8	2.3	2.1	2.1	3.5	4.1	4.1
87.5°	3.8	3.5	3.1	2.8	2.8	2.3	2.1	2.1	3.1	3.8	4.1
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)