

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: P196945

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-8030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196945
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-8030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 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: 2757 lumens
Efficiency: N/A
Efficacy: 81.1 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

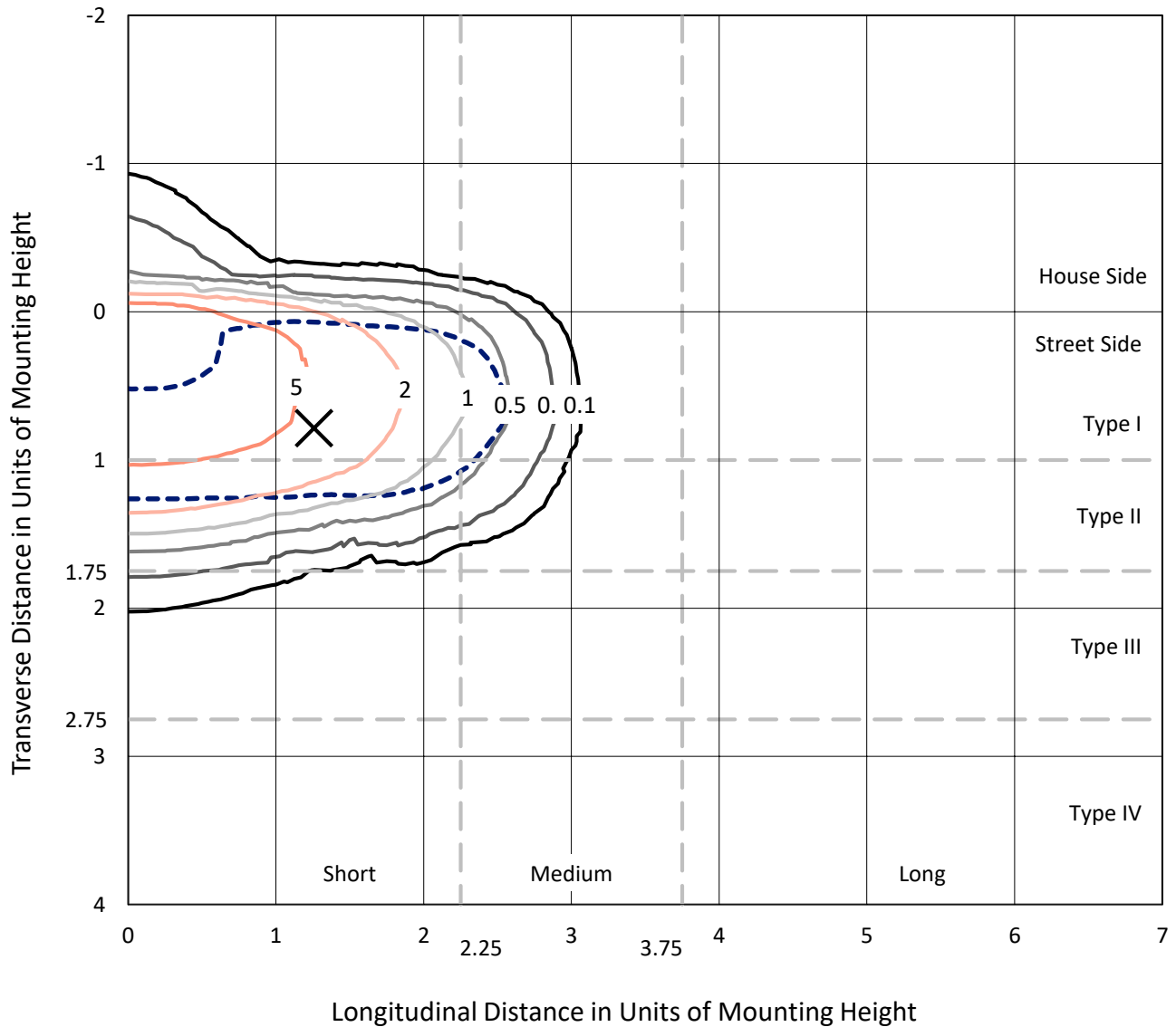


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Iso-Footcandle Lines of Horizontal Illumination

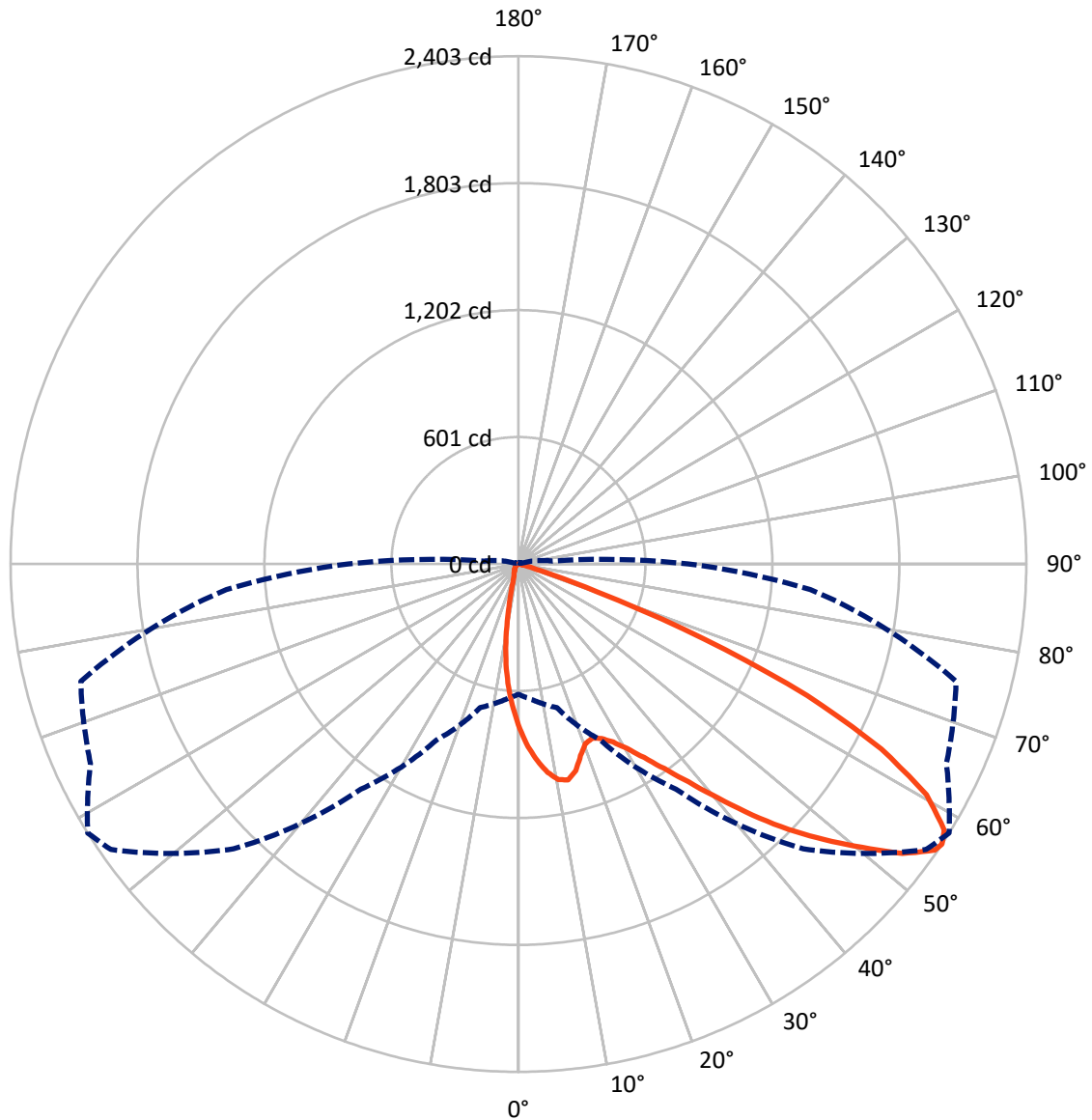
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.7 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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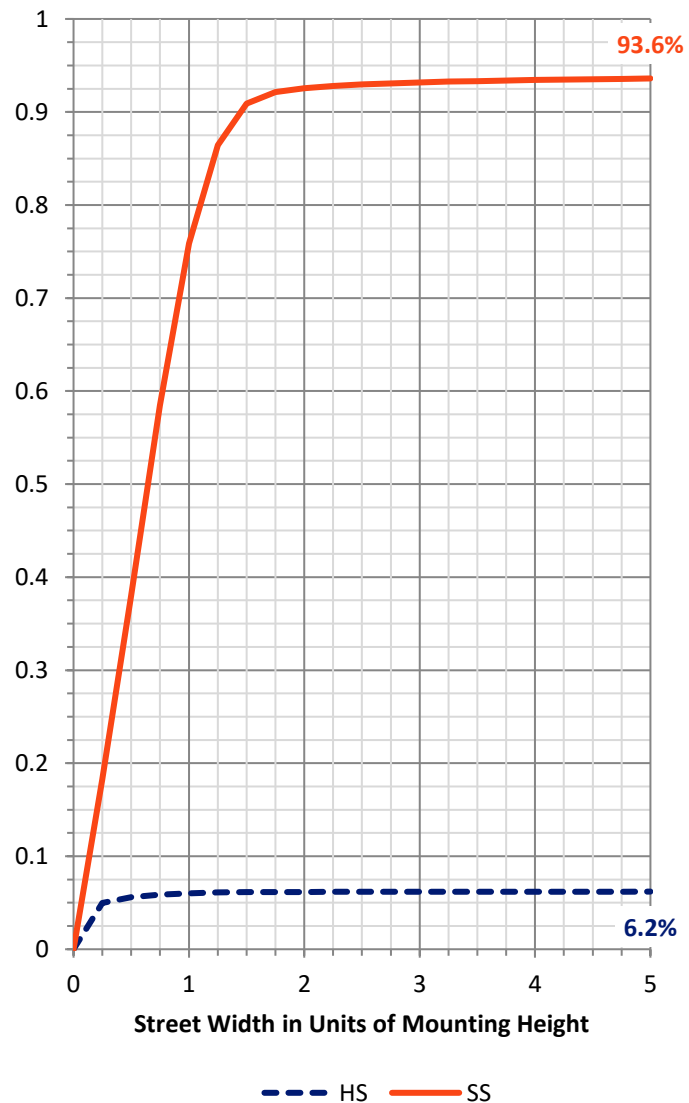
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	172.1	0.0	172.1
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	2584.9	0.0	2584.9
	% Fixture	93.8	0.0	93.8
Total	Lumens	2757.0	0.0	2757.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	2.4
10°-20°	154.9	5.6
20°-30°	260.7	9.5
30°-40°	446.5	16.2
40°-50°	673.7	24.4
50°-60°	700.3	25.4
60°-70°	393.1	14.3
70°-80°	53.9	2.0
80°-90°	7.3	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°	2757.0	100.0
0°-180°	2757.0	100.0

Coefficient of Utilization



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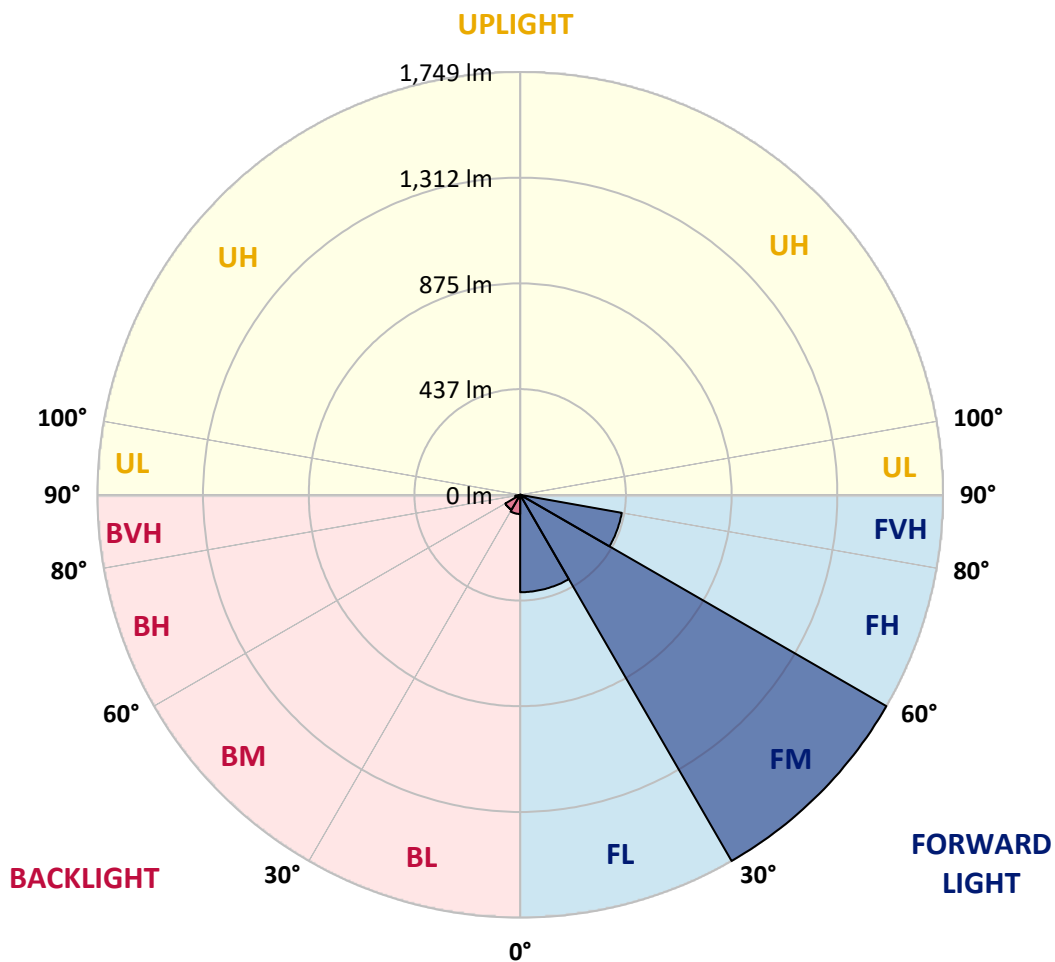
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	402.9	14.6			
FM	(30°-60°)	1749.2	63.4			
FH	(60°-80°)	426.6	15.5			G0/660
FVH	(80°-90°)	6.3	0.2			G0/10
BL	(0°-30°)	79.4	2.9	B0/110		
BM	(30°-60°)	71.3	2.6	B0/220		
BH	(60°-80°)	20.4	0.7	B0/110		G0/110
BVH	(80°-90°)	1.0	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°	780.6	780.6	780.6	780.6	780.6	780.6	780.6	780.6	780.6	780.6	780.6
2.5°	939.2	933.5	927.6	916.7	906.6	891.0	869.6	864.3	847.5	819.7	793.8
5°	1020.2	1019.1	1015.1	1006.3	995.4	976.4	952.2	936.0	910.0	866.2	816.3
7.5°	972.2	981.0	995.6	1016.2	1030.1	1028.2	1009.7	995.6	969.7	910.0	838.4
10°	819.5	821.2	841.2	884.5	953.1	1017.0	1041.2	1037.4	1013.7	948.2	857.8
12.5°	765.7	766.7	771.3	785.2	829.8	919.0	1028.6	1048.4	1046.5	984.8	878.4
15°	769.9	770.5	771.8	776.2	788.8	833.6	964.6	1014.9	1067.5	1019.5	898.6
17.5°	803.1	802.7	798.7	794.5	798.5	813.2	899.4	952.4	1063.1	1048.8	915.2
20°	867.9	870.0	856.5	837.8	828.1	828.8	867.3	907.0	1038.3	1071.5	927.6
22.5°	959.0	960.4	938.3	906.0	877.6	863.3	874.0	895.0	1009.7	1092.5	937.7
25°	1067.7	1067.7	1036.8	990.7	946.8	915.4	906.2	914.2	998.7	1116.3	947.8
27.5°	1185.1	1189.3	1148.9	1088.5	1030.5	984.6	955.6	954.1	1007.1	1146.2	959.2
30°	1312.8	1316.5	1268.6	1194.8	1126.0	1067.3	1022.7	1013.0	1039.3	1186.3	975.8
32.5°	1439.8	1443.0	1390.0	1314.7	1234.5	1165.5	1106.8	1091.5	1097.2	1245.0	1000.2
35°	1601.4	1602.0	1534.9	1445.3	1359.7	1278.7	1204.4	1189.3	1183.0	1319.1	1035.3
37.5°	1729.9	1724.8	1682.3	1597.6	1499.3	1414.8	1327.5	1307.7	1292.6	1423.2	1089.8
40°	1760.2	1760.2	1753.9	1728.4	1650.4	1569.0	1484.4	1455.0	1421.5	1545.8	1163.0
42.5°	1681.3	1686.3	1728.0	1783.3	1783.9	1731.8	1649.1	1624.3	1565.4	1685.5	1242.9
45°	1504.8	1506.3	1606.2	1755.5	1856.9	1886.8	1825.8	1791.5	1709.9	1830.6	1316.1
47.5°	1441.3	1445.9	1488.4	1671.0	1862.4	2012.4	1995.3	1948.2	1843.7	1963.1	1384.5
50°	1343.7	1349.4	1401.3	1546.5	1813.2	2092.9	2157.5	2107.0	1965.5	2073.6	1418.4
52.5°	1110.2	1119.0	1192.4	1381.8	1690.1	2096.3	2306.0	2275.7	2090.2	2132.7	1414.4
55°	764.0	770.5	856.1	1078.6	1441.9	1993.4	2370.0	2390.8	2201.5	2145.9	1395.0
56°	616.3	640.7	703.4	919.0	1300.6	1905.9	2355.2	2403.4	2234.5	2143.8	1386.6
57.5°	407.4	412.1	480.4	666.0	1044.4	1716.0	2288.8	2376.5	2277.0	2133.1	1380.5
60°	191.6	193.7	218.3	307.3	565.2	1250.5	2072.7	2218.3	2292.5	2110.6	1380.3
62.5°	124.9	125.4	128.3	146.6	231.2	681.1	1718.3	1927.8	2163.6	2108.1	1376.3
65°	102.9	103.9	100.3	102.6	120.9	256.8	1212.0	1502.9	1860.9	2048.8	1331.3
67.5°	90.7	90.9	86.0	83.3	88.6	112.7	610.6	948.0	1391.9	1740.8	1096.5
70°	82.7	82.5	77.0	70.7	70.9	74.9	199.0	393.8	770.1	1033.6	629.6
72.5°	73.4	73.8	70.7	61.8	58.9	53.0	74.9	106.2	262.1	331.9	166.0
75°	64.4	63.5	60.4	54.7	49.2	35.5	37.7	45.2	68.4	67.7	35.8
77.5°	48.8	48.0	49.4	46.7	38.5	24.8	20.6	23.6	30.9	28.8	14.5
80°	37.2	36.8	33.7	40.0	35.1	18.7	14.1	14.5	16.8	15.4	7.2
82.5°	26.9	26.7	25.5	24.6	22.3	13.7	10.7	11.4	12.6	10.7	5.3
85°	10.3	10.3	20.0	16.8	15.4	9.3	7.6	8.2	9.7	7.8	3.6
87.5°	1.7	1.7	13.5	11.1	6.9	4.6	4.8	5.3	5.7	4.6	2.7
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°	780.6	780.6	780.6	780.6	780.6	780.6	780.6	780.6	780.6	780.6	780.6
2.5°	778.5	764.4	733.5	703.6	677.5	648.9	634.4	617.6	611.3	598.6	599.9
5°	786.5	757.0	695.0	629.6	569.6	508.6	465.3	424.5	401.8	379.3	379.3
7.5°	794.7	749.7	653.8	549.2	448.2	343.7	269.7	210.3	177.3	155.2	154.6
10°	800.4	740.2	606.8	456.0	307.1	177.1	106.9	84.1	75.9	72.4	72.1
12.5°	807.7	730.7	553.4	346.2	170.6	84.1	66.7	63.1	61.6	60.8	60.8
15°	814.0	717.3	488.6	232.9	89.6	63.1	57.4	56.2	56.0	55.7	56.0
17.5°	815.5	698.1	411.0	136.3	65.0	55.1	52.6	51.5	51.5	51.3	51.3
20°	812.1	672.9	325.2	84.1	56.2	50.7	48.0	46.7	46.5	46.5	46.5
22.5°	805.2	640.7	240.4	63.7	51.1	46.7	43.1	41.9	41.9	42.1	42.3
25°	796.6	602.6	165.1	54.9	47.3	42.5	38.9	37.7	38.1	38.5	38.7
27.5°	785.6	557.2	108.1	47.5	42.3	38.3	35.1	34.3	35.1	36.0	36.4
30°	774.7	507.4	73.2	41.2	36.6	33.7	31.8	31.6	32.8	34.7	34.9
32.5°	767.5	456.2	55.3	37.0	32.2	29.7	28.8	29.2	31.1	33.2	33.7
35°	766.9	406.4	47.1	33.7	29.2	26.9	26.5	27.8	29.9	31.6	32.0
37.5°	776.8	359.7	42.7	31.1	26.9	24.6	24.0	26.3	28.2	29.9	30.3
40°	796.8	317.8	39.8	28.8	25.0	22.3	21.9	23.8	25.7	27.6	28.2
42.5°	821.8	278.7	36.4	26.5	22.9	19.8	19.4	20.8	22.7	25.5	25.9
45°	843.5	242.3	32.8	24.0	20.6	17.0	16.8	18.5	20.0	22.5	22.9
47.5°	861.8	212.0	29.4	21.2	17.7	15.1	14.9	15.8	16.6	18.9	19.4
50°	852.1	186.4	26.1	17.5	14.3	13.0	12.8	12.8	13.9	16.2	16.6
52.5°	828.3	170.4	22.9	14.5	11.8	11.1	10.5	10.7	11.8	12.8	13.0
55°	809.2	162.8	20.2	12.8	9.9	9.3	8.6	8.4	8.6	8.2	7.8
56°	804.6	162.0	19.6	12.4	9.5	8.6	7.8	7.4	7.2	6.3	6.1
57.5°	802.5	162.0	18.5	11.6	8.8	7.8	6.7	5.9	5.0	4.4	4.4
60°	800.8	163.0	17.2	10.1	7.6	6.3	4.8	3.6	2.9	2.9	2.9
62.5°	797.2	162.6	15.8	8.4	6.5	4.8	2.9	2.3	2.1	2.3	2.5
65°	757.0	151.0	13.9	6.7	5.0	3.4	1.7	1.7	1.9	2.3	2.5
67.5°	610.0	114.4	11.4	5.3	3.6	2.5	1.5	1.5	1.9	2.3	2.5
70°	335.1	60.4	9.7	3.8	2.7	2.1	1.5	1.3	1.9	2.3	2.5
72.5°	81.8	25.2	8.8	2.9	2.5	1.9	1.3	1.3	1.9	2.3	2.5
75°	20.2	18.9	7.2	2.3	2.1	1.7	1.3	1.3	1.9	2.3	2.5
77.5°	9.5	25.0	4.8	2.1	1.9	1.5	1.3	1.3	1.9	2.3	2.3
80°	5.7	18.9	2.9	1.9	1.7	1.5	1.3	1.3	1.9	2.3	2.5
82.5°	3.4	5.5	2.1	1.9	1.7	1.3	1.3	1.3	1.9	2.3	2.5
85°	2.9	2.7	2.1	1.9	1.7	1.5	1.3	1.3	2.1	2.5	2.5
87.5°	2.3	2.1	1.9	1.7	1.7	1.5	1.3	1.3	1.9	2.3	2.5
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)