

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: P196975

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196975
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
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
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4127 lumens
Efficiency: N/A
Efficacy: 93.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

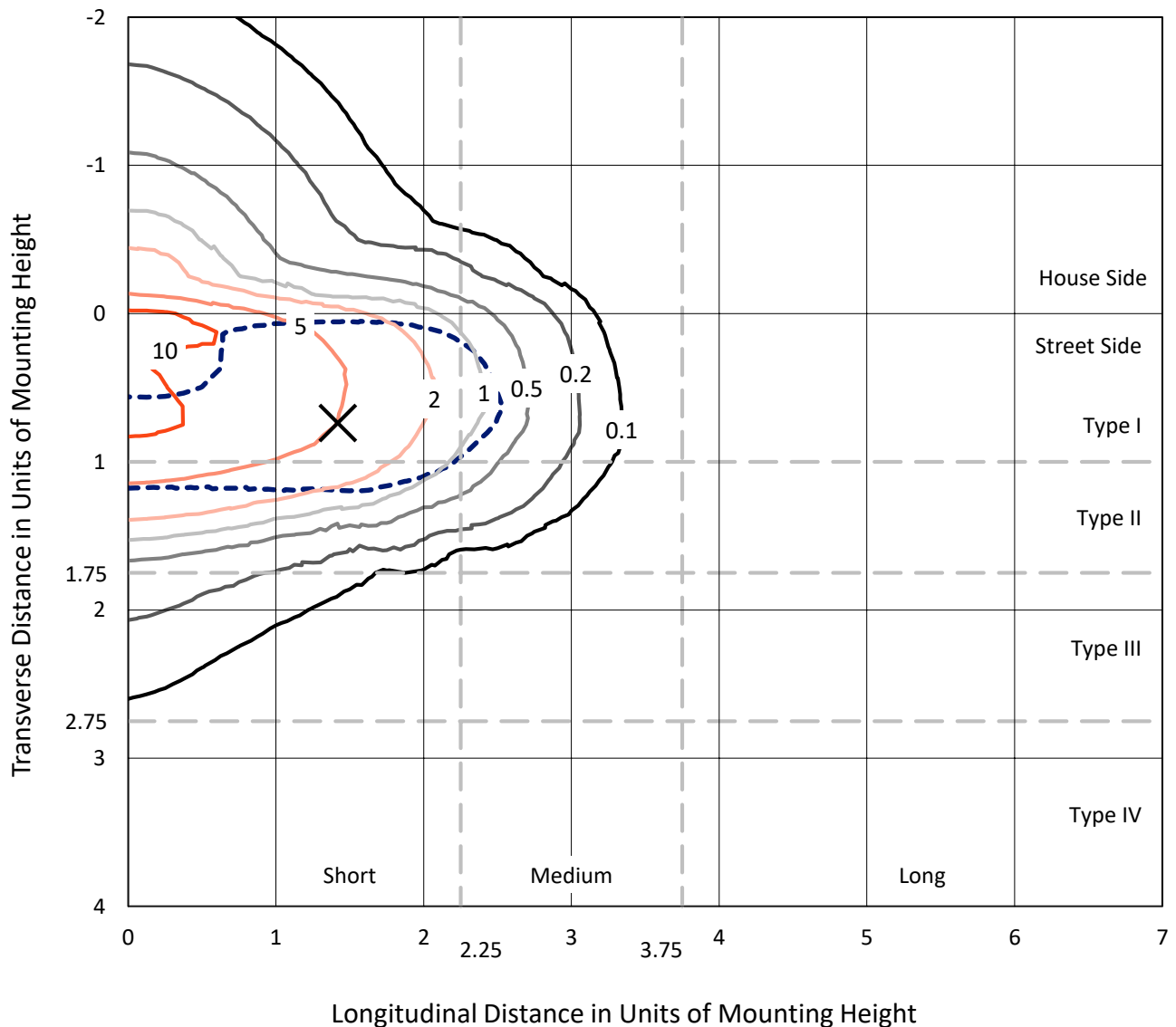
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

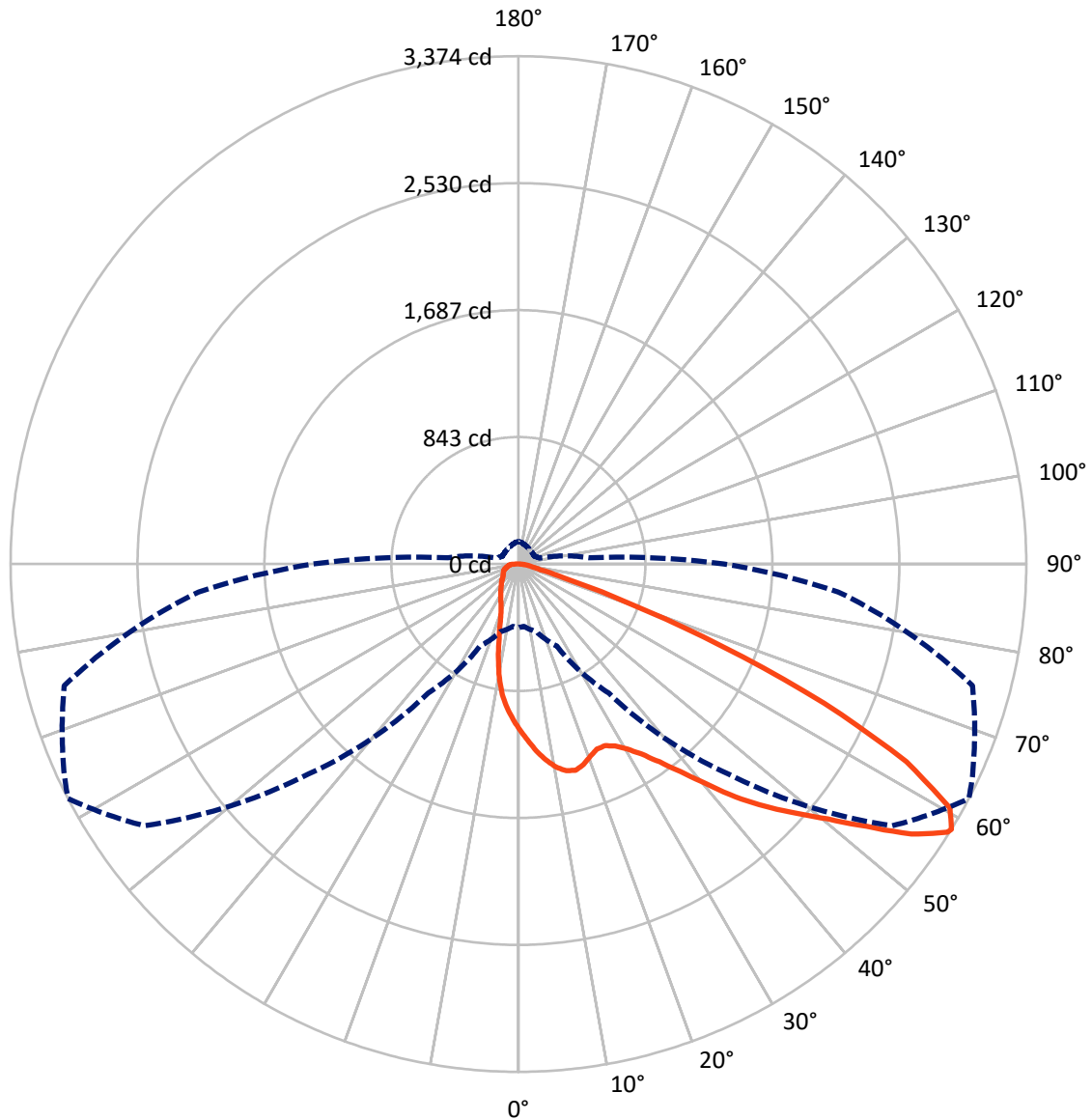
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.9 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	633.7	0.0	633.7
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	3493.4	0.0	3493.4
	% Fixture	84.6	0.0	84.6
Total	Lumens	4127.0	0.0	4127.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.5	2.4
10°-20°	248.6	6.0
20°-30°	402.8	9.8
30°-40°	643.1	15.6
40°-50°	935.5	22.7
50°-60°	978.9	23.7
60°-70°	596.8	14.5
70°-80°	166.9	4.0
80°-90°	55.9	1.4
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°	4127.0	100.0
0°-180°	4127.0	100.0



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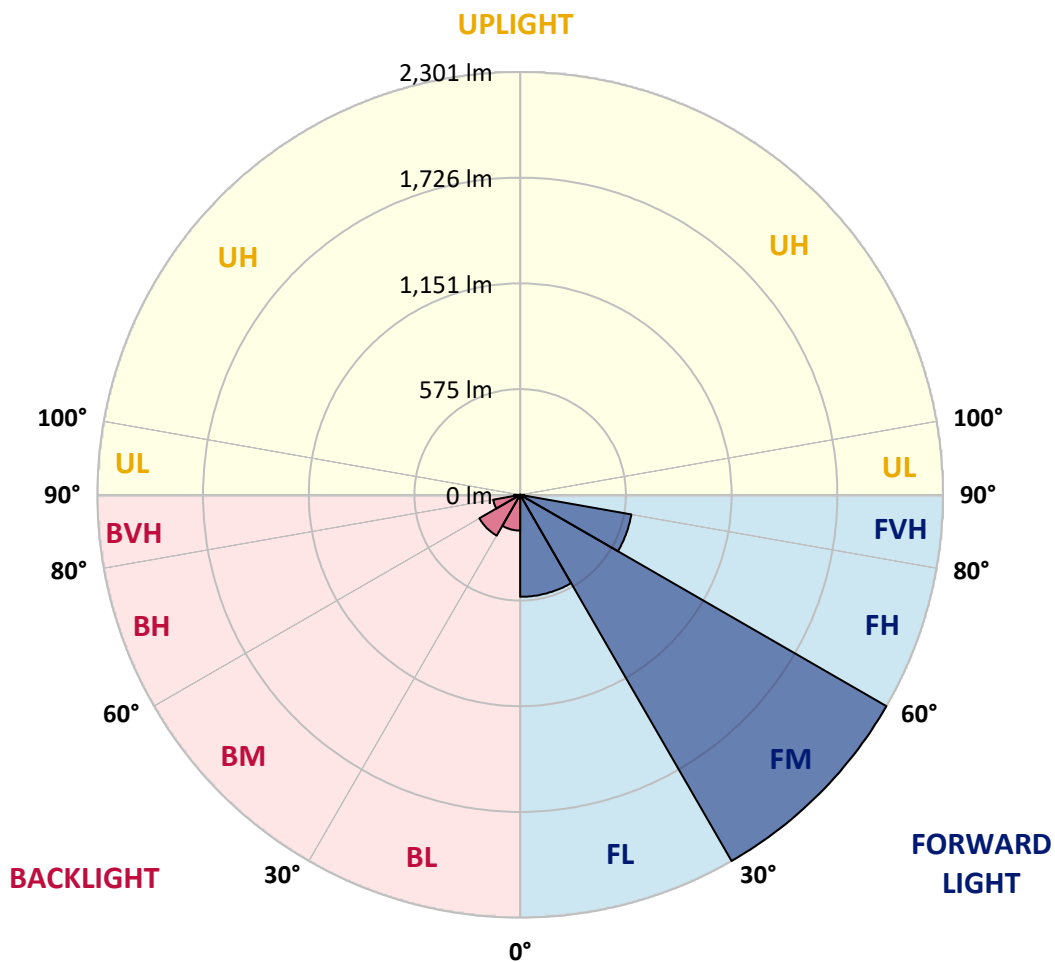
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	555.1	13.5			
FM	(30°-60°)	2301.3	55.8			
FH	(60°-80°)	614.5	14.9			G0/660
FVH	(80°-90°)	22.5	0.5			G1/100
BL	(0°-30°)	194.8	4.7	B1/500		
BM	(30°-60°)	256.3	6.2	B1/1000		
BH	(60°-80°)	149.2	3.6	B1/500		G1/500
BVH	(80°-90°)	33.4	0.8			G1/100
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°	62.5°	65°	75°	85°
0°	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9
2.5°	1250.7	1249.9	1239.4	1232.4	1224.1	1205.1	1186.0	1171.8	1164.6	1137.0	1110.1
5°	1354.1	1351.0	1345.1	1337.6	1326.8	1302.8	1272.6	1246.6	1236.3	1187.3	1138.0
7.5°	1299.5	1304.4	1322.7	1343.3	1365.0	1366.5	1345.1	1314.2	1302.8	1237.3	1165.1
10°	1148.1	1146.0	1168.9	1209.2	1280.6	1351.3	1386.6	1371.4	1359.6	1284.8	1192.2
12.5°	1102.1	1101.6	1105.5	1115.8	1160.7	1257.7	1376.1	1409.1	1405.0	1335.1	1221.0
15°	1116.1	1116.6	1116.3	1117.6	1130.0	1176.2	1317.0	1421.7	1434.6	1384.8	1250.5
17.5°	1160.7	1158.9	1153.2	1147.0	1148.8	1165.3	1253.3	1400.1	1438.7	1429.2	1275.2
20°	1229.6	1229.6	1214.3	1197.1	1185.7	1189.3	1226.7	1362.9	1419.7	1466.9	1293.8
22.5°	1316.0	1317.3	1294.8	1263.3	1237.6	1227.8	1241.9	1335.3	1396.4	1501.7	1310.3
25°	1423.3	1423.0	1390.2	1345.1	1304.4	1280.9	1280.6	1336.6	1389.2	1542.4	1327.6
27.5°	1556.1	1544.0	1505.8	1441.6	1384.1	1348.2	1332.0	1369.1	1404.4	1592.5	1350.8
30°	1706.0	1693.6	1643.5	1561.0	1483.1	1430.7	1403.9	1425.3	1450.9	1656.2	1385.9
32.5°	1854.3	1857.1	1798.3	1705.2	1605.1	1531.3	1491.6	1504.8	1522.6	1734.1	1433.3
35°	2071.4	2071.2	1994.3	1878.0	1759.1	1656.9	1606.7	1613.6	1629.9	1843.9	1499.9
37.5°	2233.4	2230.8	2181.3	2078.4	1944.5	1822.0	1749.3	1750.3	1764.2	1981.9	1587.6
40°	2249.9	2249.4	2249.2	2234.5	2142.9	2027.3	1936.3	1917.5	1923.1	2128.4	1680.7
42.5°	2123.8	2142.6	2196.8	2279.9	2305.4	2244.8	2158.6	2116.6	2104.2	2296.6	1779.2
45°	1944.0	1953.6	2048.5	2235.2	2387.2	2449.1	2384.3	2295.6	2274.4	2460.1	1859.4
47.5°	1860.5	1856.3	1911.3	2114.8	2379.2	2611.6	2616.2	2470.7	2434.9	2601.2	1927.8
50°	1681.2	1675.8	1745.2	1937.6	2292.0	2692.3	2854.3	2661.6	2595.3	2735.4	1989.7
52.5°	1324.0	1318.8	1411.9	1659.8	2097.0	2662.1	3054.9	2895.8	2782.8	2864.6	2047.5
55°	861.5	862.0	950.7	1206.3	1696.9	2486.2	3149.1	3166.4	3039.7	2993.8	2094.1
57.5°	474.3	470.0	533.1	690.2	1167.4	2086.7	3070.7	3361.4	3295.3	3104.7	2127.9
58°	421.7	416.6	465.3	600.7	1046.7	1973.9	3031.2	3373.7	3328.1	3123.0	2132.8
60°	300.5	291.7	284.2	338.7	603.0	1423.3	2768.1	3293.5	3337.6	3159.7	2128.2
62.5°	253.3	243.2	216.4	214.3	284.0	696.2	2189.1	2892.4	3016.0	3075.3	2053.4
65°	235.2	225.2	189.8	177.2	192.7	300.5	1353.6	2233.4	2398.5	2782.0	1865.1
67.5°	222.3	210.5	172.6	156.0	159.1	179.8	574.4	1460.7	1652.0	2169.5	1496.3
70°	210.7	197.6	158.9	139.8	137.2	136.7	224.4	762.7	947.1	1419.7	1002.3
72.5°	197.6	184.7	146.8	126.4	120.7	110.9	134.9	315.2	432.0	695.9	459.4
75°	178.5	167.9	133.4	115.3	105.5	90.0	99.6	151.1	186.2	266.4	213.3
77.5°	157.1	148.6	119.7	106.0	92.9	73.5	76.1	102.4	115.0	150.1	123.5
80°	111.2	114.3	104.5	93.4	81.8	59.3	58.6	75.1	82.5	100.9	83.1
82.5°	76.6	78.9	85.1	73.8	66.0	46.2	43.1	52.1	56.0	60.9	40.2
85°	54.7	53.1	59.1	52.9	48.5	29.4	27.6	33.0	35.3	37.1	19.3
87.5°	33.3	33.0	34.0	27.3	25.3	15.0	13.7	15.7	16.8	16.2	9.3
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°	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9	1101.9
2.5°	1100.1	1087.4	1059.8	1037.7	1013.7	995.4	977.0	966.7	955.4	948.9	948.2
5°	1112.2	1086.4	1027.6	972.9	916.7	866.1	816.6	780.0	750.1	733.0	732.0
7.5°	1125.6	1085.1	994.3	899.7	799.6	700.0	612.1	549.9	509.9	491.4	490.1
10°	1135.9	1079.7	953.8	806.6	647.9	516.4	436.4	399.8	387.7	384.6	384.1
12.5°	1148.3	1075.8	902.8	687.1	495.2	393.1	368.8	366.5	369.1	370.6	370.9
15°	1159.9	1068.4	833.9	554.8	387.7	351.3	351.8	356.7	361.9	364.2	364.5
17.5°	1165.3	1050.0	743.4	437.2	339.2	332.5	338.4	344.9	349.5	351.3	351.3
20°	1165.3	1020.6	638.4	354.1	313.9	315.2	322.4	327.3	328.3	326.8	326.0
22.5°	1160.4	984.3	536.2	309.0	293.3	298.2	303.8	300.5	288.4	279.1	277.3
25°	1156.0	941.2	438.0	281.4	275.2	281.7	279.3	256.4	237.8	228.3	226.7
27.5°	1148.8	889.1	355.9	258.7	257.7	262.8	239.9	217.7	208.4	203.2	202.2
30°	1147.0	832.6	297.9	238.6	240.4	233.2	206.9	199.6	197.6	194.7	193.4
32.5°	1153.0	776.1	261.5	222.1	223.9	200.2	190.1	191.1	190.9	187.3	186.0
35°	1169.2	721.2	238.3	207.1	202.0	179.3	180.6	183.6	183.6	179.3	177.7
37.5°	1197.6	670.1	223.6	194.5	176.7	168.4	171.8	175.9	175.9	172.8	171.5
40°	1227.8	620.3	212.5	184.4	160.7	160.9	164.3	167.4	168.7	169.2	168.2
42.5°	1255.1	568.7	200.7	173.6	153.5	155.3	156.8	159.1	164.6	168.2	167.7
45°	1271.1	516.9	187.8	160.2	148.6	149.3	148.8	153.0	159.4	164.8	164.8
47.5°	1285.8	474.3	177.2	146.8	143.7	143.7	142.1	146.2	152.2	158.6	159.1
50°	1299.7	446.7	169.7	136.4	137.5	136.7	136.2	140.1	148.1	155.8	157.1
52.5°	1313.9	437.5	163.0	129.0	131.0	130.0	130.5	135.9	145.0	153.0	154.2
55°	1333.8	443.4	156.0	123.8	124.8	124.6	126.6	132.8	140.8	148.8	149.3
57.5°	1358.3	465.0	150.1	119.9	118.9	120.5	123.8	129.7	137.5	147.0	147.8
58°	1363.2	470.2	149.1	118.9	117.6	119.9	123.3	129.0	137.0	147.0	147.8
60°	1370.6	488.5	146.5	116.8	113.2	117.4	121.5	127.2	135.9	148.3	149.9
62.5°	1334.5	492.1	145.7	114.5	108.6	113.7	118.6	125.1	134.9	152.7	156.0
65°	1209.4	455.0	140.3	110.7	104.7	110.9	116.1	123.5	138.0	165.8	167.4
67.5°	970.9	377.9	127.2	104.7	100.3	107.6	114.0	123.5	139.3	167.9	168.9
70°	667.5	284.0	110.7	98.3	95.2	103.4	113.2	126.4	134.9	158.9	155.8
72.5°	348.7	197.6	97.0	90.8	89.0	99.8	120.7	123.5	129.7	148.3	145.2
75°	175.7	134.4	85.4	82.3	82.0	98.5	135.2	118.9	124.3	139.5	146.2
77.5°	103.7	105.2	76.1	74.3	75.6	96.2	135.4	114.3	118.1	128.4	135.7
80°	70.9	86.9	68.9	68.4	69.4	88.5	124.8	108.6	110.9	121.5	129.2
82.5°	40.0	48.0	60.4	63.7	63.2	72.5	107.8	98.8	101.6	143.7	151.9
85°	19.3	28.9	50.6	59.6	53.9	48.2	87.7	87.7	88.5	102.9	104.2
87.5°	7.2	12.9	34.0	47.2	37.7	28.9	59.6	62.2	69.1	71.2	72.7
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)