

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: P197257

Luminaire Tested: **NAV-AF-01-D-UNV-T3-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197257
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3285 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

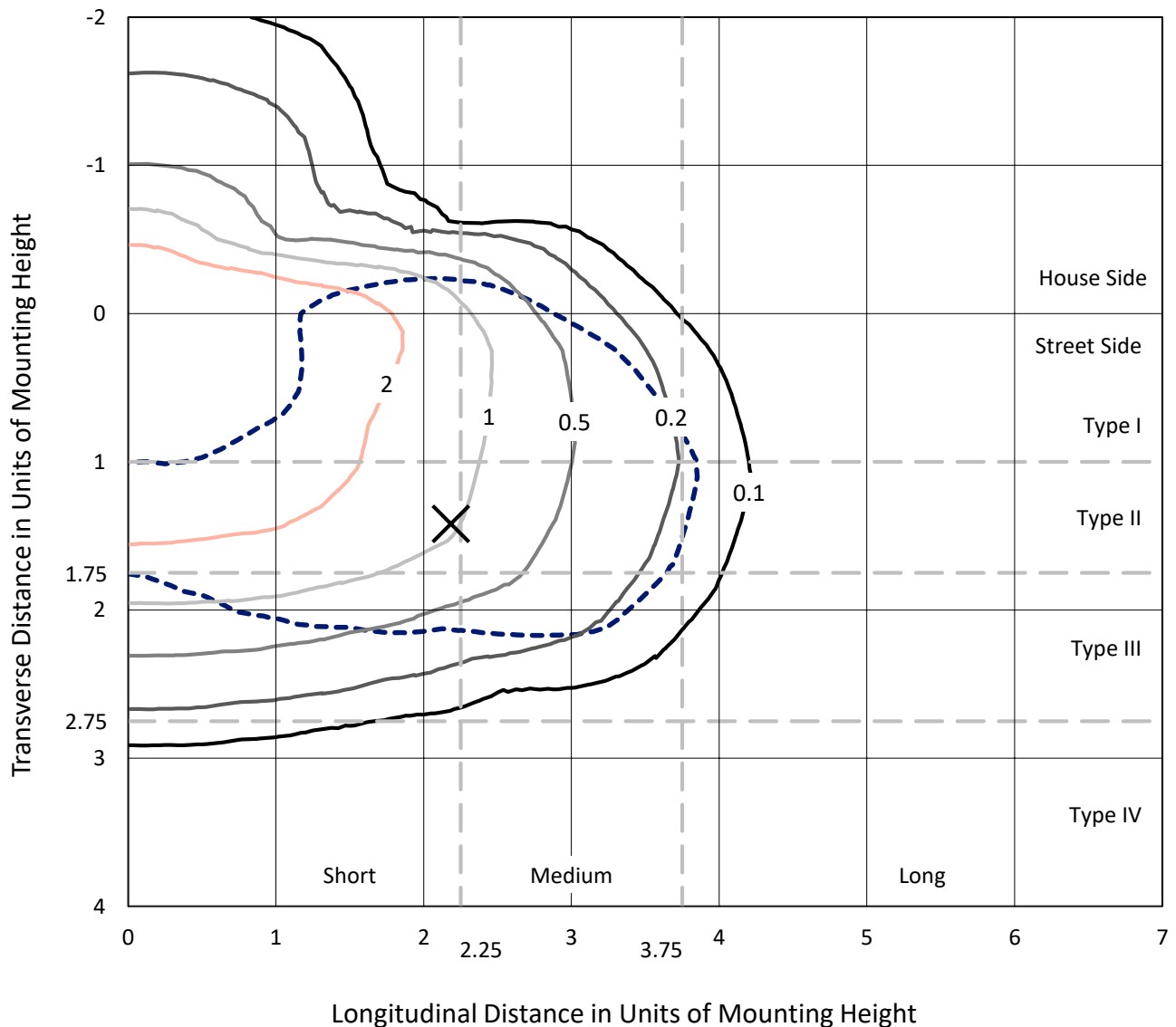
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

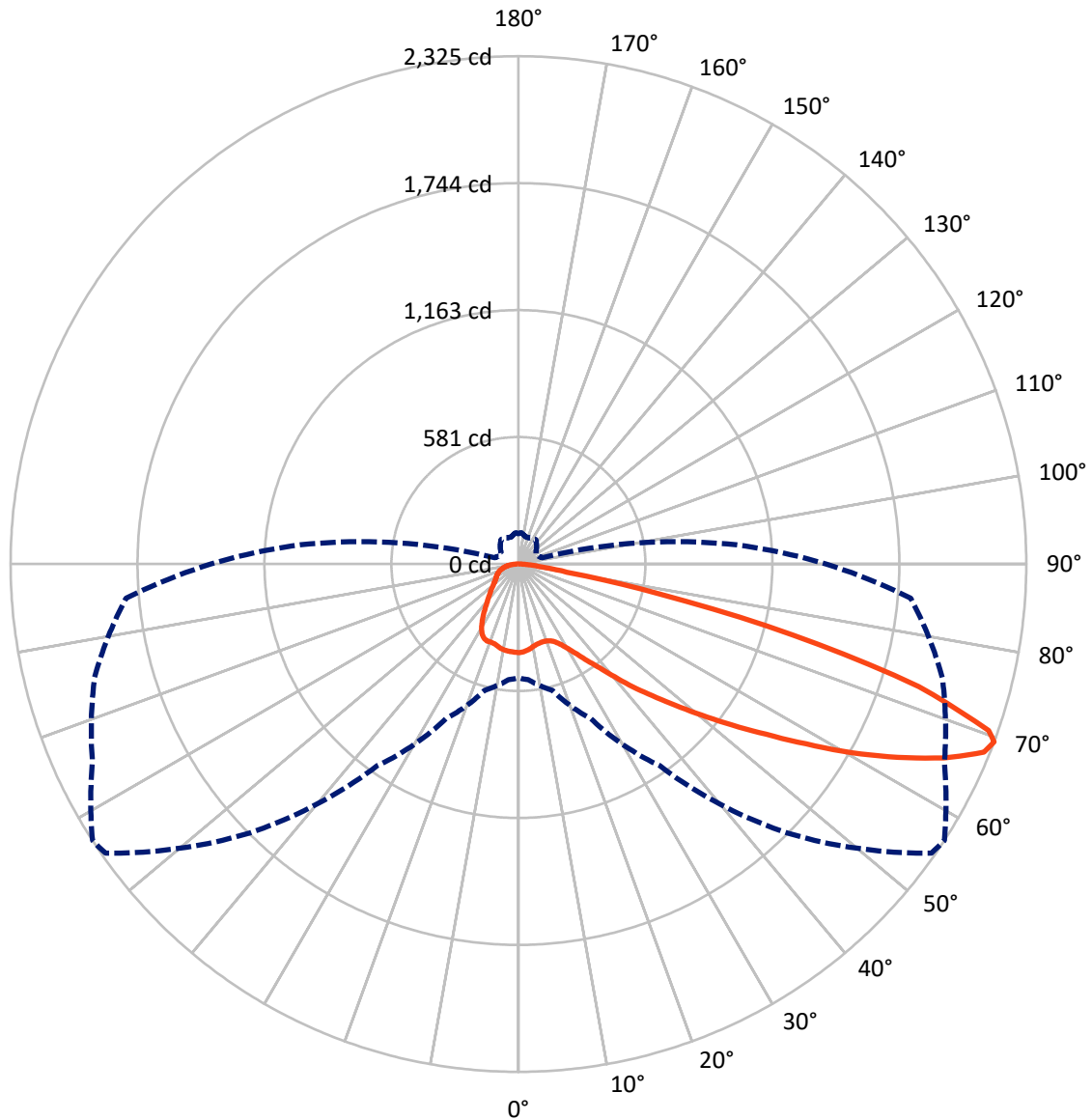
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.2 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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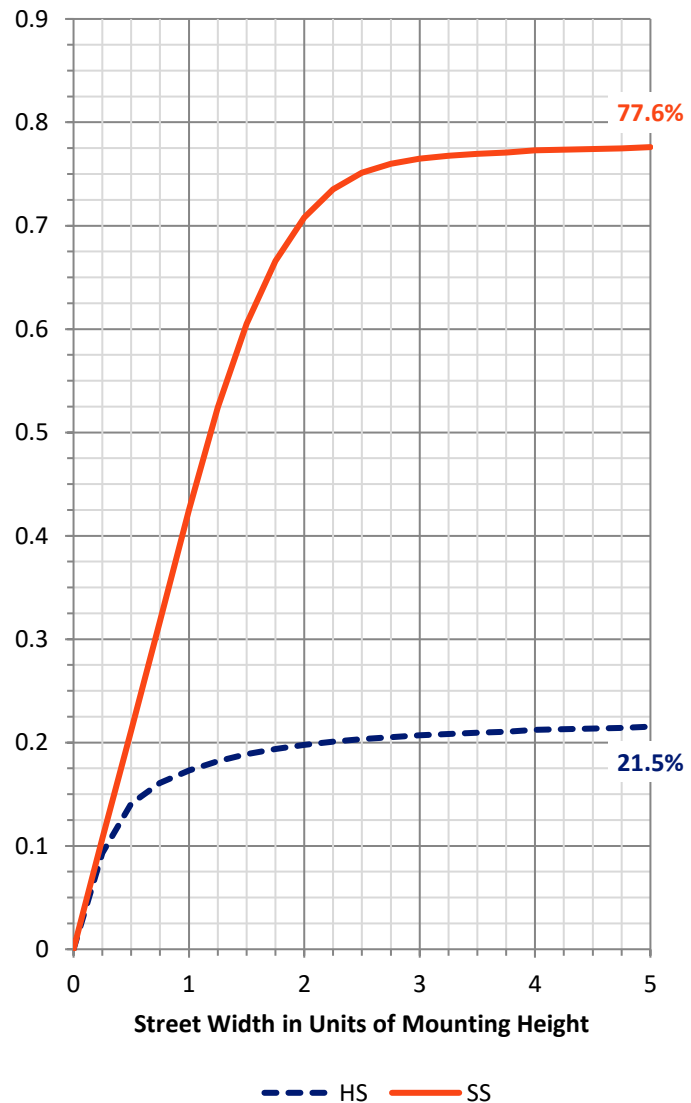
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	724.9	0.0	724.9
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	2560.1	0.0	2560.1
	% Fixture	77.9	0.0	77.9
Total	Lumens	3285.0	0.0	3285.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.0	1.2
10°-20°	108.0	3.3
20°-30°	179.7	5.5
30°-40°	293.5	8.9
40°-50°	495.3	15.1
50°-60°	770.5	23.5
60°-70°	917.9	27.9
70°-80°	427.6	13.0
80°-90°	54.4	1.7
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°	3285.0	100.0
0°-180°	3285.0	100.0



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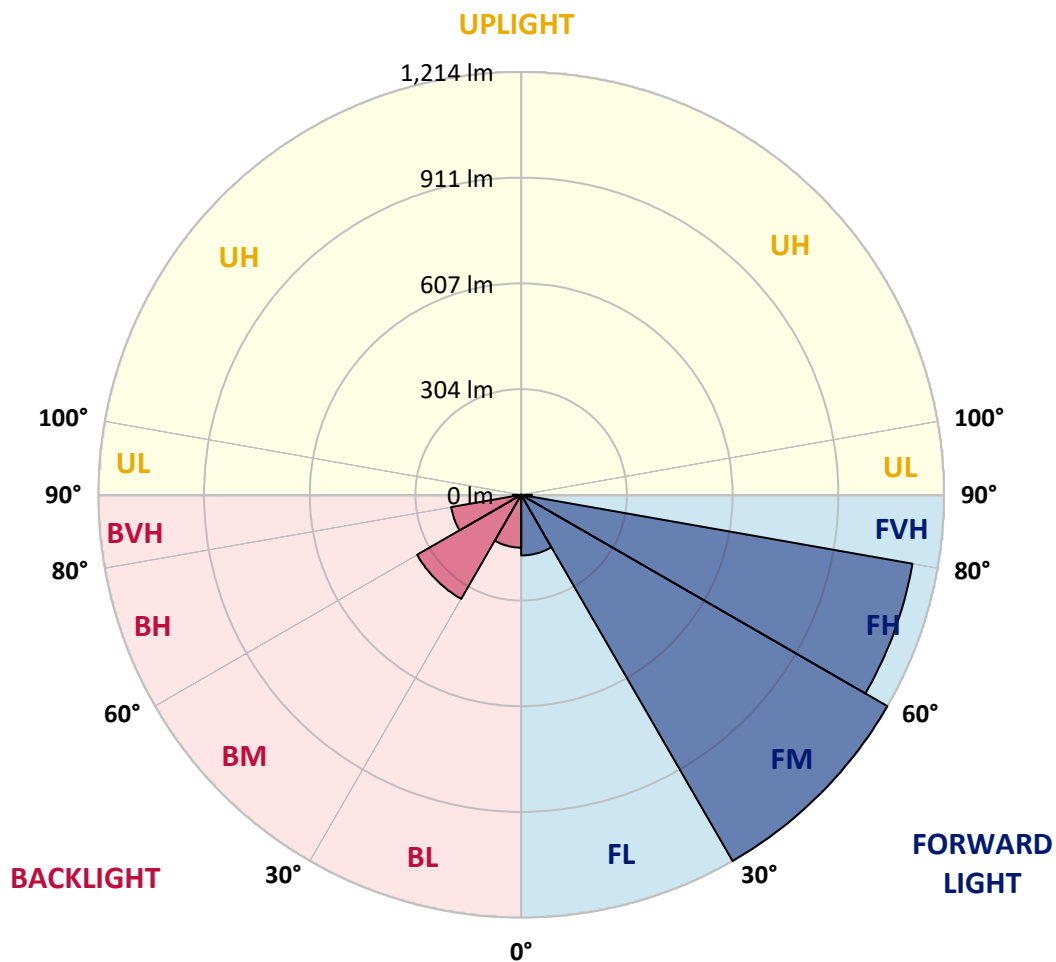
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	174.0	5.3			
FM	(30°-60°)	1214.4	37.0			
FH	(60°-80°)	1141.2	34.7			G1/1800
FVH	(80°-90°)	30.6	0.9			G1/100
BL	(0°-30°)	151.8	4.6	B1/500		
BM	(30°-60°)	345.0	10.5	B1/1000		
BH	(60°-80°)	204.3	6.2	B1/500		G1/500
BVH	(80°-90°)	23.8	0.7			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	405.9	405.9	405.9	405.9	405.9	405.9	405.9	405.9	405.9	405.9	405.9
2.5°	403.6	403.6	404.6	404.6	404.6	404.2	402.9	403.4	402.5	401.9	400.8
5°	395.4	395.8	397.1	397.5	398.1	398.3	398.3	398.1	398.3	398.3	397.7
7.5°	384.0	384.4	385.9	386.8	388.6	390.3	391.2	391.2	392.2	393.1	393.3
10°	377.1	377.1	377.9	377.9	379.4	380.2	383.0	382.8	385.7	388.4	389.7
12.5°	376.2	376.2	375.8	374.3	373.5	373.3	376.0	376.5	380.9	385.7	388.0
15°	379.0	379.0	377.7	374.8	371.6	370.1	372.9	373.7	378.6	384.2	387.8
17.5°	387.8	387.6	384.9	379.0	373.5	371.2	372.0	372.9	377.3	383.8	388.2
20°	407.4	407.4	401.5	390.8	381.3	375.8	374.6	375.2	378.3	384.4	390.1
22.5°	441.6	442.3	431.8	414.1	397.9	386.3	381.3	381.9	383.4	389.3	395.6
25°	492.1	490.4	475.5	450.5	425.2	405.5	395.2	395.8	395.8	401.3	407.8
27.5°	545.5	546.0	524.5	497.6	464.4	434.9	418.5	418.3	418.1	423.3	430.3
30°	605.9	606.1	581.3	550.2	512.1	474.5	449.8	449.6	447.7	454.3	463.3
32.5°	671.9	671.7	642.9	607.8	565.5	522.8	490.9	490.6	489.2	498.0	508.9
35°	745.1	745.1	716.5	673.2	627.6	580.0	543.0	542.8	543.6	555.6	565.9
37.5°	833.2	835.1	800.6	748.1	698.2	647.5	604.4	603.2	596.9	617.0	634.1
40°	925.1	930.4	894.6	833.2	779.4	727.0	679.5	678.7	673.2	694.6	722.2
42.5°	1024.6	1036.6	996.9	934.2	875.5	818.9	771.2	768.9	747.9	781.3	824.4
45°	1155.0	1162.8	1105.2	1048.4	993.1	928.5	871.7	859.3	838.3	881.2	937.1
47.5°	1243.8	1240.0	1204.0	1165.9	1130.4	1068.6	981.3	965.5	939.9	996.6	1058.3
50°	1298.9	1301.6	1281.4	1279.5	1277.6	1234.5	1105.0	1086.0	1056.4	1123.7	1195.6
52.5°	1335.2	1322.8	1326.4	1369.3	1421.3	1400.6	1244.8	1223.8	1193.3	1260.6	1341.8
55°	1320.1	1303.7	1336.7	1421.3	1543.4	1548.1	1398.3	1376.7	1350.6	1406.1	1517.6
57.5°	1257.4	1265.6	1317.8	1435.3	1626.9	1680.1	1574.8	1552.7	1501.4	1557.7	1684.6
60°	1169.3	1185.9	1265.6	1413.1	1685.4	1783.0	1768.5	1753.8	1665.4	1705.4	1860.0
62.5°	1074.7	1091.1	1189.1	1375.0	1659.1	1874.1	1958.6	1949.6	1846.5	1847.6	1971.2
65°	934.8	941.5	1041.7	1271.1	1586.1	1956.3	2148.9	2140.9	2019.6	1968.9	2002.3
67.5°	706.0	714.4	796.6	1003.4	1364.1	1911.7	2301.0	2299.7	2123.7	2013.9	1928.3
69°	521.4	531.7	598.7	779.0	1127.9	1741.8	2308.1	2325.2	2151.9	2009.3	1803.2
70°	381.5	393.3	455.3	618.3	939.4	1554.2	2246.9	2283.5	2141.1	1980.0	1705.6
72.5°	162.1	166.1	196.6	279.1	476.6	937.1	1840.4	1917.4	1933.8	1774.2	1332.5
75°	101.6	102.8	114.8	143.2	212.0	387.6	1191.8	1296.8	1443.8	1376.5	892.1
77.5°	76.6	77.6	84.5	98.6	131.7	144.7	552.9	659.3	826.9	809.7	444.0
80°	58.7	59.3	63.9	71.7	92.7	90.6	179.4	225.4	345.1	304.5	157.1
82.5°	46.1	46.3	50.3	51.7	64.8	61.0	90.0	100.3	139.4	115.9	76.8
85°	40.8	41.4	45.4	37.9	41.4	36.8	49.4	53.6	74.0	69.8	29.0
87.5°	20.8	21.9	38.1	32.4	20.8	17.5	21.7	23.3	30.1	32.6	14.1
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°	405.9	405.9	405.9	405.9	405.9	405.9	405.9	405.9	405.9	405.9	405.9
2.5°	401.1	401.3	401.9	402.9	404.6	406.7	409.3	411.8	413.3	414.3	413.9
5°	397.7	397.9	399.2	401.1	403.2	406.3	410.5	413.7	416.0	417.5	417.3
7.5°	393.5	394.1	396.6	398.7	401.7	404.2	407.6	410.5	412.8	414.3	414.1
10°	390.3	391.0	394.1	396.9	399.4	399.8	399.2	398.3	398.1	399.2	398.7
12.5°	388.9	390.1	393.1	395.0	393.9	389.9	385.3	383.4	382.8	384.9	385.1
15°	389.3	390.3	392.9	391.6	385.9	379.2	376.7	378.1	379.4	380.7	380.9
17.5°	390.3	391.0	391.6	387.0	379.0	374.6	373.7	372.2	368.5	366.4	366.1
20°	392.2	393.1	392.0	384.7	377.5	371.6	361.5	352.5	343.9	339.2	337.3
22.5°	398.7	399.4	396.2	389.1	378.1	359.0	338.6	323.0	309.8	302.6	299.9
25°	411.6	412.6	408.2	399.2	370.6	337.1	308.3	287.3	270.7	262.0	259.7
27.5°	434.1	435.1	430.3	406.7	352.9	307.9	273.0	252.2	237.9	230.5	229.4
30°	467.7	469.2	464.8	406.5	326.0	270.7	238.5	226.3	218.1	213.0	212.8
32.5°	514.4	519.9	501.8	399.4	292.7	233.0	212.4	208.2	204.2	200.8	200.8
35°	573.7	586.5	538.4	384.4	256.2	207.4	197.9	193.9	188.9	185.3	184.9
37.5°	644.6	664.6	564.5	357.9	224.6	195.0	189.1	182.5	174.6	167.6	165.9
40°	742.0	746.6	577.3	314.8	201.1	188.2	180.9	172.7	162.6	154.8	153.9
42.5°	839.8	824.6	574.8	268.6	187.6	182.1	172.5	163.4	154.4	147.8	147.8
45°	951.0	892.8	555.6	222.1	175.4	175.2	164.7	156.0	149.1	144.3	143.2
47.5°	1057.4	954.0	522.6	187.8	162.8	168.2	159.6	152.7	146.4	141.7	140.9
50°	1186.6	1024.8	487.5	163.8	150.6	162.1	157.5	153.9	147.8	139.9	139.0
52.5°	1314.8	1107.7	460.4	145.7	139.9	157.3	158.8	159.2	153.5	138.0	136.9
55°	1452.6	1196.2	431.8	131.7	131.0	155.0	161.7	161.3	158.6	138.4	136.7
57.5°	1583.6	1285.2	389.1	121.8	124.1	152.7	162.4	155.6	150.8	140.5	137.8
60°	1692.1	1358.8	326.4	114.8	118.2	148.1	158.2	148.1	139.9	140.1	137.5
62.5°	1744.9	1379.4	249.6	106.8	113.4	140.5	152.1	142.4	134.8	140.9	139.4
65°	1704.8	1320.7	177.9	99.5	107.5	131.7	148.5	137.5	132.3	145.1	143.4
67.5°	1560.5	1160.9	129.1	93.0	101.8	122.6	141.7	133.1	129.8	148.3	144.5
69°	1407.2	1002.3	111.9	89.2	97.8	117.8	137.3	130.8	127.9	143.9	138.4
70°	1279.7	880.1	103.3	86.9	94.4	115.0	134.0	129.3	126.0	138.6	132.1
72.5°	917.6	568.9	86.9	79.9	85.6	108.9	126.6	123.9	118.8	125.1	120.9
75°	554.4	297.0	73.8	72.8	76.3	100.5	118.0	114.6	109.6	110.2	108.1
77.5°	254.7	137.1	61.8	64.4	66.7	90.0	107.5	103.7	99.1	97.4	97.6
80°	111.7	80.1	51.7	54.9	56.2	81.0	96.1	91.9	86.9	95.9	89.0
82.5°	60.4	46.5	40.4	42.5	46.1	70.5	83.5	78.0	73.2	85.2	68.8
85°	24.4	23.8	27.3	29.4	32.0	50.7	69.8	64.1	58.3	52.2	50.9
87.5°	10.5	11.4	13.5	14.3	17.0	31.5	46.9	41.0	41.2	35.3	34.7
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)