

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: P270579

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270579
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-05-D-UNV-AFL-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 1200mA LIGHTSQUARES 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: 24055.1 lumens
Efficiency: N/A
Efficacy: 75.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 320
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

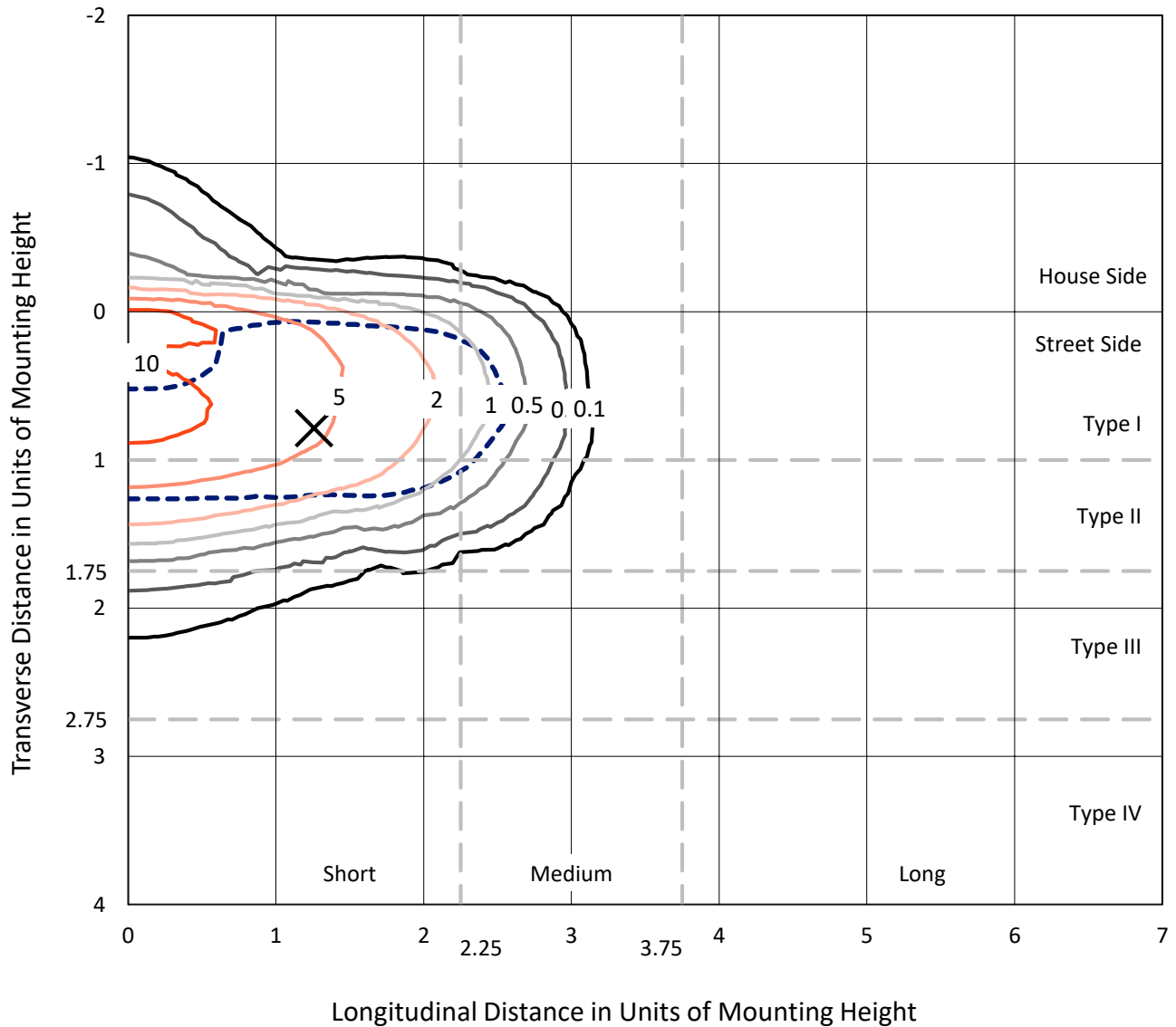


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

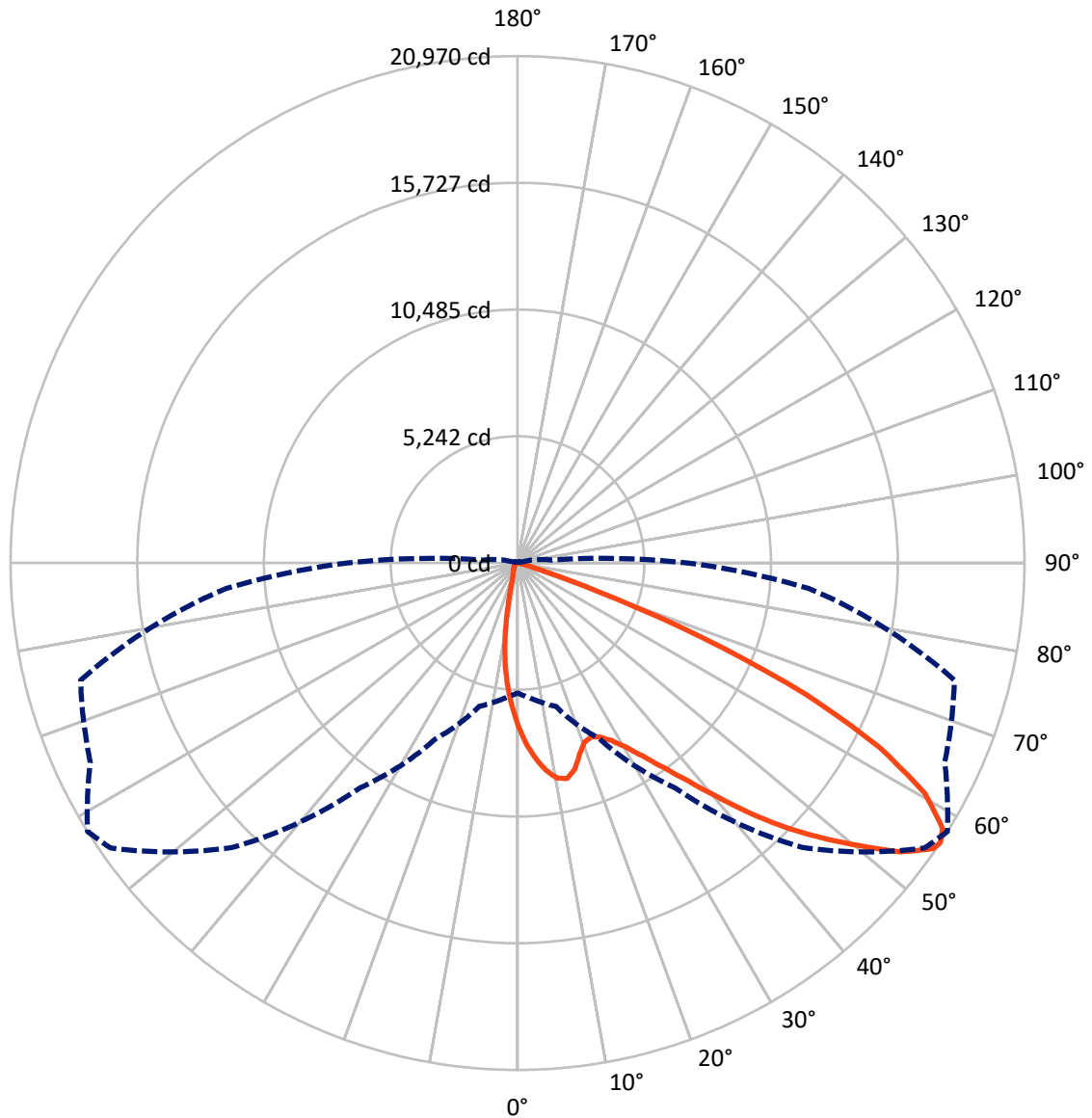


Based on 25 foot mounting height. Maximum calculated value = 13.5 fc
 Type II - Short - Full Cutoff

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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	1501.5	0.0	1501.5
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	22553.6	0.0	22553.6
	% Fixture	93.8	0.0	93.8
Total	Lumens	24055.1	0.0	24055.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	581.0	2.4
10°-20°	1351.9	5.6
20°-30°	2274.8	9.5
30°-40°	3895.3	16.2
40°-50°	5878.1	24.4
50°-60°	6110.1	25.4
60°-70°	3430.1	14.3
70°-80°	470.1	2.0
80°-90°	63.7	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°	24055.1	100.0
0°-180°	24055.1	100.0

Coefficient of Utilization



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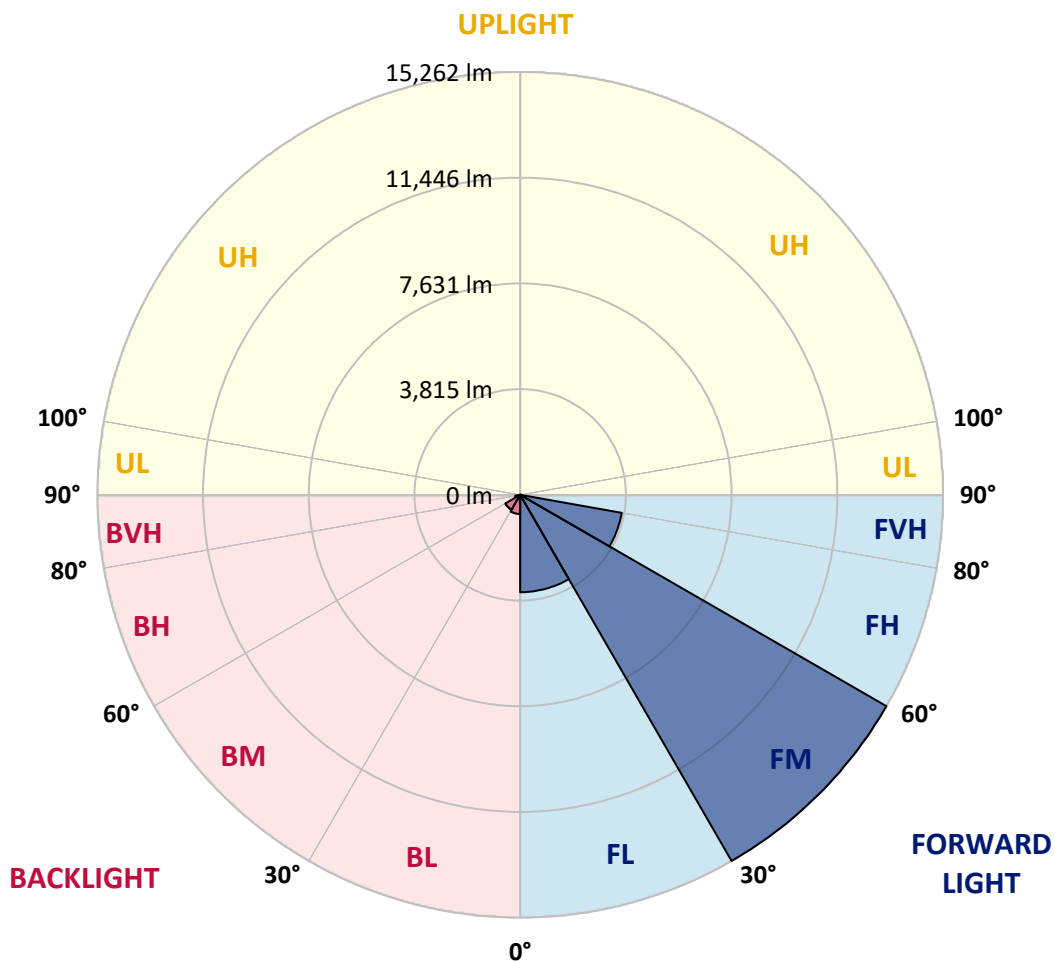
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3515.0	14.6			
FM (30°-60°)	15261.6	63.4			
FH (60°-80°)	3722.1	15.5			G2/5000
FVH (80°-90°)	54.9	0.2			G1/100
BL (0°-30°)	692.7	2.9	B2/1000		
BM (30°-60°)	622.0	2.6	B1/1000		
BH (60°-80°)	178.1	0.7	B1/500		G1/500
BVH (80°-90°)	8.8	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7
2.5°	8194.6	8145.0	8093.5	7998.1	7910.0	7774.2	7587.1	7541.2	7394.4	7152.0	6926.3
5°	8901.1	8892.0	8857.1	8780.0	8684.5	8519.3	8308.3	8167.0	7939.4	7557.7	7122.8
7.5°	8482.6	8559.8	8686.4	8866.2	8987.5	8970.8	8809.4	8686.4	8460.6	7939.4	7315.4
10°	7150.2	7164.9	7339.3	7717.3	8315.7	8873.5	9084.6	9051.6	8844.3	8273.5	7484.3
12.5°	6680.4	6689.6	6730.0	6851.2	7240.2	8018.4	8974.5	9147.0	9130.6	8592.7	7664.1
15°	6717.2	6722.6	6733.6	6772.2	6882.4	7273.2	8416.6	8855.2	9314.0	8895.6	7840.3
17.5°	7007.0	7003.5	6968.6	6932.0	6966.7	7095.3	7847.7	8310.2	9275.4	9150.8	7985.4
20°	7572.4	7590.8	7473.3	7310.0	7225.4	7230.9	7566.9	7913.8	9059.0	9348.9	8093.5
22.5°	8367.1	8379.8	8187.2	7904.5	7656.9	7532.0	7625.6	7809.1	8809.4	9532.5	8181.8
25°	9316.0	9316.0	9046.1	8644.2	8260.6	7987.2	7906.4	7976.1	8713.9	9739.9	8269.7
27.5°	10340.0	10376.7	10024.4	9497.6	8991.0	8591.0	8337.7	8324.9	8787.3	10000.4	8368.9
30°	11454.0	11487.0	11068.6	10424.4	9824.3	9312.2	8923.1	8838.8	9068.1	10351.0	8513.9
32.5°	12562.4	12590.0	12127.6	11470.5	10771.2	10169.4	9657.3	9523.3	9572.9	10863.1	8726.8
35°	13972.0	13977.4	13392.0	12610.2	11863.2	11156.7	10508.8	10376.7	10321.6	11509.1	9033.3
37.5°	15093.3	15049.3	14678.6	13939.0	13081.8	12344.1	11582.4	11409.9	11277.9	12417.5	9508.6
40°	15357.7	15357.7	15302.5	15080.6	14399.7	13689.5	12951.7	12694.7	12402.9	13487.5	10147.3
42.5°	14669.4	14713.5	15076.9	15559.5	15565.0	15109.9	14388.6	14172.1	13658.2	14706.2	10844.7
45°	13129.5	13142.5	14014.2	15317.3	16201.9	16462.5	15930.3	15631.0	14919.1	15972.5	11483.4
47.5°	12575.4	12615.7	12986.4	14579.5	16249.6	17558.1	17409.5	16998.4	16086.3	17128.7	12079.9
50°	11723.8	11773.4	12226.7	13493.0	15820.1	18261.0	18824.5	18384.1	17148.9	18092.3	12375.3
52.5°	9686.7	9763.7	10404.2	12056.0	14746.4	18290.4	20120.1	19856.0	18237.2	18607.9	12340.5
55°	6665.8	6722.6	7469.5	9411.4	12580.9	17393.0	20678.2	20859.8	19208.1	18723.6	12171.6
56°	5377.3	5590.2	6137.2	8018.4	11347.6	16629.6	20549.6	20969.9	19496.3	18705.1	12098.3
57.5°	3555.0	3595.3	4191.9	5810.4	9112.1	14972.2	19969.7	20735.0	19866.9	18611.7	12045.0
60°	1671.9	1690.3	1905.0	2681.4	4931.4	10910.8	18084.9	19354.9	20002.7	18415.3	12043.1
62.5°	1090.2	1093.9	1119.5	1279.1	2017.0	5942.6	14992.4	16820.4	18877.7	18393.2	12008.3
65°	897.4	906.6	875.4	895.6	1055.2	2240.9	10574.8	13113.1	16236.8	17875.6	11615.5
67.5°	791.0	792.8	750.7	726.8	772.6	983.7	5327.8	8271.7	12144.0	15188.8	9567.3
70°	721.2	719.5	671.8	616.6	618.6	653.3	1736.2	3435.7	6719.0	9018.5	5493.0
72.5°	640.5	644.2	616.6	539.6	513.9	462.4	653.3	926.8	2286.7	2896.0	1448.1
75°	561.6	554.3	526.8	477.2	429.5	310.2	328.5	394.5	596.5	590.9	312.0
77.5°	425.7	418.4	431.2	407.4	335.8	216.5	179.9	205.5	269.9	251.4	126.7
80°	324.8	321.1	293.7	348.7	306.5	163.3	123.0	126.7	146.9	133.9	62.4
82.5°	234.8	233.1	222.2	214.8	194.6	119.3	93.7	99.2	110.1	93.7	45.9
85°	89.9	89.9	174.4	146.9	133.9	80.8	66.0	71.5	84.4	67.9	31.3
87.5°	14.7	14.7	117.5	97.2	60.5	40.3	42.2	45.9	49.5	40.3	23.9
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°	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7	6810.7
2.5°	6792.4	6669.5	6399.6	6139.0	5911.4	5661.8	5535.3	5388.5	5333.3	5223.3	5234.2
5°	6862.2	6605.1	6063.7	5493.0	4970.0	4437.6	4059.6	3703.6	3505.4	3308.9	3308.9
7.5°	6933.7	6541.0	5704.1	4791.9	3911.0	2998.8	2352.8	1835.2	1547.2	1354.5	1349.0
10°	6983.2	6458.4	5294.8	3979.0	2679.6	1545.4	932.4	734.2	662.5	631.2	629.5
12.5°	7047.6	6375.8	4828.6	3020.9	1488.4	734.2	581.8	550.7	537.7	530.4	530.4
15°	7102.5	6258.3	4263.4	2031.6	781.9	550.7	501.1	490.0	488.1	486.3	488.1
17.5°	7115.4	6091.2	3586.2	1189.3	567.1	480.9	458.9	449.6	449.6	447.9	447.9
20°	7086.0	5871.1	2837.3	734.2	490.0	442.2	418.4	407.4	405.7	405.7	405.7
22.5°	7025.5	5590.2	2097.7	556.1	446.0	407.4	376.2	365.3	365.3	367.0	368.9
25°	6950.2	5258.0	1440.7	478.9	413.0	370.7	339.5	328.5	332.3	335.8	337.8
27.5°	6854.7	4861.6	943.3	414.7	368.9	334.0	306.5	299.1	306.5	313.9	317.6
30°	6759.3	4426.7	638.6	359.7	319.3	293.7	277.1	275.3	286.3	302.8	304.6
32.5°	6697.0	3980.7	482.7	323.0	280.8	258.8	251.4	255.1	271.6	290.0	293.7
35°	6691.5	3545.8	411.2	293.7	255.1	234.8	231.3	242.3	260.6	275.3	279.0
37.5°	6777.7	3138.3	372.5	271.6	234.8	214.8	209.2	229.3	246.0	260.6	264.3
40°	6952.1	2773.1	346.8	251.4	218.4	194.6	190.9	207.4	223.9	240.4	246.0
42.5°	7170.5	2431.7	317.6	231.3	200.1	172.6	168.8	181.6	198.3	222.2	225.7
45°	7359.5	2114.3	286.3	209.2	179.9	148.7	146.9	161.5	174.4	196.4	200.1
47.5°	7519.2	1850.0	256.9	185.4	154.1	132.1	130.3	137.6	144.9	165.2	168.8
50°	7434.7	1626.0	227.6	152.4	124.9	113.7	112.0	112.0	121.1	141.4	144.9
52.5°	7227.4	1486.5	200.1	126.7	102.8	97.2	91.7	93.7	102.8	112.0	113.7
55°	7060.3	1420.5	176.2	112.0	86.2	80.8	75.3	73.4	75.3	71.5	67.9
56°	7020.0	1413.2	170.7	108.2	82.6	75.3	67.9	64.1	62.4	55.1	53.2
57.5°	7001.6	1413.2	161.5	100.9	77.1	67.9	58.7	51.5	44.0	38.5	38.5
60°	6986.9	1422.3	150.5	88.2	66.0	55.1	42.2	31.3	25.7	25.7	25.7
62.5°	6955.8	1418.7	137.6	73.4	57.0	42.2	25.7	20.2	18.3	20.2	22.0
65°	6605.1	1317.8	121.1	58.7	44.0	29.4	14.7	14.7	16.4	20.2	22.0
67.5°	5322.3	998.3	99.2	45.9	31.3	22.0	12.8	12.8	16.4	20.2	22.0
70°	2923.7	526.8	84.4	33.1	23.9	18.3	12.8	11.0	16.4	20.2	22.0
72.5°	714.0	220.3	77.1	25.7	22.0	16.4	11.0	11.0	16.4	20.2	22.0
75°	176.2	165.2	62.4	20.2	18.3	14.7	11.0	11.0	16.4	20.2	22.0
77.5°	82.6	218.4	42.2	18.3	16.4	12.8	11.0	11.0	16.4	20.2	20.2
80°	49.5	165.2	25.7	16.4	14.7	12.8	11.0	11.0	16.4	20.2	22.0
82.5°	29.4	47.7	18.3	16.4	14.7	11.0	11.0	11.0	16.4	20.2	22.0
85°	25.7	23.9	18.3	16.4	14.7	12.8	11.0	11.0	18.3	22.0	22.0
87.5°	20.2	18.3	16.4	14.7	14.7	12.8	11.0	11.0	16.4	20.2	22.0
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)