

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: P195120

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-7060-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195120
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL2-7060-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32234 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 382
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

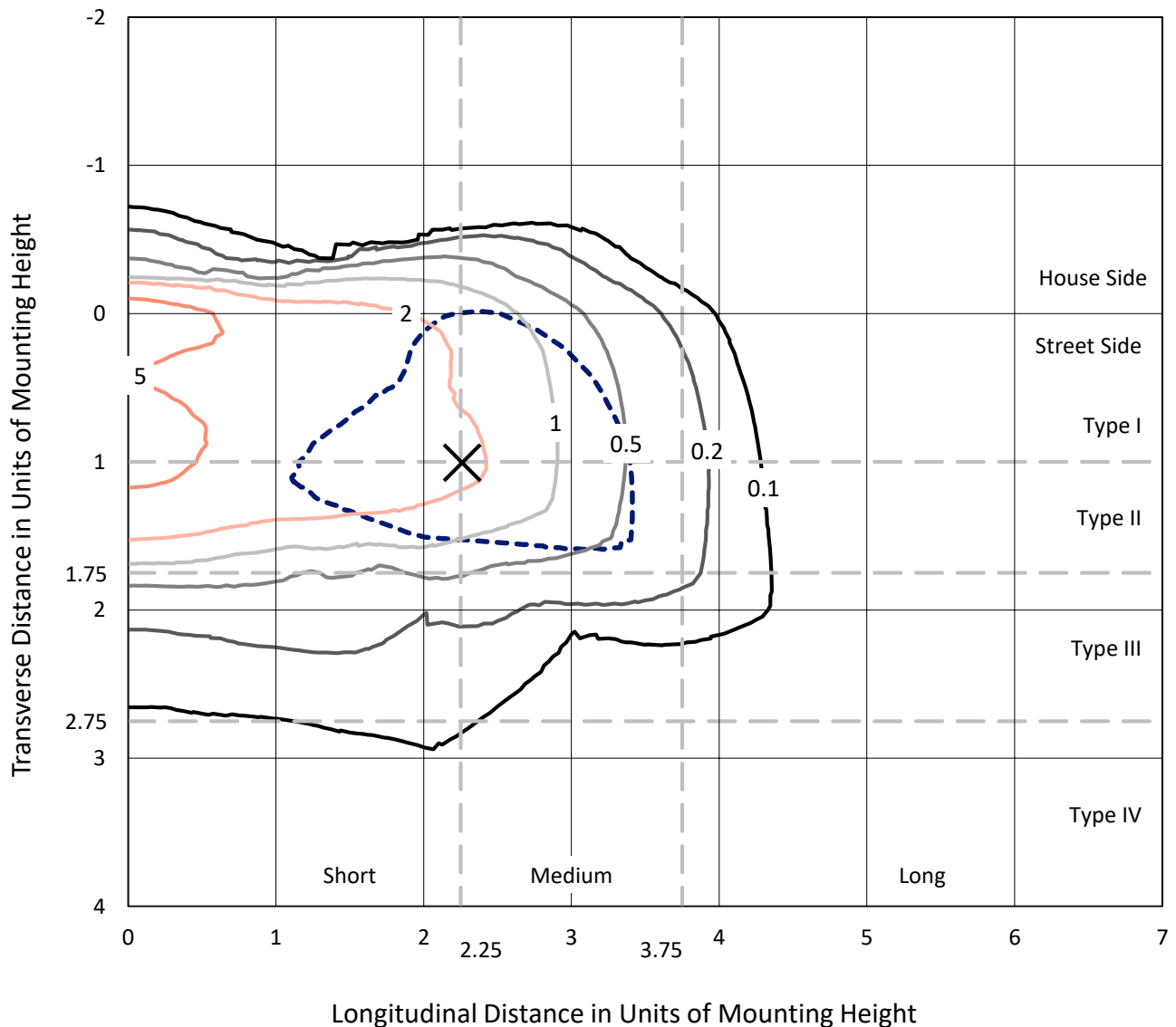


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Iso-Footcandle Lines of Horizontal Illumination

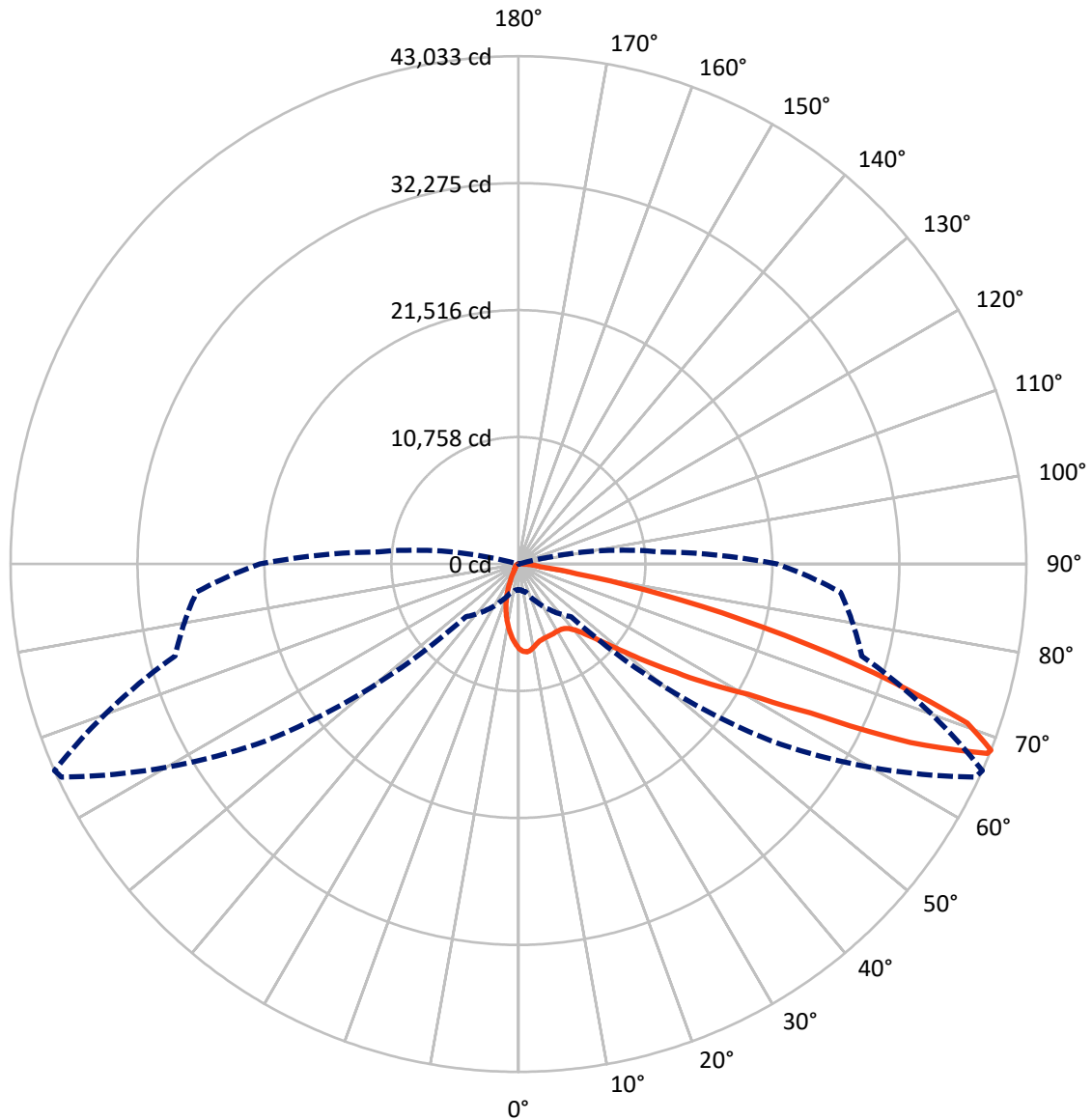
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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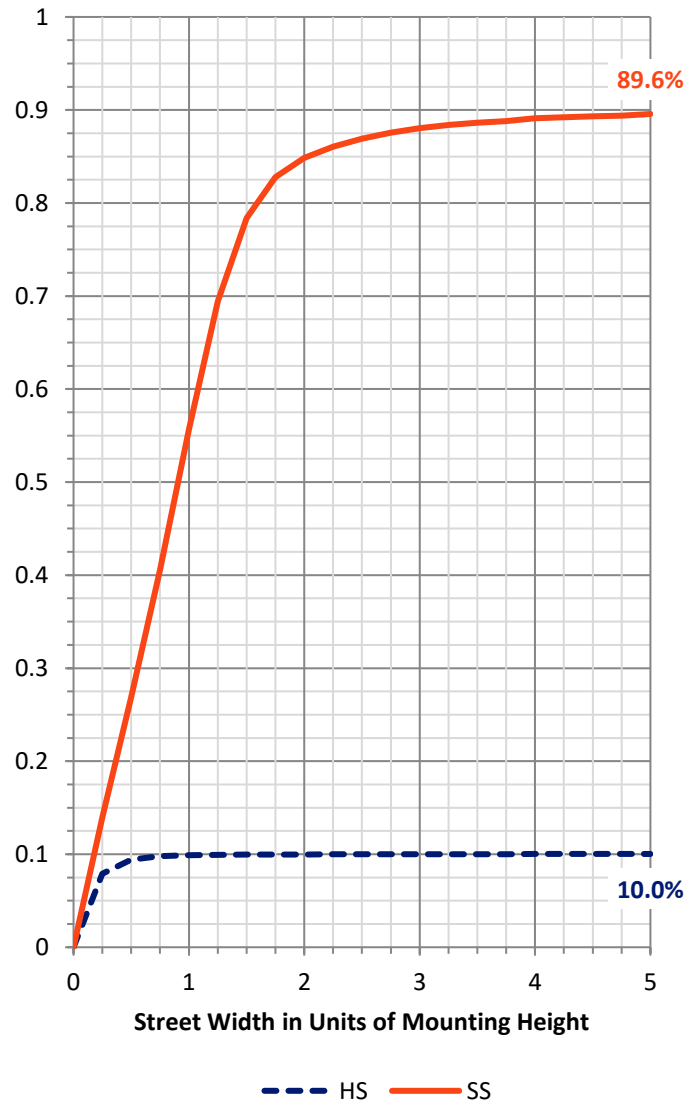
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3265.0	0.0	3265.0
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	28969.0	0.0	28969.0
	% Fixture	89.9	0.0	89.9
Total	Lumens	32234.0	0.0	32234.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	588.7	1.8
10°-20°	1266.7	3.9
20°-30°	1835.6	5.7
30°-40°	2809.9	8.7
40°-50°	4806.2	14.9
50°-60°	7518.2	23.3
60°-70°	8657.0	26.9
70°-80°	4332.1	13.4
80°-90°	419.6	1.3
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°	32234.0	100.0
0°-180°	32234.0	100.0



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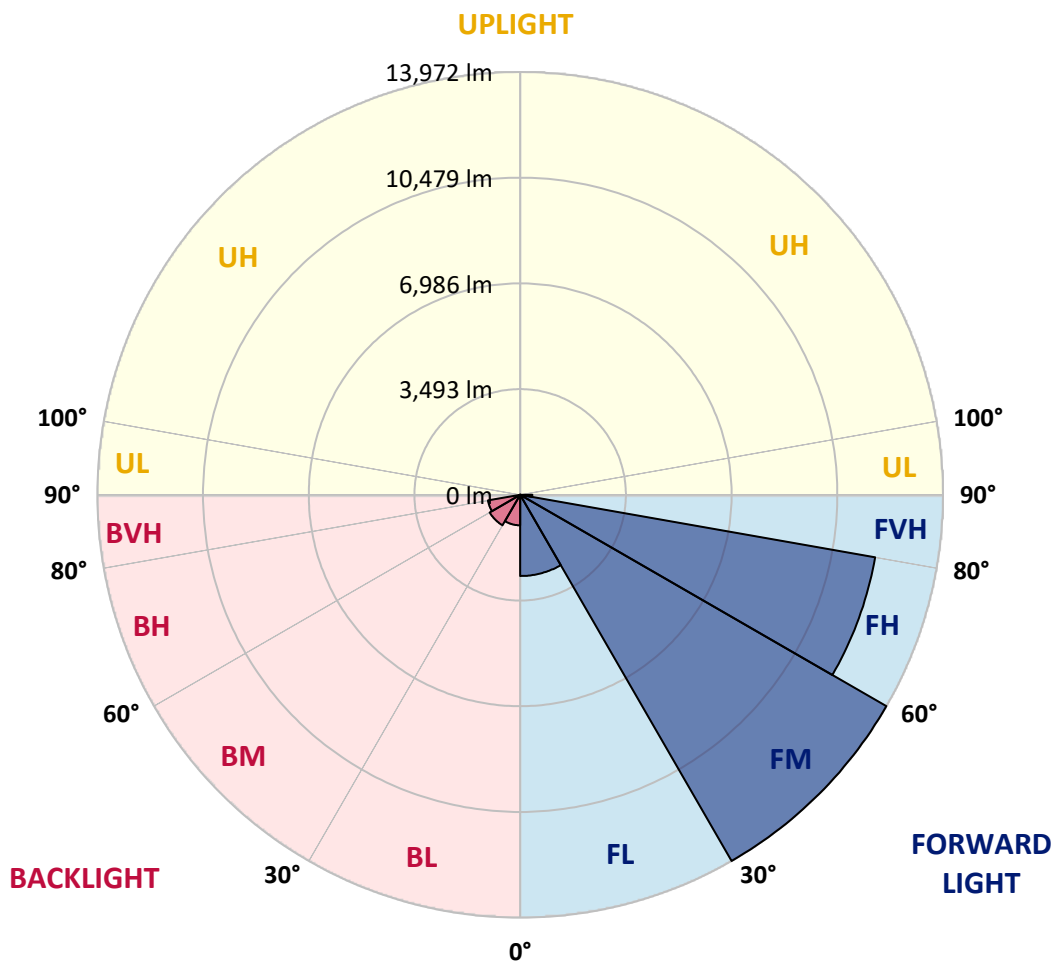
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2683.3	8.3			
FM (30°-60°)	13971.7	43.3			
FH (60°-80°)	11910.4	36.9			G4/12000
FVH (80°-90°)	403.7	1.3			G3/500
BL (0°-30°)	1007.7	3.1	B3/2500		
BM (30°-60°)	1162.6	3.6	B2/2500		
BH (60°-80°)	1078.7	3.3	B3/2500		G3/2500
BVH (80°-90°)	15.9	0.0			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4
2.5°	7553.4	7558.5	7555.9	7563.5	7558.5	7520.5	7480.0	7394.0	7401.6	7290.2	7166.2
5°	7022.0	7065.0	7108.0	7151.1	7254.8	7345.9	7454.7	7480.0	7480.0	7383.9	7201.7
7.5°	6480.5	6483.0	6531.1	6589.3	6728.5	6895.5	7148.5	7376.3	7381.3	7406.6	7206.7
10°	6073.1	6085.7	6118.6	6181.9	6321.1	6485.6	6769.0	7125.8	7153.6	7340.8	7156.1
12.5°	5756.8	5772.0	5807.4	5880.8	6007.3	6176.8	6475.4	6882.8	6920.8	7277.6	7140.9
15°	5513.9	5534.1	5561.9	5635.3	5772.0	5951.6	6278.1	6720.9	6766.4	7252.3	7189.0
17.5°	5412.6	5412.6	5410.1	5460.7	5597.4	5779.6	6121.2	6634.9	6693.1	7272.5	7270.0
20°	5455.7	5448.1	5394.9	5382.3	5465.8	5648.0	5997.2	6579.2	6645.0	7310.5	7368.7
22.5°	5683.4	5668.2	5549.3	5450.6	5425.3	5546.8	5913.7	6541.2	6619.7	7388.9	7500.3
25°	6166.7	6121.2	5956.7	5734.0	5534.1	5521.5	5855.5	6521.0	6604.5	7480.0	7644.5
27.5°	6794.3	6781.6	6518.5	6219.9	5835.2	5605.0	5837.8	6505.8	6589.3	7545.8	7760.9
30°	7573.7	7578.7	7275.1	6885.4	6303.4	5840.3	5893.4	6498.2	6584.2	7550.9	7811.5
32.5°	8378.3	8383.4	8130.4	7712.8	6943.6	6245.2	6050.3	6533.6	6612.1	7530.6	7809.0
35°	9152.7	9160.2	9008.4	8671.9	7798.9	6806.9	6346.4	6655.1	6710.8	7543.3	7803.9
37.5°	10131.9	10162.3	9975.1	9661.3	8871.8	7631.9	6829.7	6900.6	6946.1	7647.0	7841.9
40°	11802.0	11761.6	11225.1	10693.7	10035.8	8636.4	7528.1	7323.1	7338.3	7915.3	7986.1
42.5°	13748.0	13697.4	12778.8	11862.8	11232.7	9848.5	8421.4	7970.9	7968.4	8365.7	8299.9
45°	15423.1	15392.8	14426.1	13203.9	12558.6	11187.1	9522.1	8904.7	8874.3	9145.1	8871.8
47.5°	16612.4	16587.1	15855.8	14631.1	14092.1	12659.9	10896.1	10177.5	10114.2	10164.8	9800.5
50°	16728.8	16701.0	16445.4	15658.5	15883.7	14820.9	12594.1	11845.1	11764.1	11685.6	11204.9
52.5°	15640.7	15638.2	15772.3	15721.7	17138.8	17601.8	14676.6	13907.4	13811.2	13611.3	13133.1
55°	13416.5	13403.8	13912.4	14651.3	17110.9	20471.4	17852.4	16361.9	16235.4	15835.6	15208.0
57.5°	9803.0	9737.2	10800.0	12366.3	15909.0	21726.5	22895.6	19411.1	19201.1	17933.3	16966.7
60°	5412.6	5437.9	6804.4	8659.2	13062.2	21478.5	27536.4	22966.4	22414.8	19742.6	18768.4
62.5°	3034.0	3097.3	4114.5	5627.7	8327.7	19466.8	30026.4	29085.0	27756.6	21853.0	21045.8
65°	2295.1	2333.1	2844.2	4342.3	5250.7	13603.7	30423.7	37640.5	36494.2	25051.5	24671.9
67.5°	2161.0	2191.4	2441.9	3600.8	4782.6	7054.9	27432.7	42701.4	42845.7	29414.0	27480.7
68°	2176.2	2214.1	2464.7	3464.2	4775.0	6311.0	26157.3	42726.7	43032.9	30117.5	27384.6
70°	1999.1	2009.2	2606.4	3398.4	4628.2	4972.3	18922.7	39799.0	40348.1	30955.1	24859.2
72.5°	764.2	766.7	1169.1	2942.9	4848.4	5000.2	9532.2	31456.1	31483.9	26939.2	19380.8
75°	397.3	334.0	366.9	921.1	4630.7	4873.7	4782.6	21478.5	21344.4	18219.3	11875.4
77.5°	273.3	232.8	245.5	318.8	1925.7	4871.1	3454.1	12351.1	12323.3	7750.8	3388.3
80°	154.4	134.1	146.8	268.2	675.6	4572.5	3218.7	5308.9	5002.7	1361.4	549.1
82.5°	78.4	65.8	78.4	225.2	420.1	2877.1	3130.2	2082.6	1854.8	323.9	356.8
85°	20.2	20.2	38.0	156.9	260.6	943.9	2806.3	1503.1	1351.3	141.7	253.0
87.5°	5.1	2.5	15.2	58.2	93.6	205.0	1556.2	837.6	721.2	73.4	146.8
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°	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4	7181.4
2.5°	7115.6	7044.8	6905.6	6748.7	6637.4	6515.9	6445.1	6359.0	6293.2	6235.0	6278.1
5°	7090.3	6953.7	6645.0	6298.3	6007.3	5728.9	5521.5	5324.1	5174.8	5081.2	5119.1
7.5°	7024.5	6822.1	6321.1	5779.6	5303.8	4855.9	4491.6	4165.1	3912.1	3775.4	3818.5
10°	6913.2	6627.3	5954.2	5202.6	4537.1	3904.5	3363.0	2877.1	2510.2	2338.1	2378.6
12.5°	6832.2	6455.2	5574.6	4645.9	3770.4	2872.1	2153.4	1596.7	1310.8	1138.7	1153.9
15°	6796.8	6321.1	5220.3	4058.8	2932.8	1844.7	1164.0	842.6	744.0	708.5	711.1
17.5°	6801.9	6214.8	4883.8	3449.0	2087.6	1060.3	713.6	642.7	627.6	620.0	620.0
20°	6814.5	6108.5	4534.6	2813.9	1336.1	683.2	594.7	571.9	564.3	554.2	556.7
22.5°	6852.5	6027.5	4182.8	2176.2	822.4	556.7	526.3	506.1	493.4	478.3	480.8
25°	6910.7	5966.8	3836.2	1566.4	579.5	485.8	458.0	430.2	407.4	389.7	392.2
27.5°	6946.1	5880.8	3466.7	1067.9	480.8	425.1	387.2	349.2	323.9	308.7	306.2
30°	6920.8	5741.6	3046.7	700.9	425.1	366.9	321.4	278.4	253.0	240.4	240.4
32.5°	6852.5	5561.9	2583.6	511.2	377.0	316.3	260.6	222.7	205.0	197.4	199.9
35°	6774.0	5374.7	2090.2	432.7	339.1	268.2	212.6	182.2	174.6	172.1	172.1
37.5°	6731.0	5212.7	1617.0	392.2	303.7	222.7	174.6	156.9	149.3	149.3	149.3
40°	6779.1	5088.7	1196.9	361.9	268.2	184.7	146.8	134.1	131.6	131.6	131.6
42.5°	6984.1	5045.7	875.5	336.6	232.8	154.4	126.5	116.4	113.9	116.4	116.4
45°	7383.9	5139.4	663.0	311.2	199.9	126.5	108.8	101.2	101.2	103.7	103.7
47.5°	8062.0	5379.7	544.0	285.9	167.0	106.3	93.6	88.6	88.6	91.1	91.1
50°	9114.7	5825.1	488.4	258.1	139.2	91.1	78.4	75.9	75.9	78.4	81.0
52.5°	10713.9	6672.8	460.5	230.3	113.9	75.9	65.8	63.3	65.8	68.3	68.3
55°	12492.9	7758.4	427.6	202.4	96.2	63.3	53.1	53.1	55.7	60.7	60.7
57.5°	14150.3	8806.0	397.3	167.0	83.5	50.6	43.0	43.0	48.1	53.1	53.1
60°	15901.4	9833.3	356.8	134.1	70.9	40.5	35.4	35.4	43.0	48.1	50.6
62.5°	18064.9	11027.7	303.7	106.3	55.7	30.4	25.3	32.9	40.5	48.1	48.1
65°	21192.6	12513.1	237.9	83.5	43.0	22.8	20.2	30.4	38.0	45.5	48.1
67.5°	22328.7	12323.3	179.7	68.3	32.9	17.7	17.7	27.8	38.0	45.5	45.5
68°	21913.7	11908.3	172.1	65.8	30.4	17.7	17.7	27.8	38.0	45.5	45.5
70°	19094.8	9734.7	141.7	50.6	25.3	15.2	15.2	25.3	38.0	43.0	45.5
72.5°	14297.1	6467.8	121.5	32.9	22.8	15.2	12.7	25.3	35.4	43.0	43.0
75°	8201.2	2684.8	103.7	25.3	20.2	12.7	12.7	22.8	35.4	43.0	43.0
77.5°	2317.9	627.6	83.5	20.2	17.7	12.7	10.1	22.8	32.9	40.5	40.5
80°	425.1	187.3	65.8	17.7	15.2	12.7	10.1	22.8	32.9	40.5	40.5
82.5°	280.9	88.6	48.1	17.7	15.2	12.7	10.1	20.2	30.4	38.0	38.0
85°	210.0	63.3	30.4	17.7	15.2	12.7	10.1	20.2	30.4	38.0	38.0
87.5°	116.4	27.8	22.8	20.2	17.7	12.7	10.1	17.7	27.8	35.4	35.4
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)