

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: INVUE

Report Number: P141876

Luminaire Tested: **ECM-F02-LED-E1-T3-7050**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141876
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33683)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F02-LED-E1-T3-7050
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (14) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4974.5 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

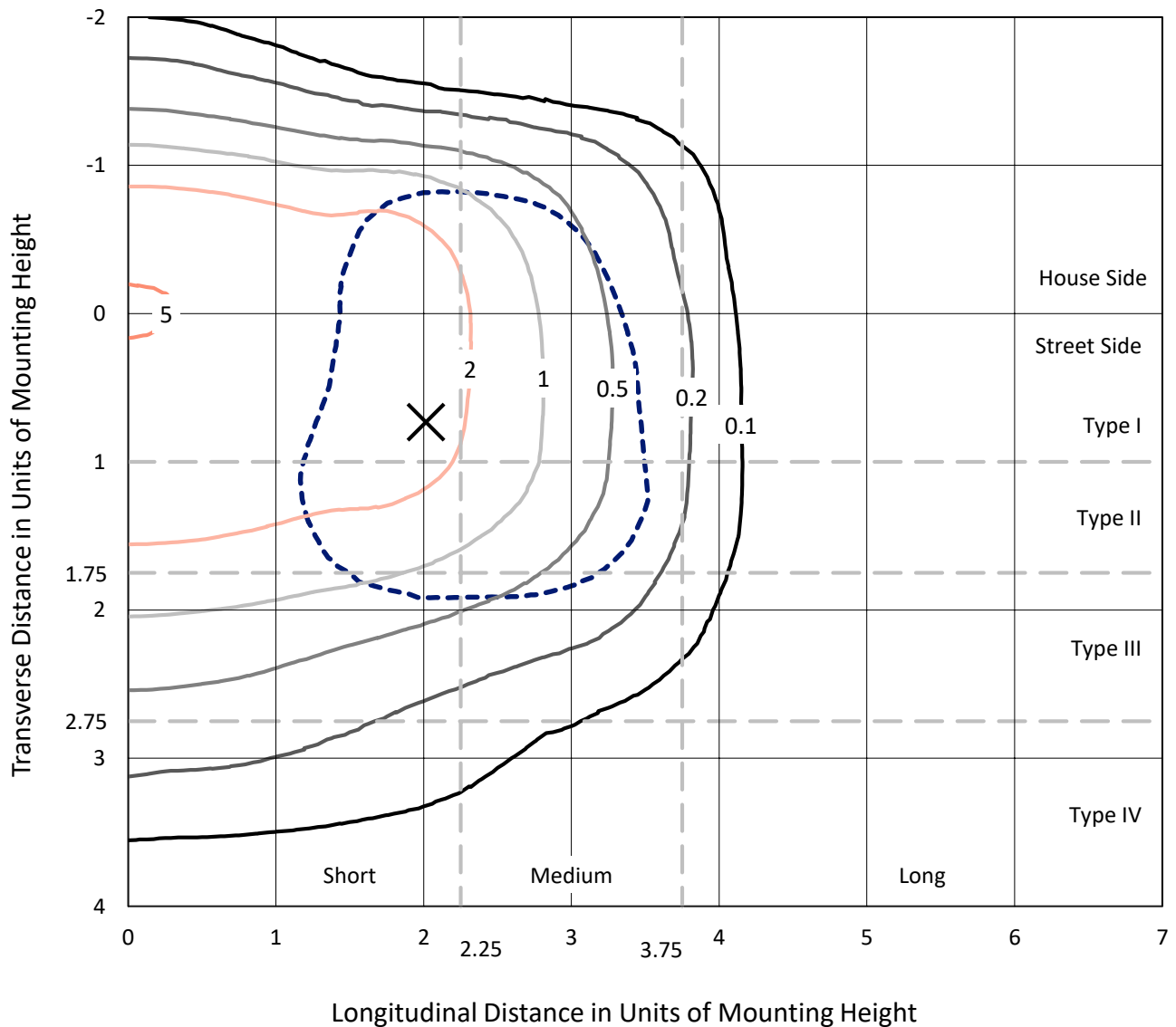
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

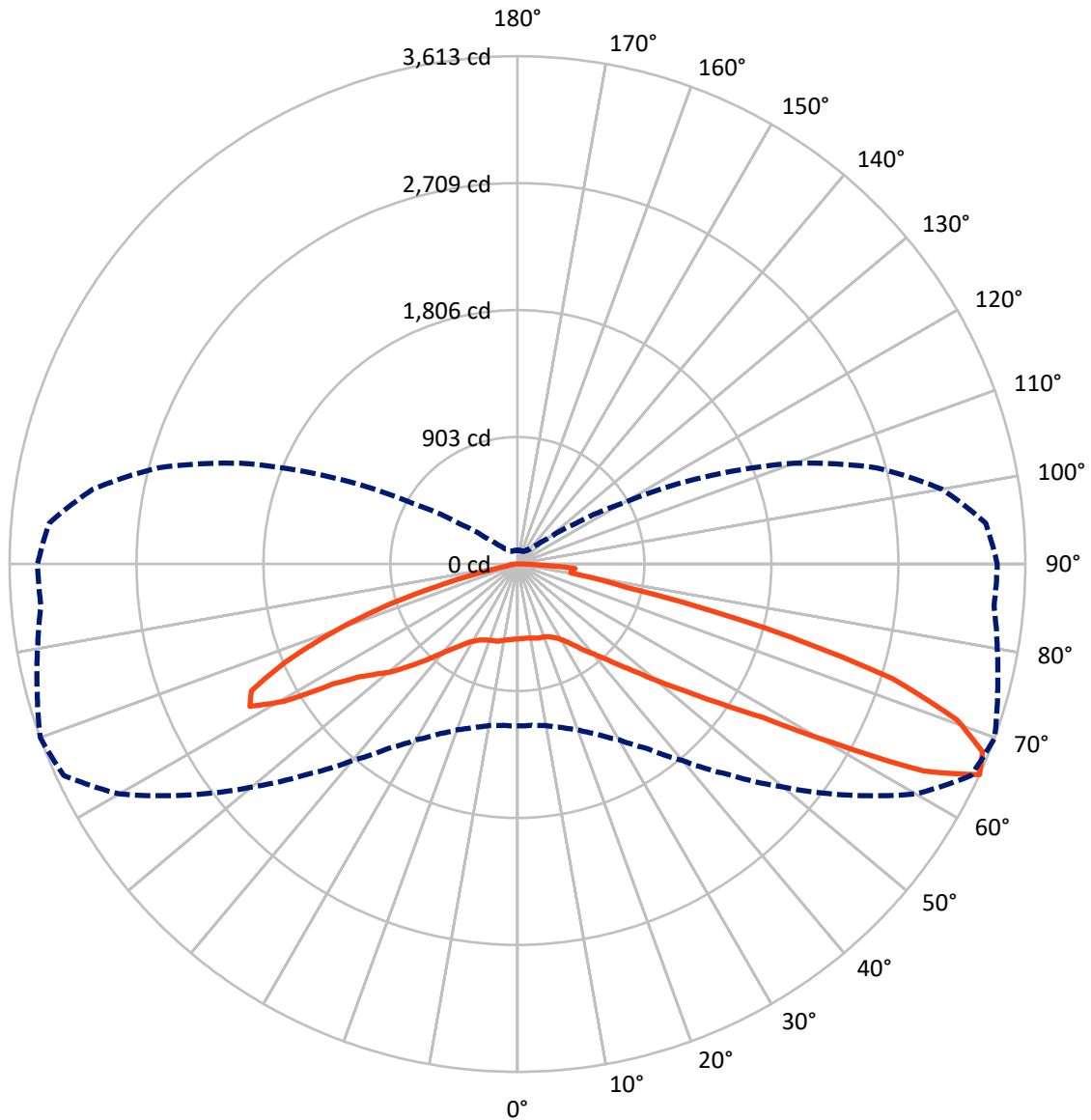
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.4 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1679.2	0.0	1679.2
	% Fixture	33.8	0.0	33.8
Street Side	Lumens	3295.2	0.0	3295.2
	% Fixture	66.2	0.0	66.2
Total	Lumens	4974.5	0.0	4974.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.3	1.0
10°-20°	152.0	3.1
20°-30°	261.3	5.3
30°-40°	418.8	8.4
40°-50°	685.7	13.8
50°-60°	1073.3	21.6
60°-70°	1508.4	30.3
70°-80°	713.8	14.4
80°-90°	109.7	2.2
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°	4974.5	100.0
0°-180°	4974.5	100.0



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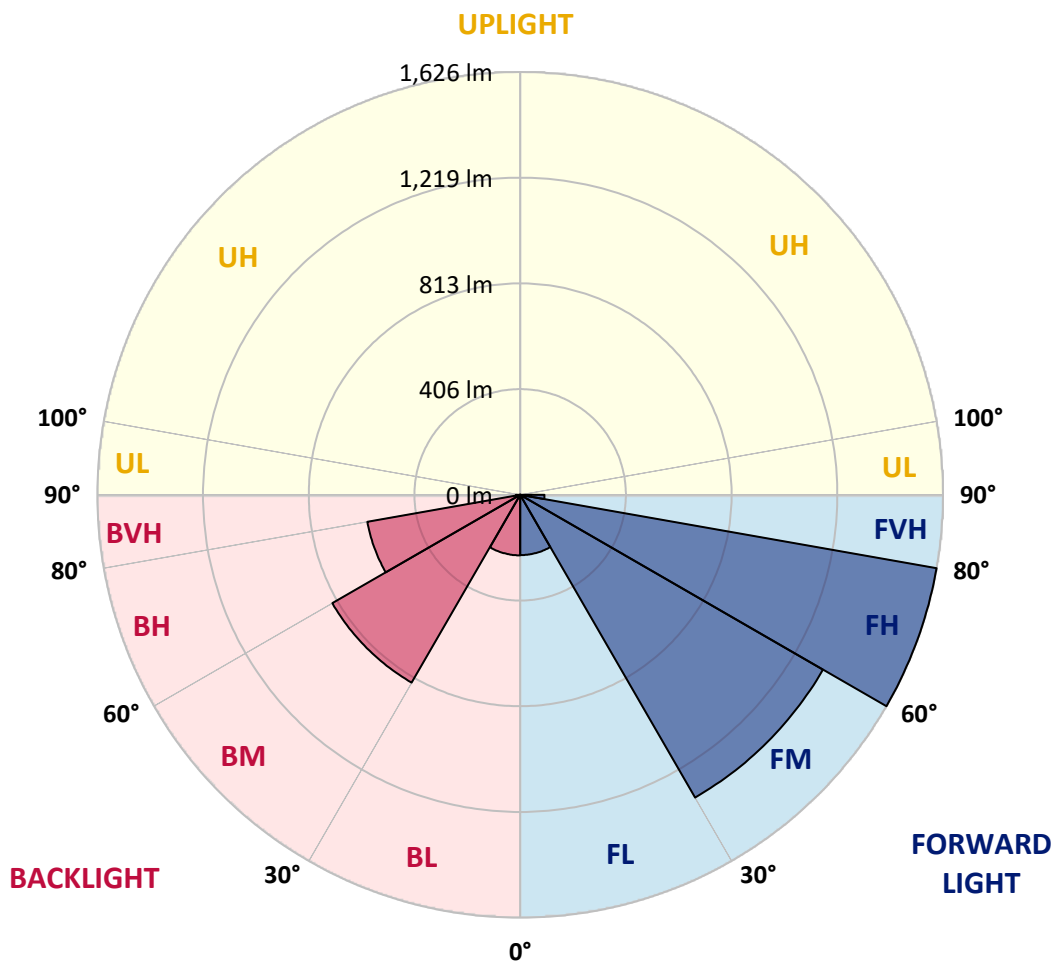
CATALOG NUMBER: ECM-F02-LED-E1-T3-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	231.8	4.7			
FM	(30°-60°)	1344.2	27.0			
FH	(60°-80°)	1625.8	32.7			G1/1800
FVH	(80°-90°)	93.5	1.9			G1/100
BL	(0°-30°)	232.8	4.7	B1/500		
BM	(30°-60°)	833.7	16.8	B1/1000		
BH	(60°-80°)	596.5	12.0	B2/1000		G2/1000
BVH	(80°-90°)	16.2	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1
2.5°	530.3	530.8	530.8	529.7	529.7	530.3	530.3	530.8	530.8	530.8	531.4
5°	530.3	530.8	530.8	530.3	529.7	530.8	530.3	530.8	530.8	530.8	530.8
7.5°	529.1	529.7	529.7	529.1	529.7	530.3	530.3	531.4	532.0	532.0	532.5
10°	523.5	524.1	524.6	524.6	525.8	527.4	528.0	530.3	530.8	532.5	533.7
12.5°	513.3	513.3	514.5	515.6	517.3	520.7	522.4	525.8	528.6	530.8	534.8
15°	504.3	504.3	505.4	506.0	509.4	511.6	515.0	519.0	524.1	528.6	534.8
17.5°	508.8	508.8	508.2	507.7	508.2	508.2	511.1	515.0	519.5	525.8	533.7
20°	526.3	525.8	523.5	522.4	521.8	519.5	517.8	517.3	519.5	524.1	532.0
22.5°	541.6	540.4	539.9	538.7	540.4	539.3	537.0	534.2	530.8	529.1	533.7
25°	550.6	551.2	551.2	551.2	554.6	555.7	556.8	553.4	549.5	543.8	544.4
27.5°	563.0	563.6	562.5	564.7	568.7	571.5	574.3	576.6	574.3	570.9	567.0
30°	589.6	589.6	587.9	589.6	593.0	595.8	599.7	603.7	603.7	600.3	596.3
32.5°	617.2	617.8	617.8	618.9	624.0	626.3	631.9	635.9	638.7	636.4	638.7
35°	650.6	650.0	651.7	652.2	660.2	663.0	674.3	677.1	681.6	682.7	684.4
37.5°	705.9	707.0	703.6	701.4	708.2	708.2	722.8	730.7	729.6	737.5	743.2
40°	795.1	790.0	788.3	787.2	791.2	790.6	790.0	800.8	805.9	807.0	809.8
42.5°	893.9	895.6	893.9	897.9	897.9	895.1	892.8	891.1	900.7	906.9	908.1
45°	1009.7	1012.0	1008.6	1005.8	1013.1	1017.1	1017.1	1021.6	1029.5	1032.3	1030.6
47.5°	1102.3	1108.5	1105.7	1109.7	1121.5	1135.1	1153.2	1165.0	1173.5	1181.4	1193.8
50°	1185.9	1188.7	1195.5	1208.5	1226.0	1247.5	1276.8	1306.2	1323.1	1342.9	1357.6
52.5°	1236.7	1245.2	1255.4	1276.8	1306.2	1336.1	1381.3	1429.3	1472.2	1494.2	1511.7
55°	1267.2	1273.4	1287.0	1316.4	1357.6	1402.2	1458.7	1524.7	1581.8	1630.3	1668.2
57.5°	1266.1	1271.2	1289.8	1322.0	1371.1	1427.0	1497.6	1580.1	1664.2	1745.0	1816.1
60°	1241.8	1246.3	1265.0	1299.4	1353.1	1419.7	1504.4	1605.5	1719.6	1841.0	1965.8
62.5°	1204.5	1207.9	1224.3	1258.8	1313.0	1384.1	1483.5	1616.2	1778.3	1969.7	2212.0
65°	1152.0	1152.0	1167.3	1202.8	1254.8	1334.4	1444.0	1599.8	1824.0	2115.4	2467.8
67.5°	1074.7	1074.7	1087.1	1116.4	1157.1	1212.4	1322.0	1484.1	1720.7	2069.7	2481.9
70°	928.4	930.7	930.7	948.7	966.8	991.6	1043.6	1167.8	1389.8	1730.9	2136.3
72.5°	680.5	639.3	671.4	700.8	721.1	734.7	764.6	803.6	915.4	1171.2	1538.3
75°	428.6	439.3	463.6	497.0	547.2	599.2	656.2	680.5	670.3	700.8	947.6
77.5°	259.8	250.7	274.5	324.1	380.6	451.2	557.9	650.6	703.6	700.2	670.9
80°	112.4	109.6	125.4	149.1	176.8	240.6	338.3	465.3	606.5	688.4	676.0
82.5°	40.1	40.7	51.4	61.0	73.4	94.3	133.8	214.0	339.4	483.4	597.5
85°	11.9	13.0	18.1	25.4	28.8	32.8	45.2	67.2	114.6	183.0	325.3
87.5°	3.4	4.0	5.1	9.0	8.5	7.9	9.0	14.1	10.7	9.0	45.2
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1
2.5°	530.8	530.8	530.8	531.4	530.8	530.8	531.4	531.4	532.0	532.5	533.7
5°	530.3	530.3	530.8	530.8	530.8	531.4	532.0	532.5	533.7	535.4	537.0
7.5°	532.0	532.0	531.4	532.0	532.0	532.5	533.7	534.2	536.5	538.2	541.0
10°	533.7	533.7	534.2	534.8	534.8	535.9	537.6	538.2	540.4	543.8	546.6
12.5°	535.9	537.6	539.9	541.0	542.1	543.3	545.0	546.1	548.9	553.4	556.8
15°	537.6	541.6	543.8	546.6	548.3	548.9	550.6	552.9	555.7	560.2	564.2
17.5°	537.6	542.7	546.1	548.9	551.7	553.4	555.1	557.4	561.3	565.8	569.8
20°	537.0	544.4	548.9	553.4	558.5	560.2	563.0	565.3	569.8	575.4	578.3
22.5°	539.9	548.3	554.6	562.5	568.1	572.6	576.0	580.0	583.4	587.3	588.4
25°	548.3	556.8	567.0	576.6	584.5	591.3	595.8	599.2	603.1	604.8	602.6
27.5°	562.5	568.7	582.8	596.9	609.3	617.8	622.9	627.4	628.5	631.9	623.4
30°	587.9	590.7	605.4	625.7	639.8	653.9	660.7	665.2	665.8	663.5	648.9
32.5°	629.7	624.6	637.6	664.7	686.1	698.0	708.7	711.5	709.8	702.5	678.8
35°	680.5	672.6	678.8	718.3	742.0	759.5	769.7	772.5	768.6	755.6	722.8
37.5°	743.2	740.3	743.2	781.0	822.2	838.6	843.1	846.5	836.9	813.2	770.3
40°	812.6	813.2	809.8	844.3	896.2	919.9	930.7	923.3	911.5	877.6	830.1
42.5°	908.6	905.2	893.4	924.4	991.1	1015.4	1025.0	1019.3	1007.5	964.5	909.2
45°	1035.7	1024.4	1013.1	1029.5	1093.9	1125.5	1139.6	1135.6	1114.8	1062.8	1010.8
47.5°	1191.0	1179.1	1158.2	1155.4	1220.4	1257.6	1262.7	1256.5	1240.7	1188.7	1124.9
50°	1354.2	1350.8	1341.2	1318.6	1376.8	1414.1	1410.7	1406.1	1388.6	1322.6	1257.1
52.5°	1523.0	1529.8	1523.6	1507.8	1569.9	1585.2	1586.3	1572.7	1552.4	1491.4	1402.2
55°	1700.4	1725.8	1735.4	1747.8	1796.9	1794.7	1781.7	1749.5	1754.6	1685.1	1561.4
57.5°	1888.4	1966.3	2027.9	2055.6	2102.4	2116.0	2083.2	2094.0	2089.5	2017.7	1822.9
60°	2136.3	2322.7	2483.1	2581.9	2645.1	2620.9	2666.6	2668.9	2746.2	2588.7	2284.8
62.5°	2531.6	2873.8	3158.5	3243.7	3260.1	3254.5	3200.3	3254.5	3239.8	3047.8	2654.2
65°	2864.2	3271.4	3560.5	3612.5	3536.3	3466.2	3403.0	3413.7	3343.7	3065.8	2643.4
67.5°	2909.4	3314.9	3583.1	3568.4	3401.9	3272.0	3166.9	3084.5	2941.6	2690.3	2322.1
70°	2552.0	2981.7	3327.3	3316.0	3084.5	2911.1	2740.6	2616.3	2470.6	2276.4	1927.9
72.5°	1985.0	2367.9	2702.7	2789.7	2561.6	2370.1	2213.7	2055.6	1905.4	1720.7	1501.0
75°	1351.4	1639.4	1795.2	1819.0	1610.0	1466.6	1406.1	1276.8	1117.6	1078.0	915.4
77.5°	785.0	895.6	848.2	785.0	631.9	464.2	354.6	303.3	304.4	349.6	334.9
80°	638.1	607.6	479.4	384.6	261.5	133.3	89.2	76.8	77.4	89.8	87.0
82.5°	657.9	675.4	555.1	388.5	267.7	141.2	67.8	50.3	58.7	63.8	62.7
85°	487.4	638.7	572.6	412.2	287.4	150.2	44.0	27.7	39.0	47.4	50.8
87.5°	136.7	214.6	166.6	110.1	80.2	27.1	17.5	14.7	18.1	24.8	24.8
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1	533.1
2.5°	534.2	536.5	535.9	537.0	537.6	539.3	540.4	539.9	539.9	541.0	542.1
5°	538.7	541.6	541.6	543.3	545.0	547.2	548.9	547.8	548.3	549.5	550.6
7.5°	543.3	546.6	547.2	548.9	550.0	551.2	552.3	550.6	550.0	550.0	549.5
10°	548.9	552.3	551.7	551.7	551.2	550.0	547.8	543.8	541.0	539.3	538.2
12.5°	558.5	560.8	557.4	554.0	548.3	544.4	539.3	534.8	531.4	528.6	527.4
15°	567.0	565.8	561.9	555.7	547.8	541.6	536.5	530.3	526.3	522.9	521.2
17.5°	571.5	567.5	561.9	556.2	549.5	543.8	537.6	530.3	524.1	519.5	517.3
20°	576.0	569.8	562.5	556.8	551.7	547.2	542.7	533.7	525.8	519.0	515.6
22.5°	582.8	574.3	567.0	561.9	556.8	552.3	547.8	539.3	530.8	521.8	516.7
25°	592.4	581.1	576.0	570.9	565.3	560.8	554.6	546.6	537.6	526.9	519.5
27.5°	607.6	597.5	591.8	586.7	580.0	572.6	565.8	555.1	546.6	534.2	524.6
30°	629.7	618.9	613.8	608.8	600.9	591.3	581.7	568.1	556.2	542.1	529.7
32.5°	657.3	651.7	645.5	637.0	626.3	614.4	600.3	582.2	565.3	547.8	532.0
35°	700.2	690.6	680.5	672.0	656.2	639.8	618.4	591.8	569.2	547.8	528.6
37.5°	749.4	739.2	725.7	710.4	686.7	660.7	630.8	597.5	567.5	541.6	520.1
40°	808.7	795.7	777.6	748.8	713.8	674.8	634.7	593.0	557.9	528.0	503.2
42.5°	887.2	860.6	825.6	783.3	733.6	680.5	629.7	581.1	541.6	508.8	484.0
45°	975.8	933.5	877.0	813.8	744.9	678.2	618.4	561.9	517.3	481.1	455.2
47.5°	1071.3	1005.2	922.2	833.0	746.0	665.8	596.3	533.1	482.8	444.4	412.2
50°	1179.1	1070.1	953.8	842.6	738.6	643.8	564.7	491.9	439.9	394.2	364.8
52.5°	1271.7	1127.2	975.8	838.6	712.7	605.4	512.8	442.2	381.2	340.5	311.7
55°	1381.3	1182.5	987.7	818.8	670.9	545.5	456.9	378.4	320.8	284.6	259.8
57.5°	1566.0	1276.3	997.9	778.7	602.0	470.4	379.5	306.1	260.9	229.3	211.8
60°	1922.3	1458.1	1039.6	718.9	514.5	380.1	293.1	239.4	200.5	179.6	167.2
62.5°	2155.5	1581.8	1021.0	626.8	402.1	284.6	214.6	172.8	150.2	135.0	129.3
65°	2096.2	1457.0	866.3	497.0	280.1	189.2	144.0	118.6	108.4	100.5	97.1
67.5°	1800.3	1175.2	628.0	321.3	177.3	115.2	94.3	84.1	79.6	76.2	75.7
70°	1434.4	828.4	373.3	170.5	98.3	76.2	67.2	63.2	61.6	61.6	61.6
72.5°	1040.8	477.2	183.5	92.0	66.1	58.2	54.2	53.1	52.5	52.5	53.1
75°	594.6	206.7	94.3	63.2	54.2	50.3	48.0	48.0	48.0	48.0	48.6
77.5°	207.3	94.3	66.6	53.1	46.9	44.6	43.5	44.6	45.2	45.2	45.2
80°	75.7	66.6	57.0	46.3	41.8	39.5	39.5	41.2	42.4	41.2	40.7
82.5°	59.9	52.5	46.3	40.1	36.7	35.6	36.1	37.3	36.7	36.1	34.4
85°	45.7	34.4	32.2	29.9	29.4	29.4	31.6	32.2	29.9	28.8	27.1
87.5°	22.6	18.1	16.4	19.2	18.6	16.9	17.5	17.5	14.7	13.6	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):

	165°	170°	175°	180°
0°	533.1	533.1	533.1	533.1
2.5°	542.1	542.7	544.4	543.8
5°	550.0	550.6	551.7	551.7
7.5°	548.3	548.9	548.9	548.9
10°	535.4	535.4	536.5	536.5
12.5°	525.2	524.6	524.6	523.5
15°	519.0	517.8	518.4	516.7
17.5°	514.5	513.9	513.9	512.8
20°	512.8	511.6	511.1	509.9
22.5°	511.6	511.1	509.9	508.8
25°	514.5	511.6	511.1	509.9
27.5°	517.3	514.5	512.2	511.6
30°	520.1	515.0	512.2	511.1
32.5°	519.5	512.8	508.8	507.1
35°	513.3	504.9	499.8	498.1
37.5°	501.5	491.9	484.0	481.1
40°	484.5	472.1	464.8	460.8
42.5°	464.2	450.1	443.9	440.5
45°	430.9	419.6	412.2	409.4
47.5°	393.6	378.4	371.6	368.8
50°	345.6	333.2	327.5	323.6
52.5°	294.8	283.5	278.4	276.1
55°	245.7	240.0	232.1	230.4
57.5°	199.3	197.7	192.0	191.4
60°	162.1	159.3	155.3	155.3
62.5°	127.6	124.8	123.1	123.1
65°	98.3	97.7	96.6	96.0
67.5°	75.7	77.4	77.9	76.8
70°	63.2	63.8	63.8	63.8
72.5°	54.8	54.8	54.8	54.2
75°	49.7	49.7	48.6	48.0
77.5°	45.7	45.2	45.7	45.2
80°	40.1	39.5	38.4	37.3
82.5°	33.3	32.8	29.9	29.9
85°	26.0	24.3	22.0	19.8
87.5°	14.7	13.0	9.6	6.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)