

Scaled data based on original data using
LM-31-95 IESNA Approved Method for Photometric Testing of Roadway Luminaires
Using Incandescent Filament and High Intensity Discharge Lamps

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: STREETWORKS

Report Number: 251p102_150MP

Luminaire Tested: **UTR15PXX33**

Issue Date: 3/3/2020

Test Information

Test Method: LM-31-95
Report Number: 251p102_150MP
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: UTR15PXX33
Description: TRADITIONAIRE STREET WORKS LUMINAIRE 175W METAL HALIDE TYPE 3
DISTRIBUTION, VERTICAL LAMP WITH LT144X ACRYLIC REFRACTIVE
LENSES, OPAL AT HOUSE SIDE.
Light Source: 150 WATT PULSE-START CLEAR UNIVERSAL BURN
Ballast/Driver: -

Summary

Lumens per Lamp: 14000 (1 lamp)
Luminaire Lumens: 8172.2 lumens
Efficiency: 58.4%
Efficacy: 44.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.08' x L: 1.08' x H: 0.94')
IES Classification: Type II - Medium - Non-Cutoff
BUG Rating: B2 - U3 - G3

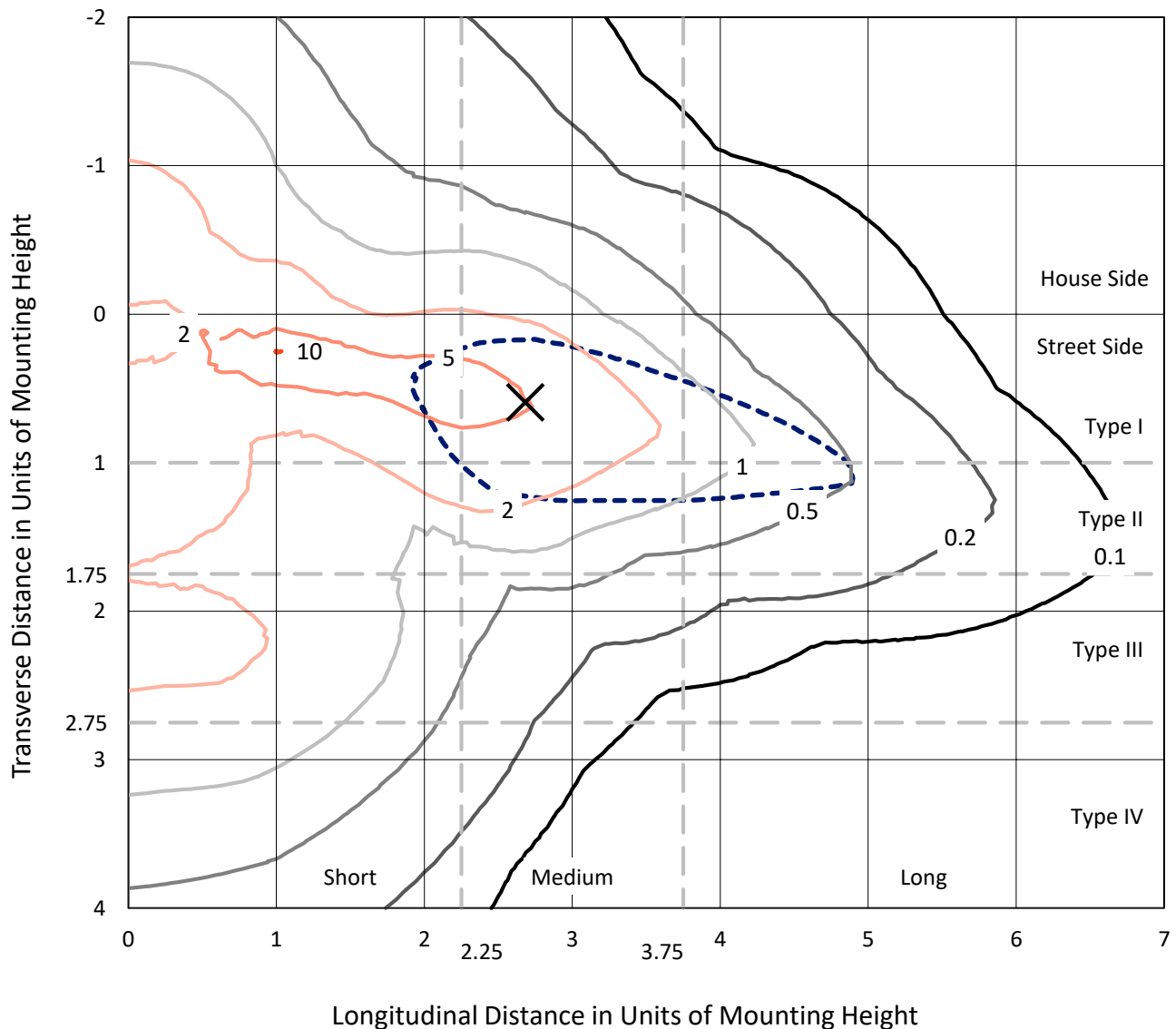
Input Watts (W): 185
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

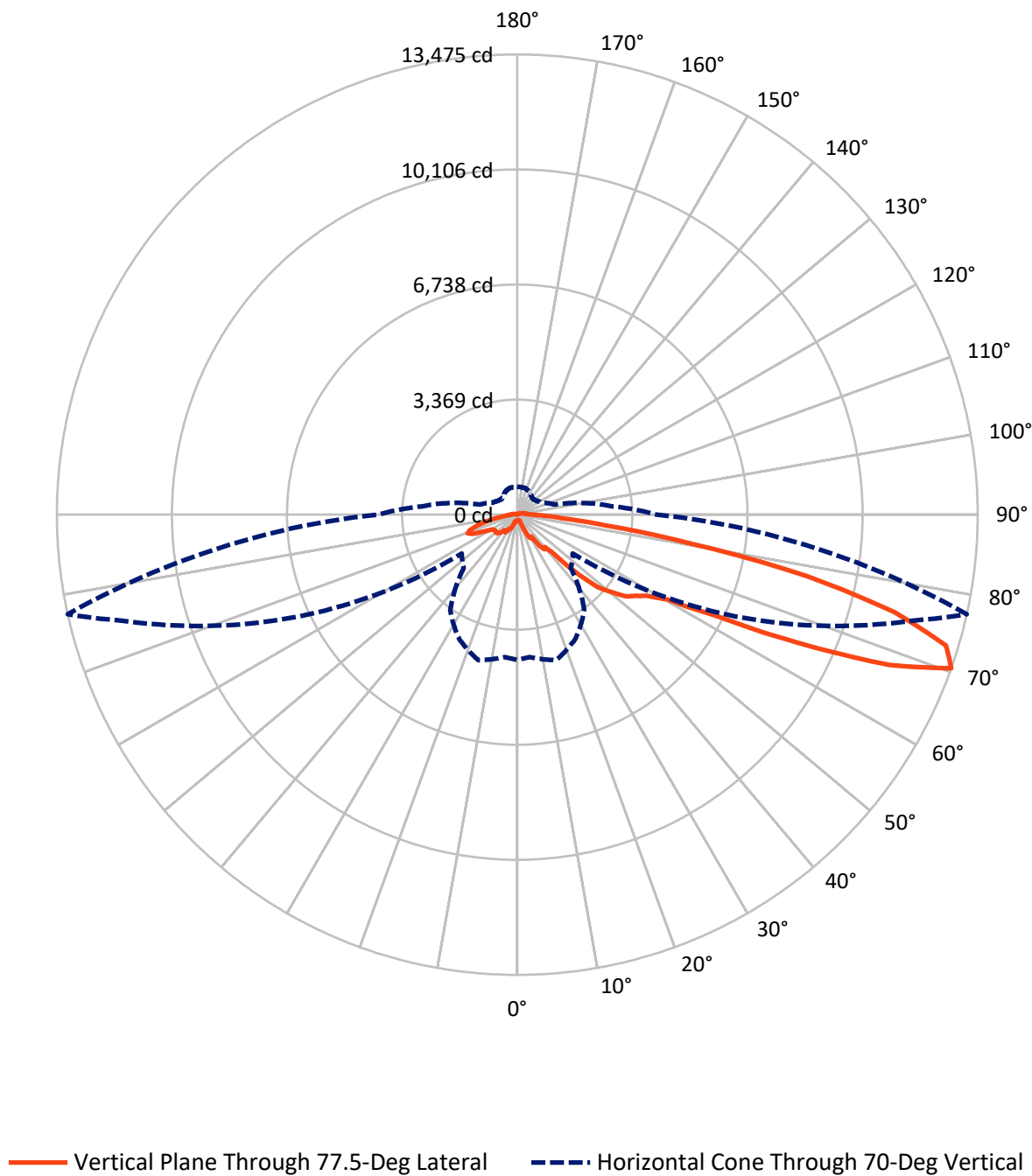
× Max cd
- - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.2 fc
Type II - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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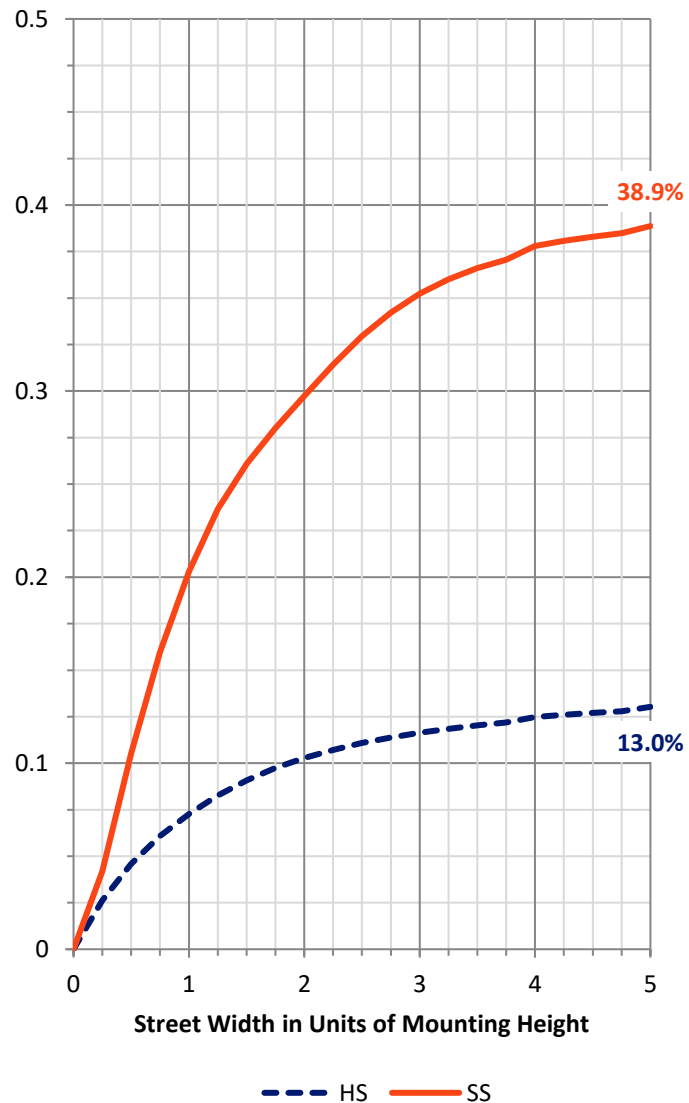
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1986.4	430.3	2416.7
	% Lamp	14.2	3.1	17.3
Street Side	Lumens	5550.5	204.9	5755.4
	% Lamp	39.6	1.5	41.1
Total	Lumens	7537.0	635.2	8172.2
	% Lamp	53.8	4.5	58.4

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	17.7	0.2	0.1
10°-20°	59.2	0.7	0.4
20°-30°	184.2	2.3	1.3
30°-40°	370.9	4.5	2.6
40°-50°	664.8	8.1	4.7
50°-60°	1027.5	12.6	7.3
60°-70°	2223.6	27.2	15.9
70°-80°	2351.1	28.8	16.8
80°-90°	637.9	7.8	4.6
90°-100°	282.7	3.5	2.0
100°-110°	175.9	2.2	1.3
110°-120°	100.1	1.2	0.7
120°-130°	54.2	0.7	0.4
130°-140°	19.9	0.2	0.1
140°-150°	2.3	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	7537.0	92.2	53.8
0°-180°	8172.2	100.0	58.4

Coefficient of Utilization

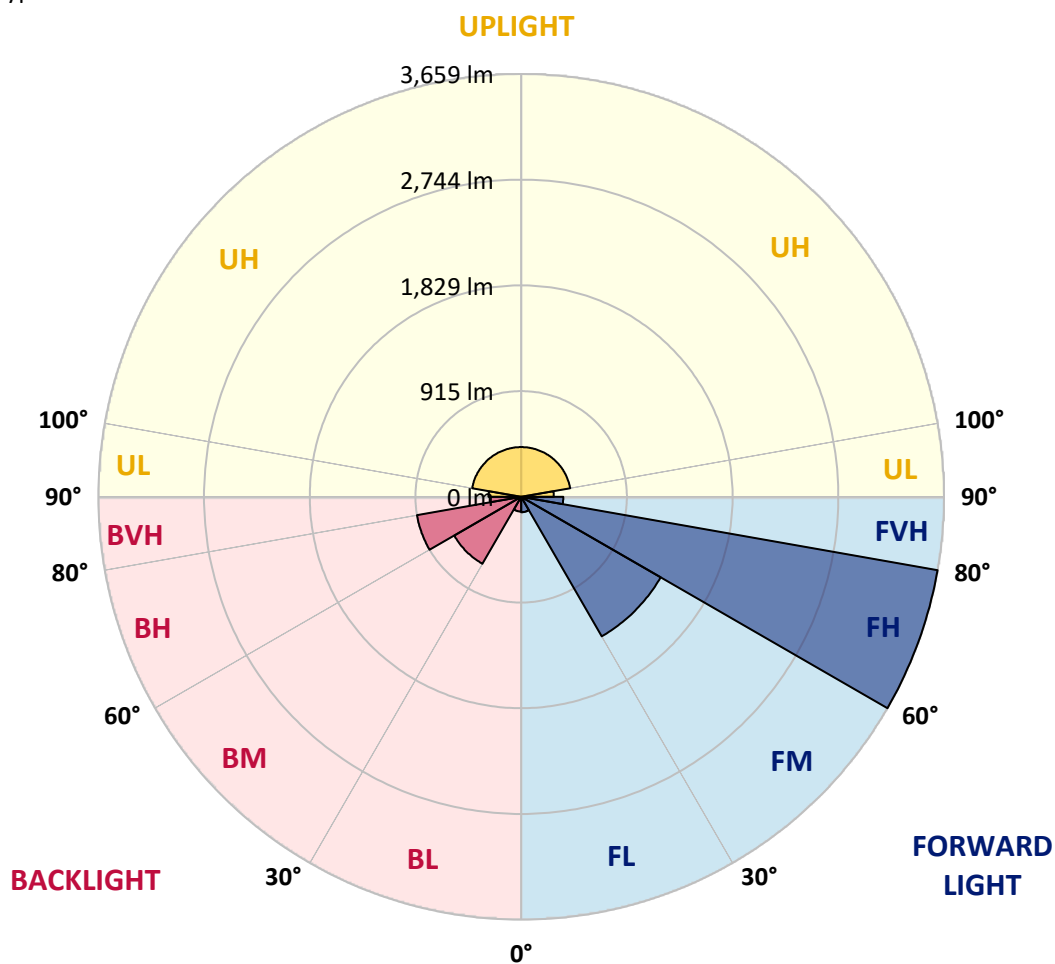


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	133.6	1.0			
FM	(30°-60°)	1393.7	10.0			
FH	(60°-80°)	3658.9	26.1			G2/5000
FVH	(80°-90°)	364.3	2.6			G3/500
BL	(0°-30°)	127.4	0.9	B1/500		
BM	(30°-60°)	669.5	4.8	B1/1000		
BH	(60°-80°)	915.9	6.5	B2/1000		G2/1000
BVH	(80°-90°)	273.6	2.0			G3/500
UL	(90°-100°)	282.7	2.0		U3/500	
UH	(100°-180°)	430.3	3.1		U3/500	
Trapped Light		5827.8	41.6			

BUG Rating: B2-U3-G3
Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2
2.5°	163.9	164.9	164.9	165.9	164.9	167.0	165.9	169.0	171.1	172.1	173.2
5°	158.7	159.7	161.8	160.7	161.8	160.7	164.9	168.0	169.0	170.1	171.1
7.5°	156.6	158.7	156.6	158.7	158.7	160.7	162.8	167.0	172.1	170.1	176.3
10°	162.8	165.9	161.8	162.8	162.8	165.9	165.9	169.0	170.1	172.1	175.3
12.5°	171.1	174.2	172.1	177.3	176.3	170.1	168.0	165.9	170.1	170.1	176.3
15°	162.8	163.9	162.8	167.0	177.3	179.4	161.8	156.6	163.9	168.0	174.2
17.5°	174.2	174.2	175.3	176.3	177.3	159.7	151.4	164.9	173.2	175.3	184.6
20°	238.5	238.5	218.8	203.3	183.6	146.2	153.5	170.1	189.8	196.0	211.6
22.5°	404.4	405.5	388.9	321.5	252.0	223.0	221.9	252.0	296.6	309.0	348.4
25°	486.4	495.7	481.2	409.6	485.3	572.4	399.3	349.5	547.6	591.1	413.8
27.5°	482.2	488.4	492.6	438.7	496.7	692.7	702.1	510.2	771.6	758.1	469.8
30°	414.8	409.6	400.3	387.9	450.1	573.5	762.2	635.7	807.9	797.5	449.0
32.5°	601.5	590.1	536.1	458.4	451.1	451.1	776.7	833.8	784.0	757.0	580.7
35°	685.5	663.7	600.4	549.6	486.4	461.5	773.6	1368.9	1101.3	1100.3	677.2
37.5°	701.0	676.1	619.1	591.1	595.3	613.9	669.9	1431.1	1359.6	1291.1	704.1
40°	623.3	609.8	567.3	578.7	615.0	661.6	706.2	1247.6	1480.9	1248.6	677.2
42.5°	899.1	869.0	731.1	620.1	579.7	607.7	711.4	1480.9	1884.3	1517.2	904.3
45°	1072.3	1036.0	932.3	801.6	626.4	573.5	779.9	1686.2	2929.6	2443.3	1141.8
47.5°	1133.5	1108.6	1033.9	936.4	785.0	648.1	906.4	1623.0	3711.6	3182.7	1282.8
50°	1115.9	1110.7	1072.3	1018.4	906.4	747.7	951.0	1627.1	3776.9	3547.7	1415.6
52.5°	1130.4	1114.8	1100.3	1073.3	979.0	776.7	931.3	1725.6	3773.8	3977.0	1505.8
55°	1198.8	1187.4	1165.6	1151.1	1046.4	784.0	923.0	1953.8	3928.3	4197.9	1685.2
57.5°	1347.1	1328.4	1297.3	1252.7	1131.4	818.2	937.5	2308.4	4081.8	4482.1	1998.4
60°	1552.4	1532.7	1532.7	1443.6	1288.0	931.3	1017.3	2769.9	4516.3	5035.9	2528.3
62.5°	2112.4	2077.2	2020.1	1807.6	1546.2	1114.8	1178.1	3373.5	5836.4	6510.5	3635.9
65°	2968.0	2900.6	2885.0	2517.9	2039.9	1407.3	1441.5	4449.9	8005.9	9061.6	5364.6
67.5°	3914.8	3852.6	3944.9	3482.4	2864.3	1876.0	1774.4	6164.1	10488.6	11750.7	7059.1
70°	4253.9	4185.5	4410.5	4019.6	3419.1	2216.1	1983.9	7048.7	11985.0	13475.3	7703.1
72.5°	3967.7	3884.7	4029.9	3575.7	3047.9	2080.3	1828.3	5696.4	11355.6	13123.7	6788.4
75°	3360.0	3256.3	3152.6	2585.3	2019.1	1422.8	1367.9	3354.8	9444.3	11399.1	5235.0
77.5°	2471.3	2361.3	2105.2	1529.6	1013.2	763.3	872.1	1926.8	6835.1	8673.8	3625.5
80°	1410.4	1350.2	1188.4	878.4	623.3	480.1	534.1	1204.0	4263.3	5162.4	2281.5
82.5°	720.7	715.6	668.9	587.0	506.1	401.3	394.1	772.6	2564.6	2620.6	1359.6
85°	387.9	392.0	424.1	447.0	420.0	359.9	323.6	486.4	1239.3	1301.5	741.5
87.5°	255.1	263.4	310.1	352.6	343.3	304.9	270.7	338.1	662.7	719.7	431.4
90°	180.4	184.6	221.9	264.4	290.4	263.4	227.1	257.2	355.7	393.0	268.6
92.5°	135.9	137.9	170.1	210.5	239.6	230.2	205.3	226.1	276.9	297.6	218.8
95°	107.9	112.0	137.9	175.3	201.2	206.4	184.6	205.3	239.6	256.1	210.5
97.5°	90.2	91.3	113.0	145.2	176.3	186.7	169.0	208.4	223.0	244.7	193.9
100°	72.6	75.7	88.1	115.1	145.2	150.4	154.5	215.7	214.7	218.8	160.7
102.5°	67.4	64.3	75.7	94.4	120.3	119.3	158.7	208.4	170.1	172.1	129.6
105°	58.1	57.0	62.2	75.7	99.6	93.3	122.4	185.6	147.3	134.8	96.4
107.5°	45.6	43.6	48.7	58.1	80.9	77.8	100.6	161.8	146.2	113.0	75.7
110°	31.1	31.1	36.3	48.7	72.6	63.3	119.3	153.5	132.7	102.7	66.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
112.5°	22.8	24.9	29.0	39.4	60.1	50.8	73.6	119.3	98.5	87.1	63.3
115°	18.7	18.7	19.7	34.2	47.7	47.7	61.2	91.3	73.6	72.6	55.0
117.5°	11.4	12.4	13.5	28.0	36.3	39.4	60.1	73.6	57.0	57.0	43.6
120°	11.4	10.4	11.4	17.6	29.0	37.3	60.1	57.0	46.7	46.7	41.5
122.5°	9.3	8.3	7.3	10.4	22.8	39.4	69.5	55.0	44.6	43.6	34.2
125°	3.1	3.1	3.1	3.1	12.4	41.5	75.7	52.9	39.4	40.4	28.0
127.5°	2.1	2.1	3.1	0.0	8.3	38.4	64.3	45.6	31.1	32.1	21.8
130°	1.0	2.1	0.0	0.0	2.1	30.1	55.0	38.4	25.9	25.9	15.6
132.5°	1.0	2.1	0.0	0.0	0.0	17.6	43.6	27.0	23.9	23.9	13.5
135°	0.0	1.0	0.0	0.0	0.0	1.0	32.1	16.6	28.0	25.9	12.4
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	12.4	9.3	20.7	19.7	7.3
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	15.6	18.7	5.2
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.1	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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°	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2
2.5°	173.2	174.2	177.3	180.4	182.5	182.5	185.6	187.7	189.8	188.7	187.7
5°	172.1	174.2	182.5	189.8	192.9	196.0	203.3	208.4	209.5	211.6	212.6
7.5°	179.4	182.5	190.8	197.0	205.3	210.5	218.8	224.0	229.2	231.3	233.3
10°	180.4	187.7	201.2	212.6	220.9	227.1	234.4	236.4	240.6	239.6	239.6
12.5°	183.6	192.9	208.4	224.0	235.4	242.7	244.7	245.8	246.8	247.9	243.7
15°	180.4	191.9	211.6	232.3	249.9	254.1	255.1	253.0	252.0	255.1	256.1
17.5°	190.8	205.3	229.2	253.0	256.1	257.2	256.1	264.4	271.7	270.7	270.7
20°	220.9	232.3	259.3	275.9	270.7	258.2	274.8	285.2	293.5	297.6	300.7
22.5°	327.7	338.1	359.9	348.4	320.4	290.4	289.3	304.9	322.5	329.8	330.8
25°	383.7	412.7	437.6	412.7	356.7	326.7	309.0	324.6	340.1	350.5	346.4
27.5°	459.4	485.3	495.7	452.1	387.9	346.4	340.1	347.4	363.0	371.3	372.3
30°	442.8	464.6	464.6	405.5	385.8	368.1	364.0	368.1	385.8	396.1	394.1
32.5°	574.5	587.0	571.4	455.3	385.8	376.4	382.7	392.0	413.8	426.2	428.3
35°	661.6	650.2	621.2	473.9	405.5	387.9	400.3	420.0	442.8	454.2	455.3
37.5°	685.5	655.4	604.6	482.2	422.1	415.9	427.3	449.0	464.6	481.2	483.3
40°	656.4	622.2	566.2	464.6	430.4	424.1	456.3	480.1	492.6	512.3	511.3
42.5°	868.0	799.6	640.9	466.7	435.6	437.6	480.1	509.2	523.7	543.4	547.6
45°	1046.4	921.9	707.3	489.5	452.1	451.1	495.7	536.1	563.1	580.7	584.9
47.5°	1112.7	956.1	734.2	512.3	475.0	470.8	516.4	562.1	594.2	611.9	617.0
50°	1128.3	956.1	749.8	536.1	491.6	494.7	548.6	591.1	622.2	640.9	650.2
52.5°	1154.2	961.3	747.7	553.8	494.7	508.1	570.4	624.3	657.5	676.1	678.2
55°	1213.3	997.6	734.2	543.4	494.7	519.6	591.1	648.1	691.7	708.3	708.3
57.5°	1329.5	1080.6	725.9	539.3	496.7	540.3	615.0	675.1	723.9	739.4	740.4
60°	1542.1	1215.4	740.4	547.6	510.2	550.7	628.4	701.0	757.0	763.3	763.3
62.5°	2018.1	1519.3	818.2	583.9	541.3	566.2	645.0	721.8	777.8	787.1	791.3
65°	2772.0	2000.4	930.2	661.6	585.9	587.0	655.4	745.6	795.4	805.8	809.9
67.5°	3609.9	2516.9	1077.5	765.3	653.3	619.1	677.2	763.3	807.9	818.2	813.0
70°	4061.0	2797.9	1136.6	815.1	697.9	644.0	694.8	774.7	811.0	813.0	813.0
72.5°	3828.7	2648.6	1045.3	763.3	682.4	639.9	701.0	771.6	796.4	802.7	797.5
75°	3221.0	2284.6	875.3	630.5	605.6	606.7	679.3	747.7	781.9	783.0	775.7
77.5°	2480.6	1844.9	694.8	515.4	518.5	560.0	635.7	705.2	752.9	756.0	746.7
80°	1656.1	1307.7	531.0	414.8	456.3	519.6	598.4	664.7	714.5	719.7	712.4
82.5°	973.8	819.3	394.1	349.5	424.1	498.8	566.2	624.3	667.9	678.2	671.0
85°	542.4	482.2	294.5	312.1	398.2	476.0	541.3	588.0	623.3	635.7	631.6
87.5°	335.0	302.8	230.2	276.9	372.3	453.2	516.4	551.7	583.9	592.1	594.2
90°	224.0	205.3	193.9	242.7	332.9	416.9	485.3	518.5	547.6	550.7	547.6
92.5°	169.0	175.3	168.0	218.8	294.5	375.4	440.7	481.2	509.2	513.3	513.3
95°	145.2	134.8	160.7	206.4	273.8	342.2	404.4	442.8	469.8	477.0	479.1
97.5°	136.9	106.8	139.0	183.6	252.0	312.1	367.1	408.6	436.6	445.9	442.8
100°	133.8	103.7	116.1	161.8	229.2	289.3	340.1	377.5	402.4	415.9	415.9
102.5°	99.6	89.2	100.6	144.1	208.4	263.4	309.0	350.5	375.4	385.8	383.7
105°	72.6	64.3	78.8	125.5	189.8	236.4	283.1	320.4	342.2	355.7	357.8
107.5°	58.1	49.8	64.3	111.0	170.1	215.7	260.3	294.5	317.3	329.8	332.9
110°	46.7	40.4	48.7	94.4	148.3	192.9	234.4	270.7	292.4	304.9	304.9



REPORT NUMBER: 251p102_150MP

CATALOG NUMBER: UTR15PXX33

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	46.7	37.3	41.5	78.8	132.7	174.2	214.7	245.8	268.6	281.0	282.1
115°	44.6	37.3	36.3	67.4	116.1	154.5	196.0	221.9	244.7	255.1	256.1
117.5°	37.3	36.3	35.3	56.0	99.6	140.0	175.3	203.3	221.9	230.2	235.4
120°	34.2	36.3	32.1	49.8	86.1	123.4	157.6	180.4	203.3	211.6	212.6
122.5°	30.1	30.1	27.0	39.4	72.6	112.0	141.0	160.7	181.5	191.9	195.0
125°	23.9	21.8	20.7	30.1	61.2	94.4	123.4	143.1	161.8	173.2	177.3
127.5°	16.6	15.6	11.4	15.6	46.7	79.9	107.9	125.5	142.1	151.4	153.5
130°	13.5	10.4	10.4	10.4	34.2	68.4	88.1	109.9	122.4	127.6	129.6
132.5°	9.3	9.3	7.3	5.2	21.8	47.7	72.6	93.3	105.8	100.6	98.5
135°	8.3	8.3	5.2	2.1	6.2	31.1	56.0	78.8	87.1	77.8	76.7
137.5°	8.3	3.1	2.1	0.0	0.0	16.6	40.4	63.3	70.5	62.2	60.1
140°	1.0	1.0	0.0	0.0	0.0	0.0	25.9	44.6	53.9	46.7	47.7
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	6.2	29.0	36.3	32.1	33.2
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	18.7	16.6	15.6
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.1	2.1
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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)