

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: STREETWORKS

Report Number: P157072

Luminaire Tested: **UTLD-E02-LED-E-U-SL3-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P157072
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33669)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: UTLD-E02-LED-E-U-SL3-7060
Description: TRADITIONAIRE LED DOWNLIGHT LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (42) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5394.8 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 52.1
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



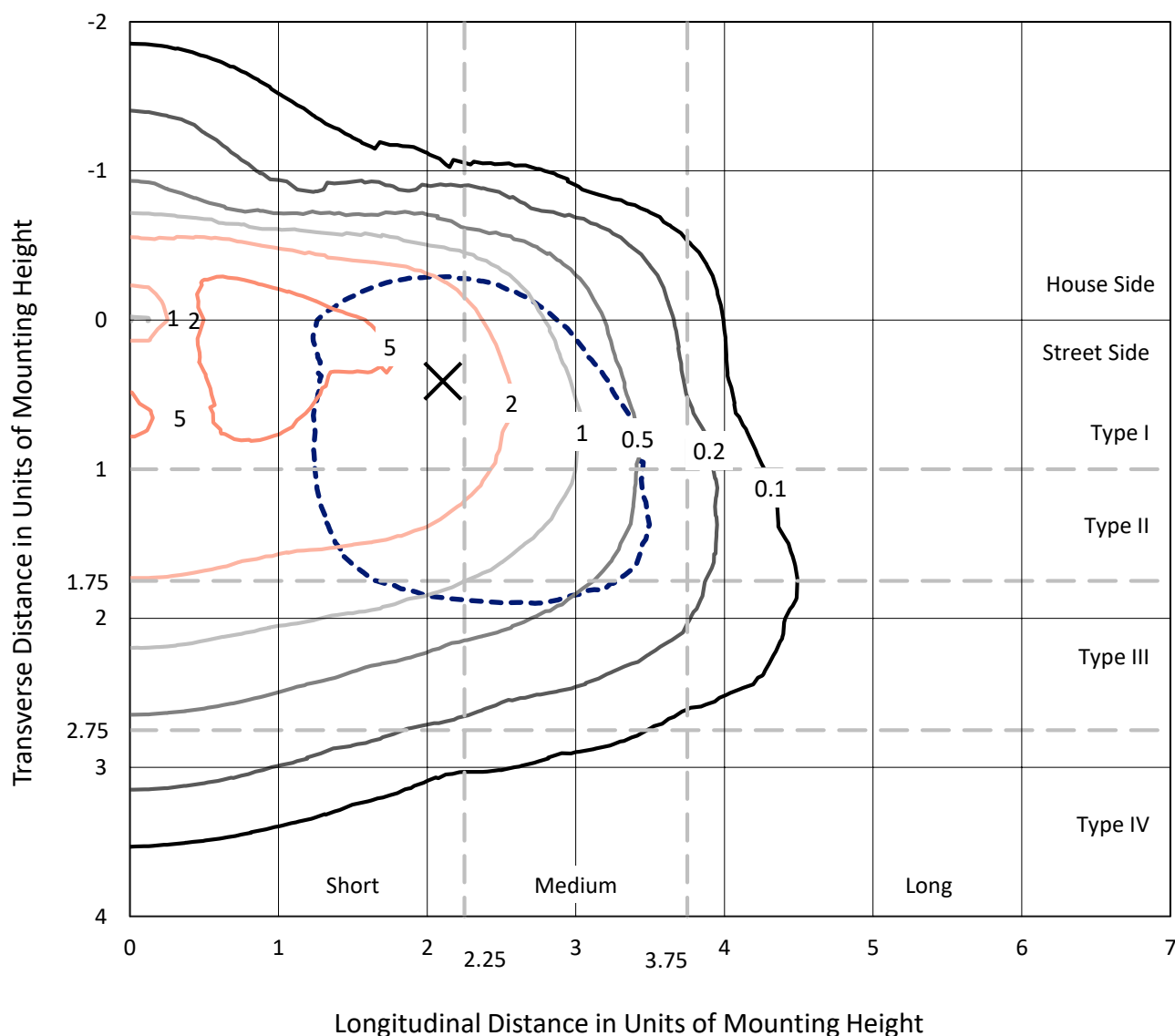
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

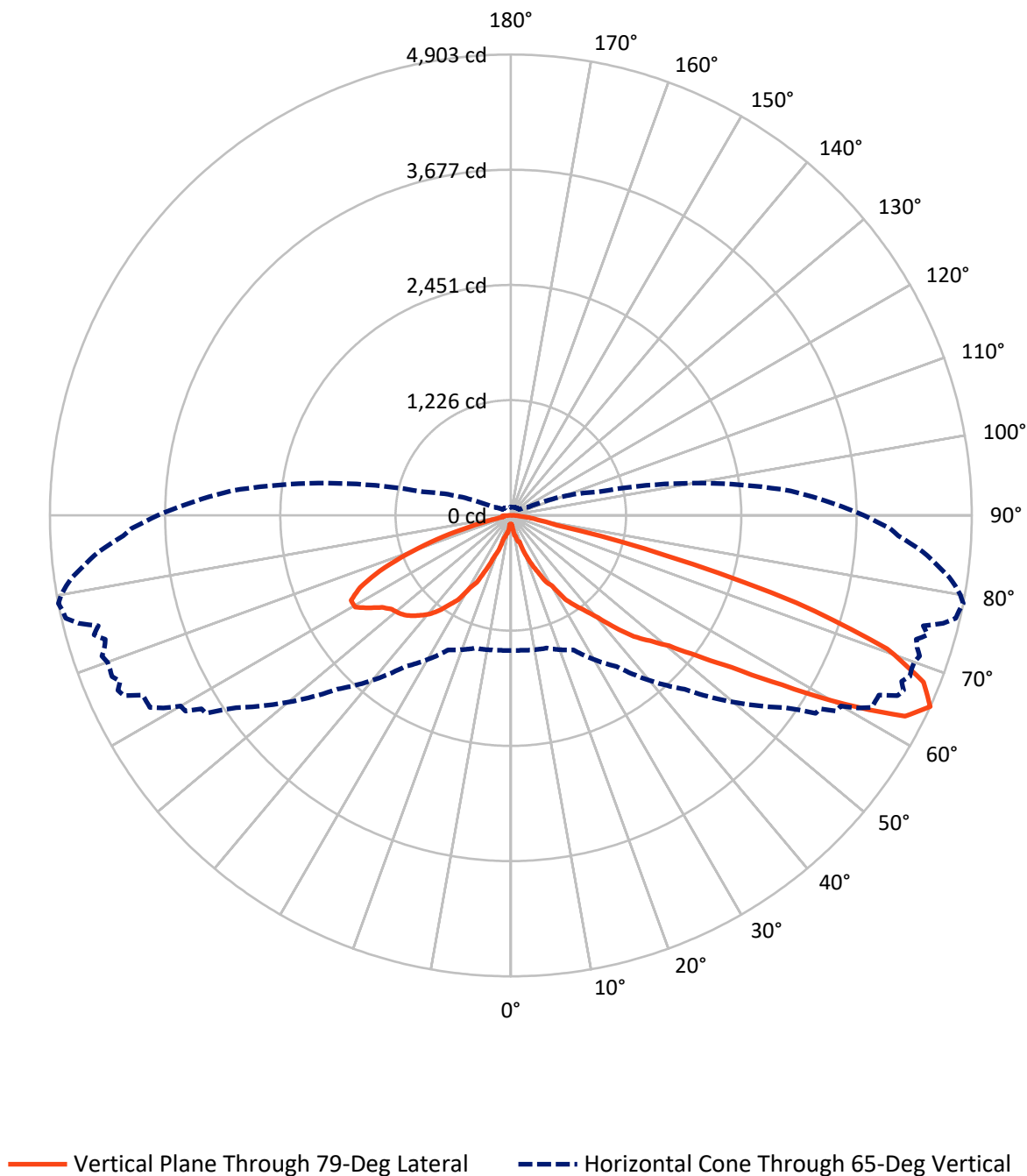


Based on 10 foot mounting height. Maximum calculated value = 6.8 fc
Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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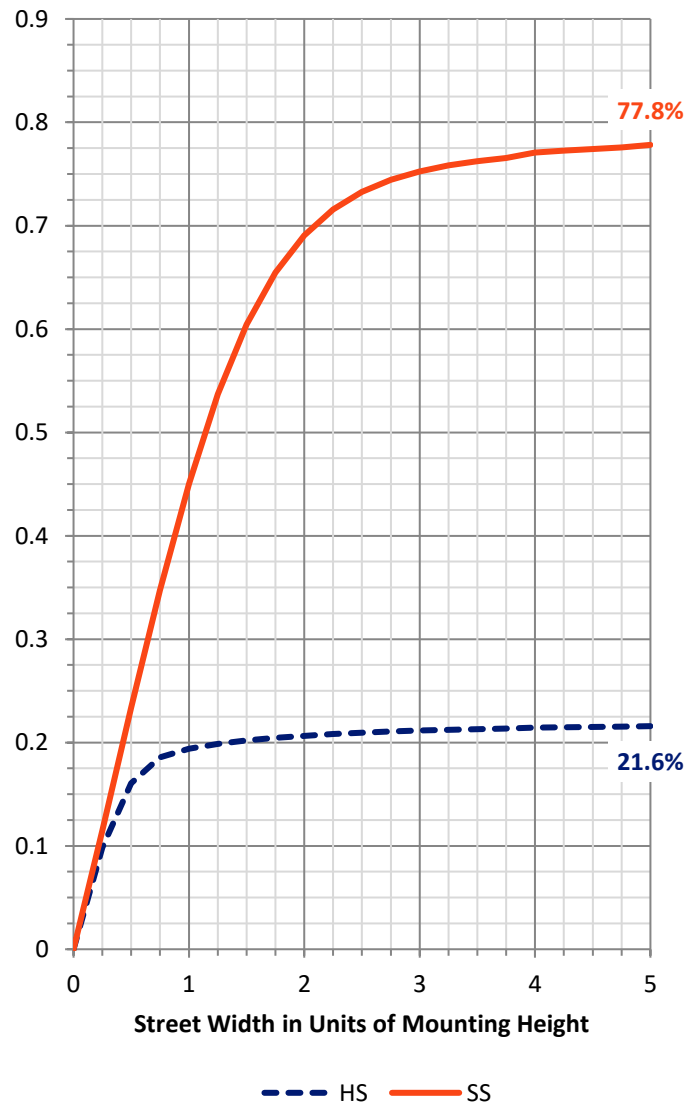
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1180.2	0.0	1180.2
	% Fixture	21.9	0.0	21.9
Street Side	Lumens	4214.6	0.0	4214.6
	% Fixture	78.1	0.0	78.1
Total	Lumens	5394.8	0.0	5394.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.0	0.2
10°-20°	82.6	1.5
20°-30°	254.7	4.7
30°-40°	490.4	9.1
40°-50°	810.4	15.0
50°-60°	1218.9	22.6
60°-70°	1632.7	30.3
70°-80°	767.4	14.2
80°-90°	124.6	2.3
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°	5394.8	100.0
0°-180°	5394.8	100.0

Coefficient of Utilization



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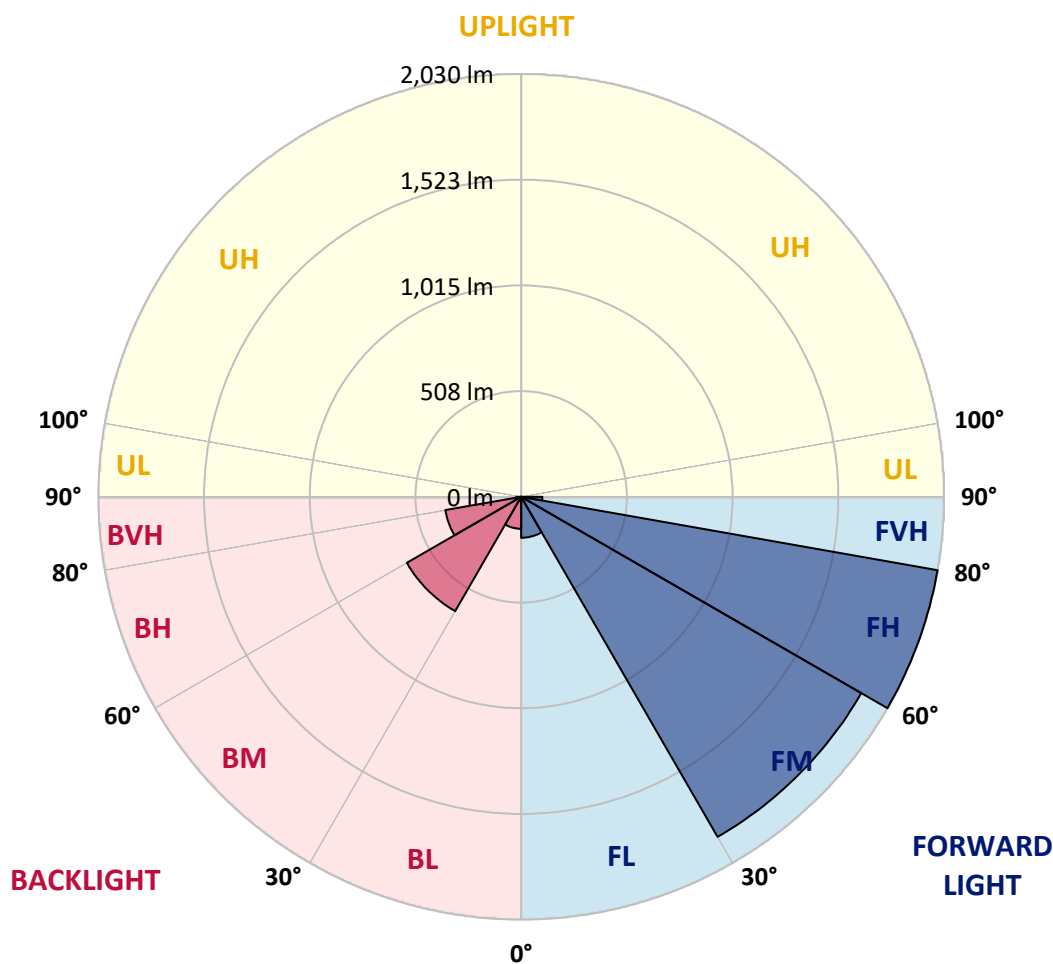
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	196.7	3.6			
FM	(30°-60°)	1885.6	35.0			
FH	(60°-80°)	2030.4	37.6			G2/5000
FVH	(80°-90°)	101.8	1.9			G2/225
BL	(0°-30°)	153.6	2.8	B1/500		
BM	(30°-60°)	634.1	11.8	B1/1000		
BH	(60°-80°)	369.7	6.9	B1/500		G1/500
BVH	(80°-90°)	22.8	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
2.5°	153.9	152.9	152.9	153.9	151.9	150.8	131.3	127.2	123.1	120.1	117.0
5°	127.2	128.3	127.2	127.2	130.3	126.2	138.5	140.6	145.7	147.8	151.9
7.5°	204.2	205.2	203.2	201.1	165.2	132.4	128.3	128.3	128.3	132.4	131.3
10°	216.5	216.5	214.5	212.4	206.2	197.0	143.7	144.7	169.3	150.8	178.5
12.5°	302.7	304.8	300.6	286.3	220.6	274.0	276.0	272.9	270.9	263.7	257.6
15°	326.3	333.5	321.2	305.8	356.1	302.7	290.4	287.3	285.3	285.3	301.7
17.5°	450.5	452.5	443.3	414.5	376.6	361.2	357.1	355.0	354.0	354.0	356.1
20°	537.7	543.8	475.1	495.6	458.7	417.6	403.3	403.3	404.3	396.1	384.8
22.5°	592.1	590.0	558.2	570.5	505.9	466.9	502.8	512.0	522.3	526.4	532.5
25°	702.9	701.9	622.8	569.5	554.1	524.3	531.5	540.8	547.9	564.4	595.1
27.5°	715.2	714.2	657.7	634.1	550.0	599.2	673.1	688.5	697.8	699.8	697.8
30°	806.5	804.5	761.4	661.8	628.0	652.6	723.4	738.8	747.0	753.2	753.2
32.5°	900.9	900.9	819.9	695.7	676.2	746.0	850.6	855.8	861.9	863.0	865.0
35°	970.7	949.1	855.8	780.9	751.1	825.0	956.3	959.4	977.9	1026.1	1040.5
37.5°	1007.6	1009.7	974.8	884.5	887.6	970.7	1174.9	1179.0	1182.1	1194.4	1211.8
40°	1067.1	1077.4	1052.8	997.4	1022.0	1153.3	1364.7	1378.1	1389.3	1391.4	1425.3
42.5°	1127.7	1135.9	1136.9	1153.3	1174.9	1344.2	1548.4	1561.7	1559.7	1575.1	1626.4
45°	1229.3	1241.6	1262.1	1281.6	1329.8	1520.7	1731.0	1751.6	1735.1	1774.1	1807.0
47.5°	1359.6	1368.8	1403.7	1455.0	1474.5	1675.6	1921.9	1927.0	1941.4	1982.4	1994.7
50°	1474.5	1485.8	1529.9	1597.6	1621.2	1811.1	2067.6	2069.7	2093.3	2151.7	2128.1
52.5°	1561.7	1574.0	1612.0	1717.7	1754.6	1961.9	2180.5	2181.5	2222.5	2276.9	2228.7
55°	1610.0	1623.3	1649.0	1769.0	1840.8	2073.8	2313.9	2320.0	2378.5	2408.3	2371.3
57.5°	1612.0	1624.3	1654.1	1758.7	1877.8	2189.7	2498.6	2529.3	2590.9	2627.9	2627.9
60°	1593.5	1608.9	1637.7	1728.0	1912.7	2319.0	2782.8	2846.4	2944.9	2980.8	3061.9
62.5°	1545.3	1552.5	1569.9	1673.6	1964.0	2473.9	3192.2	3297.9	3443.6	3466.2	3631.4
65°	1435.5	1439.6	1461.2	1579.2	1961.9	2615.5	3563.7	3702.2	3865.3	3880.7	4038.8
67.5°	1291.9	1301.1	1317.5	1430.4	1776.2	2561.2	3595.5	3776.1	3903.3	3908.4	4040.8
70°	1069.2	1065.1	1084.6	1164.6	1431.4	2147.6	3250.7	3420.0	3506.2	3542.1	3632.4
72.5°	700.8	702.9	688.5	737.8	964.5	1512.5	2618.6	2807.4	2846.4	2933.6	2978.8
75°	394.0	385.8	401.2	442.3	543.8	910.2	1782.3	1949.6	2030.7	2102.5	2141.5
77.5°	234.0	230.9	256.5	314.0	439.2	610.5	1028.2	1111.3	1178.0	1233.4	1304.2
80°	108.8	115.9	113.9	129.3	239.1	522.3	714.2	747.0	775.7	807.5	850.6
82.5°	53.4	58.5	67.7	70.8	84.1	263.7	637.2	670.0	697.8	729.6	772.7
85°	34.9	35.9	50.3	51.3	52.3	80.0	311.9	361.2	380.7	434.0	507.9
87.5°	12.3	17.4	36.9	32.8	32.8	39.0	105.7	115.9	121.1	132.4	147.8
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):

	60°	61°	62°	64°	65°	66°	67°	68°	69°	70°	71°
0°	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
2.5°	115.9	115.9	111.8	107.7	105.7	105.7	102.6	102.6	101.6	100.6	98.5
5°	150.8	152.9	152.9	152.9	151.9	150.8	149.8	147.8	145.7	141.6	138.5
7.5°	128.3	126.2	124.2	120.1	121.1	124.2	127.2	131.3	137.5	140.6	141.6
10°	180.6	185.7	184.7	185.7	184.7	186.8	186.8	188.8	187.8	188.8	190.9
12.5°	247.3	226.8	207.3	203.2	202.1	201.1	203.2	202.1	207.3	210.4	210.4
15°	310.9	332.5	333.5	344.8	342.7	326.3	308.9	303.7	299.6	299.6	289.4
17.5°	357.1	364.3	365.3	362.2	366.3	365.3	360.2	354.0	346.8	333.5	314.0
20°	425.8	436.1	442.3	448.4	460.7	451.5	449.4	490.5	495.6	499.7	495.6
22.5°	540.8	539.7	536.7	520.2	512.0	511.0	514.1	522.3	521.3	524.3	527.4
25°	609.5	608.5	616.7	646.4	654.7	684.4	676.2	676.2	681.3	686.5	678.3
27.5°	692.6	701.9	713.1	712.1	726.5	722.4	721.4	729.6	729.6	719.3	725.5
30°	758.3	787.0	826.0	838.3	830.1	830.1	841.4	852.7	849.6	848.6	850.6
32.5°	877.3	906.1	881.4	909.1	892.7	919.4	961.5	990.2	1000.5	999.4	1014.8
35°	1069.2	1074.3	1058.9	1070.2	1089.7	1094.9	1099.0	1099.0	1086.6	1107.2	1116.4
37.5°	1232.4	1206.7	1229.3	1215.9	1230.3	1246.7	1244.7	1225.2	1219.0	1252.9	1249.8
40°	1439.6	1398.6	1427.3	1420.1	1428.3	1433.5	1410.9	1397.6	1414.0	1424.2	1422.2
42.5°	1592.5	1614.1	1615.1	1612.0	1619.2	1620.2	1579.2	1585.3	1604.8	1601.8	1591.5
45°	1757.7	1793.6	1774.1	1803.9	1807.0	1767.0	1757.7	1784.4	1790.6	1780.3	1768.0
47.5°	1958.8	1982.4	1949.6	1994.7	1995.8	1950.6	1971.1	1989.6	1993.7	1973.2	1991.7
50°	2132.2	2134.3	2127.1	2162.0	2141.5	2118.9	2164.1	2174.3	2165.1	2137.4	2166.1
52.5°	2274.9	2247.2	2275.9	2324.1	2268.7	2271.8	2339.5	2331.3	2302.6	2329.3	2309.8
55°	2429.8	2405.2	2473.9	2496.5	2445.2	2492.4	2539.6	2528.3	2495.5	2549.9	2511.9
57.5°	2662.7	2668.9	2729.4	2746.9	2725.3	2830.0	2852.6	2849.5	2850.5	2886.4	2870.0
60°	3082.4	3143.0	3212.7	3266.1	3301.0	3425.1	3427.2	3429.2	3469.3	3486.7	3545.2
62.5°	3620.1	3780.2	3819.2	3883.8	4013.1	4132.1	4106.5	4109.6	4160.9	4119.8	4195.7
65°	4054.1	4224.5	4347.6	4356.8	4537.4	4573.4	4514.9	4576.4	4566.2	4566.2	4599.0
67.5°	4095.2	4270.7	4381.5	4429.7	4639.0	4629.8	4573.4	4665.7	4611.3	4657.5	4644.2
70°	3727.8	3859.2	3974.1	4076.7	4265.5	4255.3	4258.3	4385.6	4378.4	4414.3	4377.4
72.5°	3085.5	3201.4	3265.1	3451.8	3501.1	3493.9	3570.8	3581.1	3638.6	3716.6	3668.3
75°	2310.8	2386.7	2391.9	2516.0	2496.5	2472.9	2484.2	2525.2	2418.5	2350.8	2296.4
77.5°	1410.9	1428.3	1411.9	1396.5	1346.3	1297.0	1323.7	1301.1	1232.4	1188.2	1135.9
80°	888.6	910.2	918.4	967.6	954.3	996.3	1028.2	1060.0	1069.2	1031.2	994.3
82.5°	822.9	830.1	854.7	905.0	914.3	968.6	975.8	995.3	961.5	939.9	873.2
85°	529.5	545.9	596.2	564.4	607.5	608.5	585.9	583.9	518.2	484.3	407.4
87.5°	162.1	166.2	185.7	186.8	211.4	215.5	222.7	215.5	192.9	162.1	134.4
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):

	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°
0°	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
2.5°	97.5	96.5	95.4	95.4	95.4	94.4	94.4	94.4	94.4	93.4	93.4
5°	132.4	127.2	121.1	112.9	104.7	101.6	101.6	99.5	98.5	97.5	96.5
7.5°	141.6	140.6	140.6	140.6	138.5	136.5	134.4	125.2	106.7	98.5	97.5
10°	190.9	197.0	207.3	217.5	219.6	219.6	217.5	213.4	209.3	204.2	187.8
12.5°	209.3	209.3	206.2	203.2	207.3	216.5	225.7	229.8	228.8	226.8	225.7
15°	286.3	286.3	285.3	283.2	283.2	282.2	283.2	288.3	294.5	300.6	300.6
17.5°	314.0	311.9	313.0	316.0	303.7	300.6	299.6	294.5	293.5	297.6	300.6
20°	490.5	483.3	462.8	460.7	456.6	454.6	453.5	447.4	444.3	452.5	453.5
22.5°	523.3	532.5	526.4	557.2	506.9	508.9	541.8	560.3	560.3	557.2	552.0
25°	687.5	681.3	688.5	690.6	680.3	688.5	673.1	664.9	653.6	652.6	654.7
27.5°	727.5	745.0	748.0	776.8	794.2	786.0	817.8	804.5	793.2	783.9	792.2
30°	864.0	858.9	867.1	870.1	881.4	875.3	864.0	870.1	879.4	893.7	882.5
32.5°	1028.2	1036.4	1043.5	1045.6	1051.8	1043.5	1044.6	1065.1	1078.4	1063.0	1039.4
35°	1126.7	1126.7	1140.0	1138.0	1126.7	1130.8	1165.7	1173.9	1159.5	1149.2	1165.7
37.5°	1252.9	1250.8	1251.8	1254.9	1247.7	1286.7	1305.2	1284.7	1269.3	1301.1	1287.8
40°	1407.8	1422.2	1409.9	1411.9	1442.7	1465.3	1445.8	1430.4	1468.4	1444.8	1425.3
42.5°	1600.7	1587.4	1569.9	1605.9	1634.6	1619.2	1596.6	1635.6	1624.3	1591.5	1647.9
45°	1791.6	1774.1	1777.2	1809.0	1820.3	1788.5	1809.0	1836.7	1785.4	1838.8	1859.3
47.5°	1959.9	1968.1	2004.0	2033.7	1994.7	2004.0	2034.8	1992.7	2031.7	2071.7	2067.6
50°	2137.4	2173.3	2197.9	2192.8	2166.1	2224.6	2196.9	2181.5	2264.6	2275.9	2288.2
52.5°	2304.6	2359.0	2364.1	2332.3	2373.4	2406.2	2368.3	2475.0	2509.9	2518.1	2553.0
55°	2541.7	2590.9	2570.4	2563.2	2665.8	2642.2	2719.2	2851.5	2868.0	2900.8	2907.0
57.5°	2935.7	2972.6	2951.1	3034.2	3117.3	3102.9	3332.8	3400.5	3493.9	3512.4	3529.8
60°	3617.0	3588.3	3588.3	3766.8	3745.3	3893.0	4059.3	4077.7	4178.3	4185.5	4206.0
62.5°	4206.0	4193.7	4290.1	4342.5	4332.2	4601.1	4644.2	4704.7	4693.4	4713.9	4589.8
65°	4544.6	4509.7	4611.3	4542.6	4738.6	4858.6	4874.0	4902.7	4854.5	4785.8	4707.8
67.5°	4548.7	4554.9	4565.1	4519.0	4742.7	4750.9	4776.5	4734.5	4693.4	4515.9	4435.9
70°	4296.3	4336.3	4249.1	4332.2	4421.5	4373.3	4356.8	4247.1	4139.3	3953.6	3795.6
72.5°	3595.5	3542.1	3489.8	3552.4	3509.3	3421.0	3315.3	3178.9	2978.8	2838.2	2686.3
75°	2171.2	2071.7	2124.0	2032.7	1903.4	1867.5	1747.5	1709.5	1549.4	1345.2	1268.3
77.5°	1083.6	979.9	993.3	915.3	816.8	735.7	611.6	500.7	399.2	308.9	252.4
80°	907.1	856.8	806.5	724.4	641.3	532.5	421.7	298.6	203.2	148.8	127.2
82.5°	780.9	766.5	668.0	589.0	496.6	404.3	285.3	197.0	127.2	98.5	91.3
85°	361.2	325.3	282.2	269.9	212.4	173.4	129.3	95.4	73.9	65.7	60.5
87.5°	130.3	111.8	103.6	89.3	78.0	70.8	66.7	64.6	64.6	64.6	61.6
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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CATALOG NUMBER: UTLD-E02-LED-E-U-SL3-7060

CANDELA DISTRIBUTION (continued):

	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°	115°
0°	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3
2.5°	93.4	93.4	92.3	92.3	92.3	92.3	92.3	91.3	91.3	91.3	93.4
5°	96.5	95.4	95.4	94.4	94.4	94.4	93.4	93.4	92.3	95.4	128.3
7.5°	97.5	98.5	98.5	98.5	98.5	98.5	97.5	97.5	97.5	108.8	126.2
10°	167.3	161.1	160.1	158.0	156.0	154.9	152.9	149.8	153.9	209.3	145.7
12.5°	219.6	196.0	177.5	174.4	172.4	169.3	169.3	161.1	168.3	200.1	156.0
15°	298.6	291.4	270.9	251.4	253.4	253.4	251.4	250.4	231.9	234.0	237.0
17.5°	307.8	323.2	334.5	308.9	285.3	269.9	274.0	295.5	265.8	254.5	303.7
20°	452.5	457.6	459.7	445.3	413.5	413.5	418.7	423.8	400.2	396.1	395.1
22.5°	542.8	549.0	544.9	551.0	542.8	537.7	527.4	516.1	503.8	454.6	486.4
25°	656.7	672.1	680.3	667.0	647.5	623.9	616.7	617.7	638.2	635.2	673.1
27.5°	802.4	794.2	783.9	793.2	801.4	775.7	766.5	757.3	752.1	830.1	738.8
30°	854.7	848.6	861.9	848.6	846.5	857.8	868.1	851.7	850.6	913.2	837.3
32.5°	1050.7	1046.6	1015.8	1028.2	1041.5	1043.5	1042.5	1060.0	1049.7	1063.0	879.4
35°	1145.1	1123.6	1153.3	1157.4	1143.1	1161.6	1161.6	1157.4	1185.2	1130.8	914.3
37.5°	1272.4	1287.8	1307.3	1313.4	1328.8	1294.9	1322.6	1327.8	1370.9	1197.5	888.6
40°	1475.5	1486.8	1499.1	1497.1	1481.7	1518.6	1482.7	1497.1	1545.3	1236.5	859.9
42.5°	1664.3	1674.6	1693.1	1692.0	1698.2	1679.7	1708.5	1698.2	1704.4	1246.7	824.0
45°	1864.4	1890.1	1872.6	1910.6	1900.3	1893.2	1910.6	1904.5	1841.9	1266.2	763.4
47.5°	2091.2	2085.0	2102.5	2102.5	2109.7	2122.0	2103.5	2108.6	1960.9	1279.6	697.8
50°	2289.2	2298.5	2315.9	2313.9	2329.3	2314.9	2332.3	2274.9	2059.4	1271.3	613.6
52.5°	2546.8	2583.7	2564.2	2574.5	2558.1	2583.7	2530.4	2503.7	2193.8	1232.4	527.4
55°	2974.7	2917.2	2954.2	2913.1	2916.2	2909.0	2841.3	2822.8	2389.8	1211.8	428.9
57.5°	3510.3	3504.2	3476.4	3425.1	3412.8	3368.7	3312.3	3246.6	2702.8	1205.7	347.8
60°	4159.8	4135.2	4049.0	4000.8	3912.5	3823.3	3774.0	3694.0	3036.2	1179.0	287.3
62.5°	4579.5	4474.8	4412.3	4297.3	4215.2	4111.6	4031.6	3882.8	3130.6	1119.5	254.5
65°	4600.0	4502.6	4395.8	4260.4	4128.0	4037.7	3893.0	3754.5	2989.0	967.6	212.4
67.5°	4303.5	4197.8	3986.4	3885.9	3756.6	3649.9	3475.4	3354.3	2627.9	776.8	168.3
70°	3707.3	3528.8	3333.8	3198.4	3088.6	2963.4	2799.2	2666.8	2097.4	571.5	130.3
72.5°	2567.3	2464.7	2285.1	2216.4	2108.6	2048.1	1960.9	1908.6	1483.7	393.0	107.7
75°	1248.8	1171.8	1064.1	1086.6	1010.7	1027.1	1038.4	977.9	819.9	222.7	93.4
77.5°	232.9	244.2	217.5	217.5	220.6	210.4	212.4	230.9	229.8	112.9	79.0
80°	119.0	117.0	112.9	110.8	105.7	102.6	98.5	96.5	93.4	81.1	68.7
82.5°	86.2	81.1	75.9	72.9	69.8	65.7	62.6	63.6	69.8	80.0	73.9
85°	55.4	53.4	49.3	48.2	47.2	46.2	47.2	49.3	66.7	95.4	72.9
87.5°	59.5	54.4	49.3	47.2	46.2	44.1	43.1	46.2	70.8	103.6	62.6
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):

	125°	135°	145°	155°	165°	175°	180°
0°	92.3	92.3	92.3	92.3	92.3	92.3	92.3
2.5°	95.4	102.6	126.2	144.7	146.7	146.7	145.7
5°	143.7	99.5	92.3	94.4	90.3	91.3	90.3
7.5°	91.3	91.3	93.4	129.3	145.7	151.9	147.8
10°	108.8	144.7	146.7	152.9	153.9	152.9	151.9
12.5°	211.4	208.3	159.0	169.3	220.6	223.7	222.7
15°	227.8	225.7	275.0	227.8	236.0	238.1	236.0
17.5°	297.6	297.6	296.5	272.9	306.8	306.8	305.8
20°	352.0	366.3	356.1	341.7	300.6	301.7	301.7
22.5°	498.7	407.4	388.9	372.5	337.6	337.6	336.6
25°	514.1	457.6	408.4	357.1	327.3	358.1	355.0
27.5°	662.9	478.2	383.8	363.2	325.3	316.0	316.0
30°	652.6	504.8	428.9	331.4	314.0	300.6	294.5
32.5°	690.6	499.7	378.6	301.7	255.5	250.4	244.2
35°	669.0	474.1	324.2	240.1	196.0	186.8	186.8
37.5°	646.4	404.3	261.7	178.5	156.0	148.8	149.8
40°	569.5	325.3	181.6	137.5	137.5	138.5	138.5
42.5°	486.4	225.7	133.4	118.0	124.2	128.3	127.2
45°	382.7	151.9	107.7	108.8	117.0	120.1	120.1
47.5°	272.9	112.9	98.5	101.6	110.8	114.9	113.9
50°	185.7	96.5	92.3	97.5	106.7	108.8	108.8
52.5°	134.4	91.3	88.2	93.4	102.6	104.7	104.7
55°	111.8	89.3	86.2	90.3	98.5	100.6	101.6
57.5°	105.7	89.3	85.2	89.3	95.4	97.5	97.5
60°	105.7	90.3	87.2	89.3	92.3	94.4	95.4
62.5°	107.7	95.4	91.3	91.3	91.3	92.3	92.3
65°	111.8	104.7	98.5	95.4	91.3	88.2	89.3
67.5°	117.0	113.9	108.8	100.6	89.3	83.1	83.1
70°	121.1	123.1	121.1	104.7	87.2	77.0	75.9
72.5°	120.1	130.3	123.1	105.7	85.2	71.8	70.8
75°	112.9	121.1	106.7	95.4	80.0	67.7	65.7
77.5°	98.5	89.3	73.9	73.9	66.7	60.5	58.5
80°	79.0	59.5	49.3	52.3	50.3	38.0	32.8
82.5°	62.6	39.0	36.9	39.0	38.0	27.7	23.6
85°	51.3	26.7	26.7	29.8	26.7	20.5	15.4
87.5°	40.0	15.4	17.4	16.4	16.4	12.3	4.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)