

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P273770

Luminaire Tested: **4RCG-4-78D-L935-A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P273770
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-20)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4RCG-4-78D-L935-A
Description: RCG SERIES DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC FLUSH LENS
Light Source: (168) 3500K CCT, 90 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

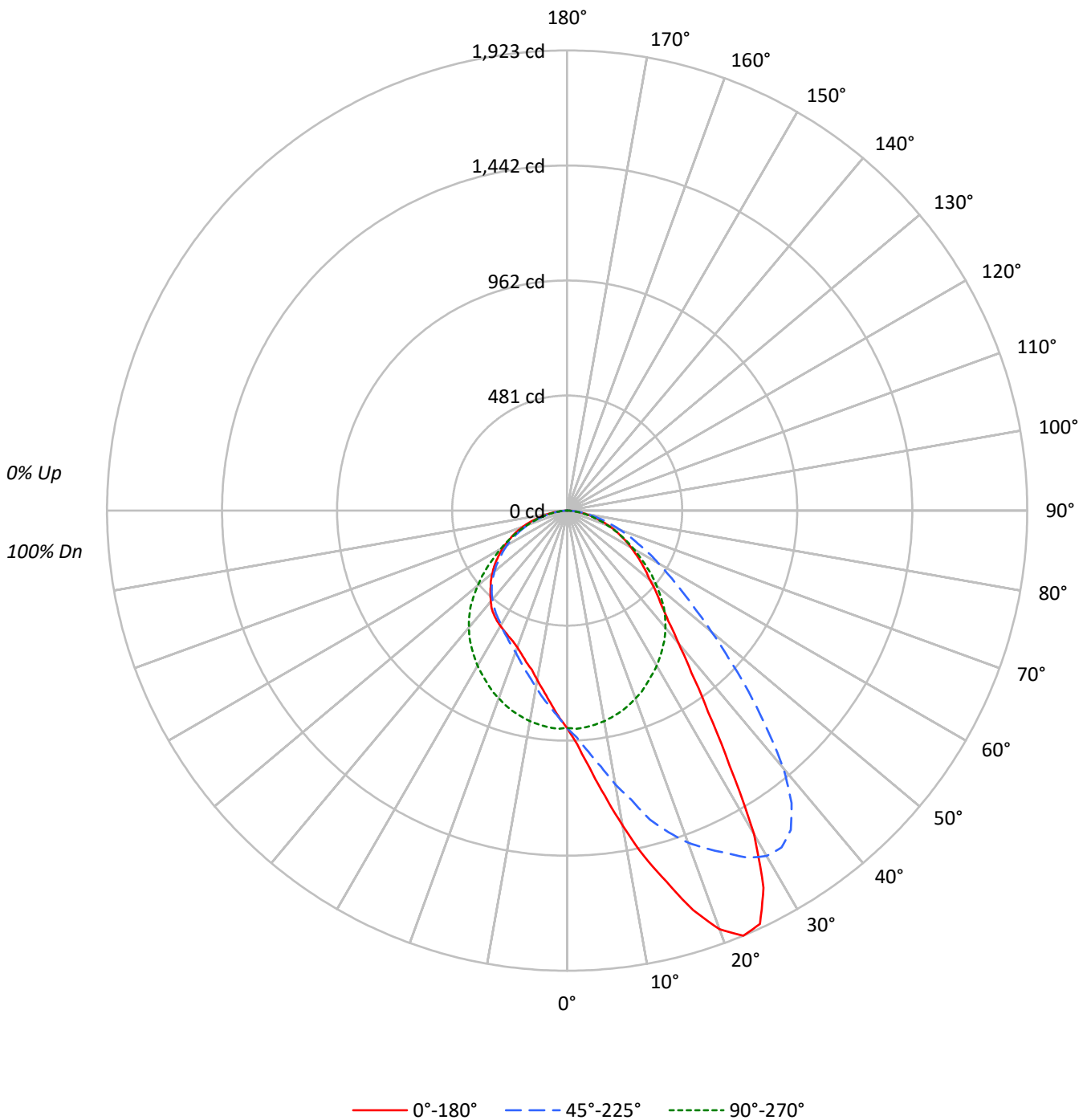
Lumens per Lamp: N/A
Luminaire Lumens: 2741.3 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.23 / 1.5
Luminous Opening: Rectangular (W 3.88' x L: 0.23' x H: 0')
CIE Type: Direct

Input Watts (W): 26
Input Voltage (V): 120
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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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	53
5	78	66	57	51	76	64	56	50	62	55	50	60	54	49	59	53	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	41
7	67	54	45	39	65	53	45	39	52	44	39	50	44	39	49	43	38	36
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	35	33
9	58	45	37	32	57	45	37	32	43	36	32	42	36	31	41	36	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	11008	11008	11008
5°	13129	11057	9799
10°	16433	11000	8850
15°	20155	10911	8238
20°	24010	10773	7844
25°	25494	10604	7757
30°	21853	10482	7797
35°	15197	10308	7878
40°	11446	10103	7855
45°	9504	9798	7755
50°	8514	9178	7684
55°	7961	8508	7589
60°	7467	7808	7510
65°	7018	7119	7271
70°	6581	6333	6925
75°	5896	5545	6346
80°	5158	4544	5466
85°	4033	3310	3672



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.3	3.3
10°-20°	286.9	10.5
20°-30°	482.7	17.6
30°-40°	545.6	19.9
40°-50°	488.7	17.8
50°-60°	394.4	14.4
60°-70°	274.8	10.0
70°-80°	144.3	5.3
80°-90°	34.6	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°-30°	859.0	31.3
0°-40°	1404.5	51.2
0°-60°	2287.6	83.5
0°-90°	2741.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2741.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	908	908	908	908	908	
5°	1079	1011	909	823	805	111
15°	1606	1337	870	686	656	464
25°	1906	1580	793	589	580	843
35°	1027	1629	697	521	532	663
45°	554	1074	572	445	452	437
55°	377	583	403	344	359	338
65°	245	327	248	234	254	244
75°	126	155	118	118	136	134
85°	29	33	24	23	26	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2
2.5°	977.8	976.9	974.7	976.4	972.9	968.1	967.6	963.2	950.5	949.6	946.1
5°	1079.0	1075.5	1075.0	1074.6	1068.4	1060.1	1044.2	1042.9	1021.8	1011.2	998.4
7.5°	1201.3	1200.0	1196.5	1192.5	1171.8	1161.7	1146.7	1127.4	1102.7	1079.0	1064.0
10°	1335.1	1349.6	1331.6	1319.2	1307.8	1286.2	1261.2	1229.9	1198.7	1162.1	1134.4
12.5°	1478.5	1483.8	1483.8	1472.4	1453.0	1417.4	1368.1	1332.9	1304.7	1237.8	1214.1
15°	1606.1	1633.0	1615.8	1576.2	1577.1	1545.9	1487.8	1424.0	1390.1	1336.8	1264.2
17.5°	1750.5	1755.3	1750.0	1713.1	1695.0	1649.7	1597.3	1537.9	1474.1	1409.4	1334.2
20°	1861.4	1858.7	1843.3	1826.2	1788.3	1754.9	1696.3	1628.1	1540.1	1476.8	1392.7
22.5°	1923.0	1918.1	1912.8	1899.2	1869.3	1832.8	1781.7	1705.6	1622.9	1529.6	1429.2
25°	1906.2	1912.0	1912.8	1908.9	1897.9	1876.3	1835.0	1775.6	1691.9	1579.7	1478.5
27.5°	1776.9	1791.4	1809.9	1822.2	1842.0	1855.2	1842.0	1804.6	1736.0	1635.6	1511.1
30°	1561.3	1543.7	1587.2	1642.2	1679.6	1745.6	1782.6	1784.8	1750.0	1666.9	1546.3
32.5°	1262.0	1290.6	1303.8	1374.7	1467.5	1543.7	1626.4	1699.9	1717.0	1668.6	1567.0
35°	1027.0	1051.3	1086.5	1121.7	1209.7	1285.4	1414.7	1527.4	1617.1	1629.0	1564.3
37.5°	853.7	867.8	889.3	926.7	987.0	1080.7	1183.3	1329.8	1453.4	1540.6	1531.8
40°	723.4	726.9	752.0	778.9	825.5	899.4	989.6	1115.5	1271.3	1406.4	1462.7
42.5°	625.7	634.5	641.6	667.1	701.9	752.9	835.2	933.8	1073.3	1233.9	1357.5
45°	554.4	563.2	569.8	587.0	613.4	650.8	709.3	804.4	913.1	1073.7	1222.0
47.5°	505.2	504.3	510.0	523.6	542.6	572.5	615.6	679.0	783.3	917.5	1072.8
50°	451.5	458.5	460.3	470.4	484.5	505.2	539.5	591.4	673.3	787.7	927.6
52.5°	413.6	414.5	420.2	426.8	438.7	453.7	482.3	520.1	580.0	673.3	799.1
55°	376.7	376.7	381.5	387.2	394.3	408.8	428.6	458.5	507.4	583.1	689.5
57.5°	342.3	344.1	348.5	349.8	356.0	366.1	383.3	407.0	444.4	505.6	593.6
60°	308.0	312.0	311.5	315.1	320.3	327.8	341.9	360.4	393.0	439.6	510.9
62.5°	278.1	276.8	276.8	281.2	286.5	293.5	301.4	316.8	343.2	383.3	441.4
65°	244.7	243.8	246.9	249.5	251.3	256.5	263.6	277.7	296.1	326.9	374.0
67.5°	215.6	213.0	215.2	216.1	219.1	223.5	230.6	239.4	254.3	280.3	318.1
70°	185.7	183.5	183.1	183.9	186.6	189.7	194.5	202.9	216.5	236.3	262.3
72.5°	154.9	153.6	153.6	155.8	156.7	158.4	161.5	169.0	179.1	192.7	216.5
75°	125.9	125.9	125.9	126.3	127.6	129.4	132.0	136.0	144.3	154.9	171.2
77.5°	99.4	99.9	99.0	98.6	100.8	101.6	102.1	106.5	111.3	119.3	132.0
80°	73.9	71.7	72.6	73.9	74.8	75.2	76.6	77.4	81.4	85.4	93.7
82.5°	50.2	48.4	48.4	50.6	50.6	51.0	52.4	53.7	54.6	58.1	61.6
85°	29.0	29.0	29.5	29.5	29.9	29.5	30.8	31.2	31.2	33.4	36.1
87.5°	13.2	12.3	12.8	13.2	12.8	13.2	13.6	14.1	14.5	15.0	15.4
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2
2.5°	943.4	939.9	936.4	930.2	925.0	917.5	915.3	912.6	904.7	897.7	892.4
5°	993.6	983.0	967.6	953.6	942.1	926.7	917.9	908.7	895.5	883.6	873.9
7.5°	1041.6	1023.1	1001.5	978.2	955.8	934.2	917.0	901.6	884.5	867.8	855.0
10°	1101.0	1071.1	1037.6	1001.5	970.7	940.8	915.7	893.7	870.0	849.3	832.1
12.5°	1168.7	1120.8	1071.5	1025.7	987.9	943.4	911.8	882.3	854.6	828.6	808.8
15°	1219.3	1163.0	1108.5	1048.2	992.7	940.8	904.7	869.5	838.3	812.8	788.1
17.5°	1269.5	1207.9	1138.4	1065.8	1000.6	940.8	891.5	853.7	815.4	784.6	760.8
20°	1310.9	1238.3	1156.9	1080.7	1006.8	938.2	882.7	835.2	792.9	759.9	732.2
22.5°	1346.5	1258.5	1173.6	1090.9	1006.4	931.1	866.4	817.2	770.5	738.4	708.5
25°	1369.0	1267.3	1182.8	1087.3	995.4	918.8	848.4	792.9	747.2	709.3	679.0
27.5°	1390.1	1266.0	1170.5	1067.5	982.2	906.0	830.4	770.9	723.0	682.1	650.8
30°	1411.2	1268.2	1148.9	1047.3	961.0	881.8	808.8	748.9	697.9	656.1	627.1
32.5°	1424.4	1266.9	1129.1	1019.1	927.6	859.8	785.5	723.0	670.2	629.3	601.5
35°	1427.9	1259.4	1105.8	978.2	891.1	822.9	760.8	696.6	641.6	603.3	571.6
37.5°	1420.4	1245.7	1080.3	941.2	847.1	779.3	725.2	670.2	617.4	574.7	547.0
40°	1396.2	1232.5	1049.5	901.6	801.3	736.6	692.2	638.5	586.6	546.5	521.0
42.5°	1350.0	1205.7	1015.6	857.6	753.8	689.1	649.1	606.4	558.0	521.0	495.5
45°	1269.1	1164.3	981.7	813.6	707.1	640.3	604.2	571.6	527.2	490.6	468.6
47.5°	1165.7	1108.5	932.9	767.4	658.3	593.6	555.8	528.9	494.2	464.7	443.1
50°	1057.0	1036.3	883.2	719.9	609.5	546.5	510.4	486.7	463.4	433.9	414.5
52.5°	931.6	952.7	825.1	670.6	559.7	498.1	464.7	447.1	426.4	403.5	387.2
55°	815.4	861.6	756.4	614.3	510.4	451.5	419.4	402.6	390.3	372.3	357.8
57.5°	702.7	761.7	685.1	557.5	462.0	410.6	378.9	360.0	352.0	341.9	330.0
60°	604.6	662.7	607.7	500.3	413.2	364.8	337.5	322.1	314.2	307.6	297.9
62.5°	517.0	576.0	532.0	442.2	365.2	321.2	298.3	283.4	277.7	275.0	267.1
65°	438.3	488.9	458.1	381.5	319.9	280.3	258.7	248.2	242.5	241.1	235.9
67.5°	370.1	409.2	385.5	327.8	277.7	241.6	222.7	213.4	208.6	208.1	203.7
70°	303.2	339.3	322.1	271.1	229.3	202.4	186.6	178.7	176.0	175.6	173.4
72.5°	251.3	273.7	260.9	220.5	190.5	166.8	156.2	147.9	144.8	145.7	144.3
75°	193.6	212.5	204.6	175.1	149.2	133.3	123.7	118.4	115.7	117.1	115.3
77.5°	147.9	161.1	153.1	130.7	114.0	102.1	94.6	91.1	88.4	88.4	87.6
80°	105.2	112.2	108.2	95.9	82.7	73.0	67.3	65.1	63.8	63.4	62.9
82.5°	67.3	73.0	68.2	60.7	52.8	48.0	45.3	42.2	41.4	41.8	41.4
85°	37.8	40.0	38.3	33.0	29.5	26.8	25.1	23.8	22.9	23.3	22.4
87.5°	16.3	16.7	15.4	13.6	12.8	11.4	11.4	10.6	9.7	9.7	9.2
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2	908.2
2.5°	889.3	886.2	881.8	875.2	870.0	861.6	861.6	862.9	862.9	862.5	861.6
5°	866.0	859.4	851.5	842.2	832.6	822.9	821.1	817.6	815.0	813.2	811.0
7.5°	842.2	831.2	820.2	807.5	796.5	787.2	780.6	774.9	771.4	767.4	764.3
10°	818.0	803.5	789.9	776.2	761.3	749.4	741.9	736.6	732.7	729.1	727.4
12.5°	789.4	772.3	756.9	744.1	727.4	715.1	708.0	706.3	701.4	693.1	688.7
15°	761.7	746.3	728.3	708.5	700.5	685.6	677.2	673.3	670.6	664.9	663.1
17.5°	738.8	718.1	697.5	682.9	668.4	656.5	651.7	646.4	642.9	637.6	636.3
20°	710.2	692.2	673.7	657.9	642.5	629.3	625.3	621.8	618.3	616.1	614.3
22.5°	681.2	663.1	648.6	634.1	617.4	609.9	605.5	601.5	599.3	598.0	596.3
25°	654.3	638.5	621.3	608.1	594.9	589.2	586.6	584.4	582.6	580.4	580.0
27.5°	630.6	613.0	598.5	585.7	576.0	571.2	568.1	566.8	566.8	567.6	568.1
30°	603.3	587.5	576.0	565.4	556.6	552.2	551.8	551.8	553.6	554.0	554.9
32.5°	578.2	565.9	554.4	544.3	538.2	535.5	537.7	537.7	539.0	540.4	542.1
35°	554.0	542.6	533.8	525.0	519.2	520.6	521.4	522.3	524.5	527.2	528.9
37.5°	531.1	520.6	511.3	504.3	500.8	503.4	505.6	507.4	510.0	512.2	514.0
40°	506.0	498.6	489.8	483.6	484.5	485.8	487.6	489.8	492.0	493.3	495.0
42.5°	482.7	474.8	468.6	463.8	465.1	466.9	467.8	468.6	471.3	473.9	474.8
45°	459.0	452.8	446.6	443.6	444.4	445.3	446.2	447.5	449.7	451.5	451.9
47.5°	432.1	427.7	423.8	420.2	422.0	421.6	422.9	425.5	426.4	427.3	429.9
50°	406.6	402.6	397.8	396.9	396.9	396.9	397.4	400.9	400.9	402.6	404.4
52.5°	378.4	376.2	373.6	371.8	371.0	371.0	373.2	374.5	375.4	378.0	379.8
55°	350.7	348.1	345.4	344.1	343.2	344.1	347.6	348.5	350.7	352.0	353.4
57.5°	321.7	319.9	317.7	316.8	316.8	317.3	319.9	322.1	322.5	326.9	328.7
60°	293.1	290.0	288.2	288.2	287.3	291.3	290.4	294.8	295.7	298.3	301.4
62.5°	263.6	259.2	258.7	258.7	260.5	260.9	262.7	264.0	266.7	270.2	272.4
65°	231.5	229.3	232.3	231.9	231.0	233.7	233.7	235.9	238.5	241.6	246.4
67.5°	201.5	199.8	200.7	200.2	201.5	203.3	204.6	206.4	209.5	213.0	216.1
70°	171.2	172.5	170.3	172.1	173.4	173.8	174.7	177.3	180.9	183.1	186.6
72.5°	141.7	141.3	142.1	142.6	143.9	144.8	145.7	148.7	152.7	154.5	157.1
75°	113.5	113.1	114.4	114.4	116.6	117.5	118.4	119.7	123.2	125.9	128.1
77.5°	88.0	88.4	88.0	89.8	88.9	89.3	92.0	93.3	93.7	99.4	100.3
80°	62.5	63.4	63.8	64.2	64.7	63.8	66.9	68.2	68.2	71.3	73.5
82.5°	40.5	40.9	42.2	42.7	42.7	44.0	43.6	44.4	45.8	46.6	49.7
85°	22.4	23.8	24.2	23.8	24.2	23.3	24.6	25.1	25.5	25.5	25.5
87.5°	8.8	9.2	8.8	9.2	8.8	9.2	9.2	8.4	8.4	9.7	7.9
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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CATALOG NUMBER: 4RCG-4-78D-L935-A

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	908.2	908.2	908.2	908.2
2.5°	858.5	858.1	861.2	859.0
5°	808.4	809.7	805.3	805.3
7.5°	763.0	761.3	761.7	758.6
10°	722.1	719.5	718.6	719.0
12.5°	688.2	688.2	681.2	681.2
15°	663.1	654.8	653.9	656.5
17.5°	635.4	630.6	631.0	630.1
20°	614.3	611.7	611.2	608.1
22.5°	594.9	594.5	594.9	591.4
25°	579.5	581.7	580.0	580.0
27.5°	569.0	569.0	567.6	567.6
30°	556.6	556.2	557.1	557.1
32.5°	544.3	545.2	545.2	545.6
35°	531.6	532.0	533.3	532.4
37.5°	514.8	517.0	516.6	517.5
40°	495.5	496.8	496.4	496.4
42.5°	475.7	476.6	475.2	474.4
45°	453.7	452.8	454.1	452.4
47.5°	429.5	429.9	430.4	432.1
50°	405.3	407.9	407.9	407.5
52.5°	381.5	382.4	384.6	384.6
55°	356.9	357.8	358.6	359.1
57.5°	331.8	331.3	333.1	333.5
60°	304.9	304.9	308.5	309.8
62.5°	276.3	278.1	281.6	279.0
65°	248.6	252.1	251.7	253.5
67.5°	219.6	221.8	225.3	225.3
70°	190.1	192.3	194.1	195.4
72.5°	161.5	162.4	167.2	164.6
75°	131.1	134.2	136.9	135.5
77.5°	102.1	106.0	106.9	105.6
80°	76.6	76.1	78.8	78.3
82.5°	51.0	50.6	51.5	51.9
85°	27.3	28.6	26.8	26.4
87.5°	7.9	7.9	7.5	7.0
90°	0.0	0.0	0.0	0.0

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