

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: P273734

Luminaire Tested: **4RCG-4-56D-L830-A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P273734
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-4-56D-L830-A
Description: RCG SERIES DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC FLUSH LENS
Light Source: (168) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2167.1 lumens
Efficiency: N/A
Efficacy: 116.5 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

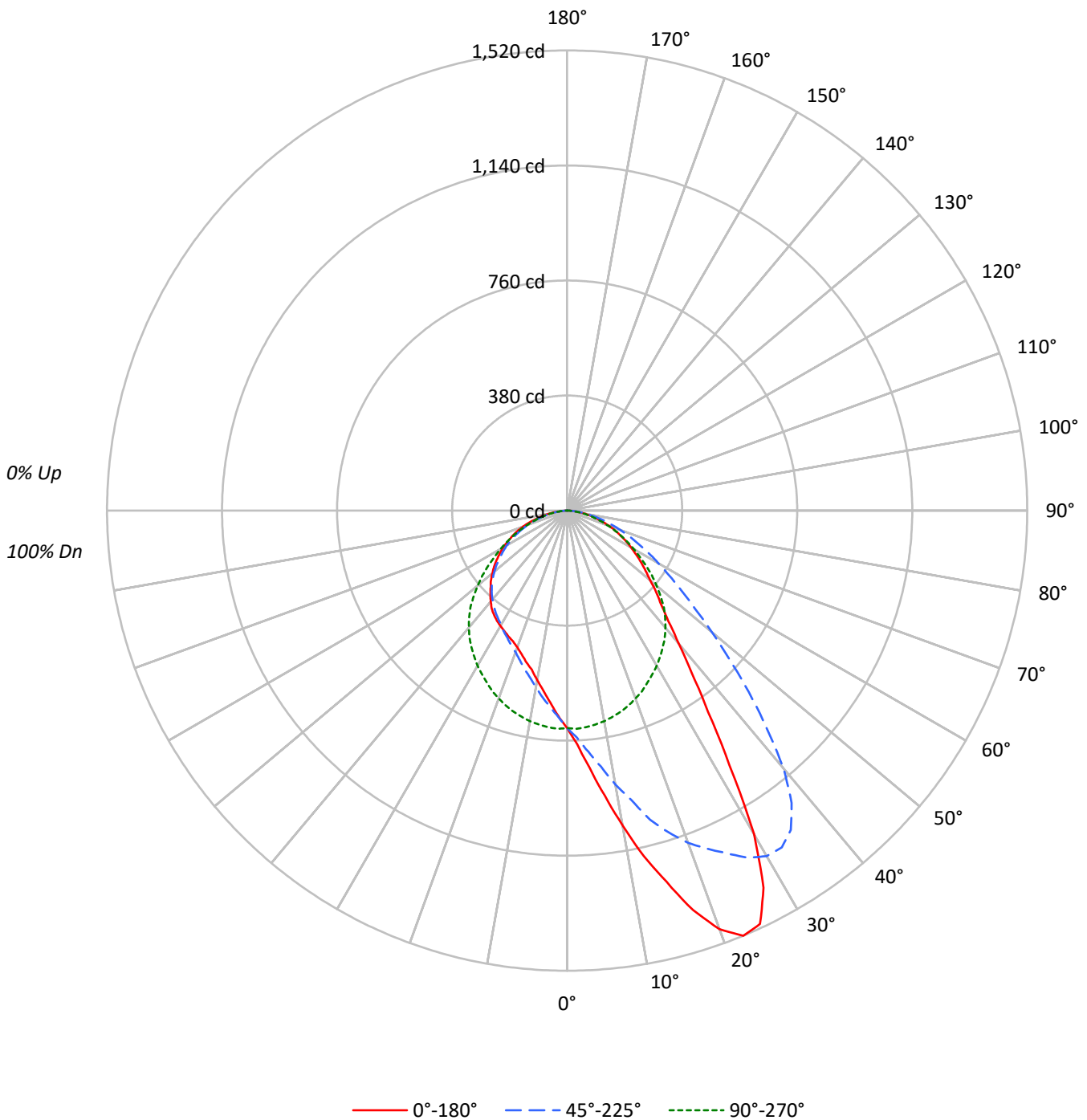
Input Watts (W): 18.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8703	8703	8703
5°	10379	8740	7746
10°	12990	8696	6996
15°	15933	8626	6513
20°	18981	8516	6201
25°	20154	8383	6132
30°	17274	8287	6164
35°	12014	8149	6228
40°	9049	7986	6209
45°	7513	7746	6130
50°	6730	7254	6074
55°	6293	6727	6000
60°	5903	6172	5937
65°	5547	5627	5748
70°	5203	5004	5475
75°	4660	4384	5016
80°	4077	3595	4321
85°	3199	2615	2907



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.6	3.3
10°-20°	226.8	10.5
20°-30°	381.6	17.6
30°-40°	431.3	19.9
40°-50°	386.3	17.8
50°-60°	311.8	14.4
60°-70°	217.3	10.0
70°-80°	114.0	5.3
80°-90°	27.3	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°	679.0	31.3
0°-40°	1110.3	51.2
0°-60°	1808.4	83.5
0°-90°	2167.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2167.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	718	718	718	718	718	
5°	853	799	718	650	637	88
15°	1270	1057	687	542	519	366
25°	1507	1249	627	466	458	666
35°	812	1288	551	412	421	524
45°	438	849	452	352	358	346
55°	298	461	318	272	284	267
65°	193	258	196	185	200	193
75°	100	122	94	93	107	106
85°	23	26	19	18	21	28
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°	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0
2.5°	772.9	772.3	770.5	771.9	769.1	765.3	764.9	761.5	751.4	750.7	747.9
5°	853.0	850.2	849.8	849.5	844.6	838.0	825.5	824.4	807.7	799.4	789.3
7.5°	949.7	948.6	945.8	942.7	926.4	918.4	906.5	891.2	871.7	853.0	841.1
10°	1055.4	1066.9	1052.6	1042.9	1033.8	1016.8	997.0	972.3	947.6	918.7	896.8
12.5°	1168.8	1173.0	1173.0	1163.9	1148.6	1120.5	1081.5	1053.7	1031.4	978.5	959.7
15°	1269.7	1290.9	1277.3	1246.0	1246.7	1222.0	1176.1	1125.7	1098.9	1056.8	999.4
17.5°	1383.8	1387.6	1383.4	1354.2	1340.0	1304.1	1262.7	1215.8	1165.3	1114.2	1054.7
20°	1471.5	1469.4	1457.2	1443.6	1413.7	1387.3	1341.0	1287.1	1217.5	1167.4	1101.0
22.5°	1520.2	1516.3	1512.2	1501.4	1477.7	1448.8	1408.5	1348.3	1282.9	1209.2	1129.9
25°	1506.9	1511.5	1512.2	1509.0	1500.3	1483.3	1450.6	1403.6	1337.5	1248.8	1168.8
27.5°	1404.7	1416.1	1430.8	1440.5	1456.1	1466.6	1456.1	1426.6	1372.3	1293.0	1194.6
30°	1234.2	1220.3	1254.7	1298.2	1327.8	1380.0	1409.2	1410.9	1383.4	1317.7	1222.4
32.5°	997.7	1020.3	1030.7	1086.7	1160.1	1220.3	1285.7	1343.8	1357.4	1319.1	1238.7
35°	811.9	831.0	858.9	886.7	956.3	1016.1	1118.4	1207.4	1278.4	1287.8	1236.6
37.5°	674.9	686.0	703.0	732.6	780.3	854.3	935.4	1051.2	1149.0	1217.9	1210.9
40°	571.9	574.7	594.5	615.7	652.6	711.0	782.3	881.8	1005.0	1111.8	1156.3
42.5°	494.7	501.6	507.2	527.4	554.8	595.2	660.2	738.2	848.4	975.4	1073.2
45°	438.3	445.3	450.5	464.0	484.9	514.5	560.8	635.9	721.8	848.8	966.0
47.5°	399.3	398.6	403.2	414.0	428.9	452.6	486.7	536.7	619.2	725.3	848.1
50°	356.9	362.5	363.9	371.9	383.0	399.3	426.5	467.5	532.2	622.7	733.3
52.5°	327.0	327.7	332.2	337.4	346.8	358.6	381.3	411.2	458.5	532.2	631.7
55°	297.8	297.8	301.6	306.1	311.7	323.2	338.8	362.5	401.1	460.9	545.1
57.5°	270.6	272.0	275.5	276.5	281.4	289.4	303.0	321.8	351.3	399.7	469.3
60°	243.5	246.6	246.3	249.1	253.2	259.2	270.3	284.9	310.6	347.5	403.9
62.5°	219.8	218.8	218.8	222.3	226.5	232.0	238.3	250.5	271.3	303.0	348.9
65°	193.4	192.7	195.1	197.2	198.6	202.8	208.4	219.5	234.1	258.5	295.7
67.5°	170.5	168.4	170.1	170.8	173.2	176.7	182.3	189.2	201.1	221.6	251.5
70°	146.8	145.1	144.7	145.4	147.5	149.9	153.8	160.4	171.1	186.8	207.3
72.5°	122.4	121.4	121.4	123.1	123.8	125.2	127.7	133.6	141.6	152.4	171.1
75°	99.5	99.5	99.5	99.8	100.9	102.3	104.4	107.5	114.1	122.4	135.3
77.5°	78.6	79.0	78.3	77.9	79.7	80.4	80.7	84.2	88.0	94.3	104.4
80°	58.4	56.7	57.4	58.4	59.1	59.5	60.5	61.2	64.4	67.5	74.1
82.5°	39.7	38.3	38.3	40.0	40.0	40.4	41.4	42.4	43.1	45.9	48.7
85°	23.0	23.0	23.3	23.3	23.7	23.3	24.4	24.7	24.7	26.4	28.5
87.5°	10.4	9.7	10.1	10.4	10.1	10.4	10.8	11.1	11.5	11.8	12.2
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°	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0
2.5°	745.8	743.0	740.2	735.4	731.2	725.3	723.6	721.5	715.2	709.6	705.5
5°	785.5	777.1	764.9	753.8	744.8	732.6	725.6	718.3	707.9	698.5	690.9
7.5°	823.4	808.8	791.7	773.3	755.6	738.5	724.9	712.8	699.2	686.0	675.9
10°	870.3	846.7	820.3	791.7	767.4	743.7	723.9	706.5	687.7	671.4	657.8
12.5°	923.9	886.0	847.0	810.9	780.9	745.8	720.8	697.5	675.5	655.0	639.4
15°	963.9	919.4	876.3	828.6	784.8	743.7	715.2	687.4	662.7	642.5	623.0
17.5°	1003.6	954.9	899.9	842.5	791.0	743.7	704.8	674.9	644.6	620.2	601.5
20°	1036.3	978.9	914.5	854.3	795.9	741.6	697.8	660.2	626.8	600.8	578.8
22.5°	1064.5	994.9	927.7	862.3	795.6	736.1	684.9	646.0	609.1	583.7	560.1
25°	1082.2	1001.8	935.1	859.6	786.9	726.3	670.7	626.8	590.7	560.8	536.7
27.5°	1098.9	1000.8	925.3	843.9	776.4	716.2	656.4	609.5	571.5	539.2	514.5
30°	1115.6	1002.5	908.3	827.9	759.7	697.1	639.4	592.1	551.7	518.7	495.7
32.5°	1126.0	1001.5	892.6	805.6	733.3	679.7	620.9	571.5	529.8	497.4	475.5
35°	1128.8	995.6	874.2	773.3	704.4	650.5	601.5	550.7	507.2	476.9	451.9
37.5°	1122.9	984.8	854.0	744.1	669.6	616.1	573.3	529.8	488.0	454.3	432.4
40°	1103.8	974.4	829.6	712.8	633.5	582.3	547.2	504.7	463.7	432.0	411.9
42.5°	1067.2	953.1	802.9	678.0	595.9	544.8	513.1	479.4	441.1	411.9	391.7
45°	1003.2	920.4	776.1	643.2	559.0	506.1	477.6	451.9	416.7	387.9	370.5
47.5°	921.5	876.3	737.5	606.7	520.4	469.3	439.3	418.1	390.6	367.3	350.3
50°	835.6	819.2	698.2	569.1	481.8	432.0	403.5	384.7	366.3	343.0	327.7
52.5°	736.4	753.1	652.2	530.1	442.5	393.8	367.3	353.4	337.1	319.0	306.1
55°	644.6	681.1	598.0	485.6	403.5	356.9	331.5	318.3	308.6	294.3	282.8
57.5°	555.5	602.1	541.6	440.7	365.3	324.6	299.5	284.6	278.3	270.3	260.9
60°	478.0	523.9	480.4	395.5	326.6	288.4	266.8	254.6	248.4	243.2	235.5
62.5°	408.7	455.3	420.6	349.6	288.7	253.9	235.8	224.0	219.5	217.4	211.2
65°	346.5	386.5	362.1	301.6	252.9	221.6	204.5	196.2	191.7	190.6	186.5
67.5°	292.6	323.5	304.7	259.2	219.5	191.0	176.0	168.7	164.9	164.5	161.1
70°	239.7	268.2	254.6	214.3	181.2	160.0	147.5	141.2	139.1	138.8	137.1
72.5°	198.6	216.4	206.3	174.3	150.6	131.8	123.5	116.9	114.4	115.1	114.1
75°	153.1	168.0	161.8	138.4	117.9	105.4	97.7	93.6	91.5	92.5	91.1
77.5°	116.9	127.3	121.1	103.3	90.1	80.7	74.8	72.0	69.9	69.9	69.2
80°	83.1	88.7	85.6	75.8	65.4	57.7	53.2	51.5	50.4	50.1	49.7
82.5°	53.2	57.7	53.9	48.0	41.7	37.9	35.8	33.4	32.7	33.0	32.7
85°	29.9	31.7	30.3	26.1	23.3	21.2	19.8	18.8	18.1	18.4	17.7
87.5°	12.9	13.2	12.2	10.8	10.1	9.0	9.0	8.3	7.7	7.7	7.3
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°	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0
2.5°	703.0	700.6	697.1	691.9	687.7	681.1	681.1	682.2	682.2	681.8	681.1
5°	684.6	679.4	673.1	665.8	658.2	650.5	649.1	646.3	644.2	642.8	641.1
7.5°	665.8	657.1	648.4	638.3	629.6	622.3	617.1	612.6	609.8	606.7	604.2
10°	646.7	635.2	624.4	613.6	601.8	592.4	586.5	582.3	579.2	576.4	575.0
12.5°	624.1	610.5	598.3	588.2	575.0	565.3	559.7	558.3	554.5	547.9	544.4
15°	602.1	590.0	575.7	560.1	553.8	542.0	535.4	532.2	530.1	525.6	524.2
17.5°	584.1	567.7	551.4	539.9	528.4	519.0	515.2	511.0	508.2	504.1	503.0
20°	561.4	547.2	532.6	520.1	507.9	497.4	494.3	491.5	488.7	487.0	485.6
22.5°	538.5	524.2	512.7	501.3	488.0	482.1	478.7	475.5	473.8	472.7	471.4
25°	517.3	504.7	491.2	480.7	470.3	465.8	463.7	462.0	460.6	458.8	458.5
27.5°	498.5	484.6	473.1	463.0	455.3	451.5	449.1	448.0	448.0	448.7	449.1
30°	476.9	464.4	455.3	447.0	440.0	436.6	436.2	436.2	437.6	438.0	438.7
32.5°	457.1	447.3	438.3	430.3	425.4	423.3	425.1	425.1	426.1	427.2	428.6
35°	438.0	428.9	422.0	415.0	410.5	411.5	412.2	412.9	414.7	416.7	418.1
37.5°	419.9	411.5	404.2	398.6	395.9	398.0	399.7	401.1	403.2	404.9	406.3
40°	400.0	394.1	387.2	382.3	383.0	384.0	385.4	387.2	388.9	390.0	391.3
42.5°	381.6	375.3	370.5	366.6	367.7	369.1	369.8	370.5	372.6	374.6	375.3
45°	362.8	357.9	353.1	350.6	351.3	352.0	352.7	353.8	355.5	356.9	357.3
47.5°	341.6	338.1	335.0	332.2	333.6	333.3	334.3	336.4	337.1	337.8	339.9
50°	321.4	318.3	314.5	313.8	313.8	313.8	314.1	316.9	316.9	318.3	319.7
52.5°	299.2	297.4	295.3	293.9	293.2	293.2	295.0	296.0	296.7	298.8	300.2
55°	277.2	275.2	273.1	272.0	271.3	272.0	274.8	275.5	277.2	278.3	279.3
57.5°	254.3	252.9	251.2	250.5	250.5	250.8	252.9	254.6	255.0	258.5	259.9
60°	231.7	229.2	227.8	227.8	227.2	230.3	229.6	233.1	233.8	235.8	238.3
62.5°	208.4	204.9	204.5	204.5	205.9	206.3	207.7	208.7	210.8	213.6	215.3
65°	183.0	181.2	183.7	183.3	182.6	184.7	184.7	186.5	188.5	191.0	194.8
67.5°	159.3	157.9	158.6	158.3	159.3	160.7	161.8	163.1	165.6	168.4	170.8
70°	135.3	136.4	134.6	136.0	137.1	137.4	138.1	140.2	143.0	144.7	147.5
72.5°	112.0	111.7	112.4	112.7	113.8	114.4	115.1	117.6	120.7	122.1	124.2
75°	89.7	89.4	90.4	90.4	92.2	92.9	93.6	94.6	97.4	99.5	101.2
77.5°	69.6	69.9	69.6	71.0	70.3	70.6	72.7	73.7	74.1	78.6	79.3
80°	49.4	50.1	50.4	50.8	51.1	50.4	52.9	53.9	53.9	56.4	58.1
82.5°	32.0	32.4	33.4	33.7	33.7	34.8	34.4	35.1	36.2	36.9	39.3
85°	17.7	18.8	19.1	18.8	19.1	18.4	19.5	19.8	20.2	20.2	20.2
87.5°	7.0	7.3	7.0	7.3	7.0	7.3	7.3	6.6	6.6	7.7	6.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P273734

CATALOG NUMBER: 4RCG-4-56D-L830-A

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	718.0	718.0	718.0	718.0
2.5°	678.7	678.3	680.8	679.0
5°	639.0	640.1	636.6	636.6
7.5°	603.2	601.8	602.1	599.7
10°	570.8	568.8	568.1	568.4
12.5°	544.1	544.1	538.5	538.5
15°	524.2	517.6	516.9	519.0
17.5°	502.3	498.5	498.8	498.1
20°	485.6	483.5	483.2	480.7
22.5°	470.3	470.0	470.3	467.5
25°	458.1	459.9	458.5	458.5
27.5°	449.8	449.8	448.7	448.7
30°	440.0	439.7	440.4	440.4
32.5°	430.3	431.0	431.0	431.3
35°	420.2	420.6	421.6	420.9
37.5°	407.0	408.7	408.4	409.1
40°	391.7	392.7	392.4	392.4
42.5°	376.0	376.7	375.7	375.0
45°	358.6	357.9	359.0	357.6
47.5°	339.5	339.9	340.2	341.6
50°	320.4	322.5	322.5	322.1
52.5°	301.6	302.3	304.0	304.0
55°	282.1	282.8	283.5	283.9
57.5°	262.3	261.9	263.3	263.7
60°	241.1	241.1	243.9	244.9
62.5°	218.5	219.8	222.6	220.5
65°	196.5	199.3	199.0	200.4
67.5°	173.6	175.3	178.1	178.1
70°	150.3	152.0	153.4	154.5
72.5°	127.7	128.4	132.2	130.1
75°	103.7	106.1	108.2	107.1
77.5°	80.7	83.8	84.5	83.5
80°	60.5	60.2	62.3	61.9
82.5°	40.4	40.0	40.7	41.0
85°	21.6	22.6	21.2	20.9
87.5°	6.3	6.3	5.9	5.6
90°	0.0	0.0	0.0	0.0

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