

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: P273713

Luminaire Tested: **4RCG-4-34D-L830-A**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P273713  
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-4-34D-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**

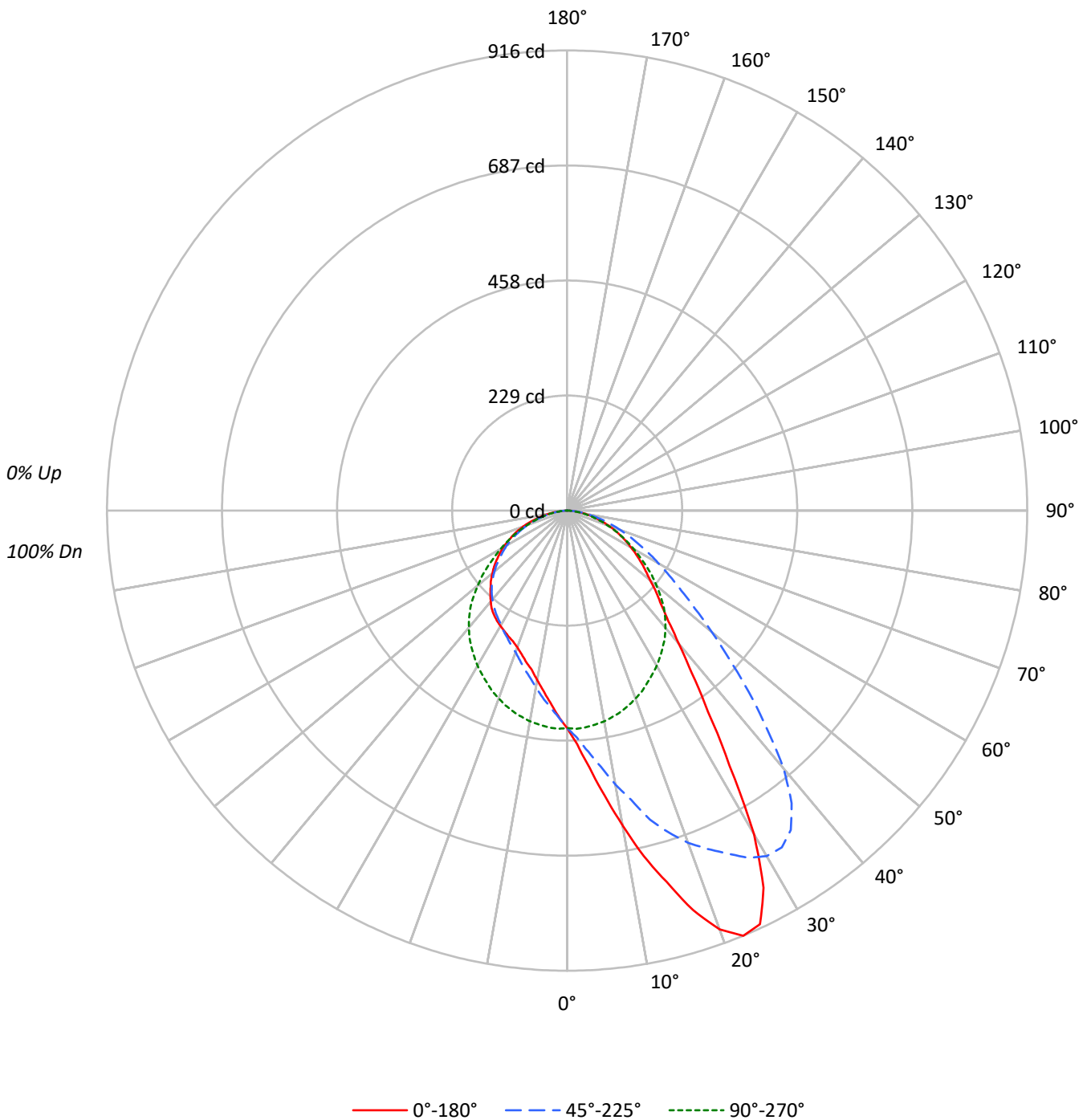
Lumens per Lamp: N/A  
Luminaire Lumens: 1306.2 lumens  
Efficiency: N/A  
Efficacy: 114.6 lumens/watt  
Spacing Criteria (0/90/45): 1.37 / 1.23 / 1.5  
Luminous Opening: Rectangular (W 3.88' x L: 0.23' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				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°	5246	5246	5246
5°	6255	5269	4669
10°	7829	5241	4217
15°	9604	5199	3925
20°	11440	5133	3738
25°	12148	5053	3695
30°	10412	4995	3715
35°	7242	4911	3754
40°	5454	4813	3742
45°	4529	4669	3694
50°	4056	4373	3662
55°	3793	4053	3616
60°	3559	3721	3578
65°	3344	3393	3465
70°	3136	3016	3299
75°	2810	2641	3025
80°	2457	2164	2604
85°	1919	1572	1752



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.6	3.3
10°-20°	136.7	10.5
20°-30°	230.0	17.6
30°-40°	260.0	19.9
40°-50°	232.8	17.8
50°-60°	187.9	14.4
60°-70°	131.0	10.0
70°-80°	68.7	5.3
80°-90°	16.5	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°	409.3	31.3
0°-40°	669.2	51.2
0°-60°	1090.0	83.5
0°-90°	1306.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1306.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	433	433	433	433	433	
5°	514	482	433	392	384	53
15°	765	637	414	327	313	221
25°	908	753	378	281	276	402
35°	489	776	332	248	254	316
45°	264	512	272	212	216	208
55°	180	278	192	164	171	161
65°	117	156	118	111	121	116
75°	60	74	56	56	65	64
85°	14	16	11	11	13	17
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°	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8
2.5°	465.9	465.5	464.4	465.2	463.6	461.3	461.1	459.0	452.9	452.5	450.8
5°	514.1	512.4	512.2	512.0	509.1	505.1	497.5	496.9	486.8	481.8	475.7
7.5°	572.4	571.8	570.1	568.2	558.3	553.5	546.4	537.2	525.4	514.1	507.0
10°	636.1	643.0	634.4	628.6	623.1	612.9	600.9	586.0	571.1	553.7	540.5
12.5°	704.5	707.0	707.0	701.5	692.3	675.3	651.9	635.1	621.7	589.8	578.5
15°	765.3	778.1	769.9	751.0	751.4	736.6	708.9	678.5	662.3	637.0	602.4
17.5°	834.1	836.4	833.8	816.2	807.6	786.0	761.1	732.8	702.4	671.6	635.7
20°	886.9	885.6	878.3	870.1	852.1	836.1	808.3	775.8	733.8	703.6	663.6
22.5°	916.2	913.9	911.4	904.9	890.7	873.3	848.9	812.7	773.2	728.8	681.0
25°	908.3	911.0	911.4	909.5	904.3	894.0	874.3	846.0	806.2	752.7	704.5
27.5°	846.6	853.5	862.4	868.2	877.7	884.0	877.7	859.8	827.1	779.3	720.0
30°	743.9	735.5	756.3	782.5	800.3	831.7	849.4	850.4	833.8	794.2	736.8
32.5°	601.3	615.0	621.2	655.0	699.2	735.5	774.9	809.9	818.1	795.1	746.6
35°	489.4	500.9	517.7	534.4	576.4	612.4	674.1	727.8	770.5	776.2	745.4
37.5°	406.8	413.5	423.7	441.6	470.3	514.9	563.8	633.6	692.5	734.0	729.8
40°	344.7	346.4	358.3	371.1	393.3	428.6	471.5	531.5	605.7	670.1	696.9
42.5°	298.1	302.3	305.7	317.9	334.4	358.7	397.9	444.9	511.4	587.9	646.8
45°	264.2	268.4	271.5	279.7	292.3	310.1	338.0	383.3	435.1	511.6	582.2
47.5°	240.7	240.3	243.0	249.5	258.5	272.8	293.3	323.5	373.2	437.2	511.2
50°	215.1	218.5	219.3	224.1	230.8	240.7	257.1	281.8	320.8	375.3	442.0
52.5°	197.1	197.5	200.2	203.4	209.0	216.2	229.8	247.8	276.3	320.8	380.8
55°	179.5	179.5	181.8	184.5	187.9	194.8	204.2	218.5	241.7	277.8	328.5
57.5°	163.1	164.0	166.1	166.7	169.6	174.4	182.6	193.9	211.8	240.9	282.8
60°	146.8	148.7	148.4	150.1	152.6	156.2	162.9	171.7	187.2	209.5	243.4
62.5°	132.5	131.9	131.9	134.0	136.5	139.8	143.6	151.0	163.5	182.6	210.3
65°	116.6	116.2	117.6	118.9	119.7	122.2	125.6	132.3	141.1	155.8	178.2
67.5°	102.7	101.5	102.5	102.9	104.4	106.5	109.9	114.1	121.2	133.6	151.6
70°	88.5	87.4	87.2	87.6	88.9	90.4	92.7	96.7	103.2	112.6	125.0
72.5°	73.8	73.2	73.2	74.2	74.6	75.5	76.9	80.5	85.3	91.8	103.2
75°	60.0	60.0	60.0	60.2	60.8	61.6	62.9	64.8	68.8	73.8	81.6
77.5°	47.4	47.6	47.2	47.0	48.0	48.4	48.6	50.7	53.0	56.8	62.9
80°	35.2	34.2	34.6	35.2	35.6	35.9	36.5	36.9	38.8	40.7	44.7
82.5°	23.9	23.1	23.1	24.1	24.1	24.3	25.0	25.6	26.0	27.7	29.4
85°	13.8	13.8	14.0	14.0	14.3	14.0	14.7	14.9	14.9	15.9	17.2
87.5°	6.3	5.9	6.1	6.3	6.1	6.3	6.5	6.7	6.9	7.1	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):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8
2.5°	449.5	447.8	446.2	443.2	440.7	437.2	436.1	434.8	431.1	427.7	425.2
5°	473.4	468.4	461.1	454.3	448.9	441.6	437.4	433.0	426.7	421.0	416.4
7.5°	496.3	487.5	477.2	466.1	455.4	445.1	436.9	429.6	421.4	413.5	407.4
10°	524.6	510.3	494.4	477.2	462.5	448.3	436.3	425.8	414.5	404.7	396.5
12.5°	556.9	534.0	510.5	488.7	470.7	449.5	434.4	420.4	407.2	394.8	385.4
15°	581.0	554.1	528.1	499.4	473.0	448.3	431.1	414.3	399.4	387.3	375.5
17.5°	604.9	575.5	542.4	507.8	476.8	448.3	424.8	406.8	388.5	373.8	362.5
20°	624.6	590.0	551.2	514.9	479.7	447.0	420.6	397.9	377.8	362.1	348.9
22.5°	641.6	599.6	559.2	519.8	479.5	443.7	412.8	389.3	367.1	351.8	337.6
25°	652.3	603.8	563.6	518.1	474.3	437.8	404.2	377.8	356.0	338.0	323.5
27.5°	662.3	603.2	557.7	508.6	468.0	431.7	395.6	367.3	344.5	325.0	310.1
30°	672.4	604.3	547.4	499.0	457.9	420.2	385.4	356.9	332.5	312.6	298.8
32.5°	678.7	603.6	538.0	485.6	442.0	409.7	374.3	344.5	319.3	299.8	286.6
35°	680.4	600.1	526.9	466.1	424.6	392.1	362.5	331.9	305.7	287.5	272.4
37.5°	676.8	593.6	514.7	448.5	403.6	371.3	345.5	319.3	294.2	273.8	260.6
40°	665.3	587.3	500.1	429.6	381.8	351.0	329.8	304.2	279.5	260.4	248.2
42.5°	643.3	574.5	483.9	408.6	359.2	328.3	309.3	288.9	265.9	248.2	236.1
45°	604.7	554.8	467.8	387.7	336.9	305.1	287.9	272.4	251.2	233.8	223.3
47.5°	555.4	528.1	444.5	365.7	313.7	282.8	264.8	252.0	235.5	221.4	211.1
50°	503.6	493.8	420.8	343.0	290.4	260.4	243.2	231.9	220.8	206.7	197.5
52.5°	443.9	453.9	393.1	319.5	266.7	237.3	221.4	213.0	203.2	192.3	184.5
55°	388.5	410.5	360.4	292.7	243.2	215.1	199.8	191.8	186.0	177.4	170.5
57.5°	334.8	362.9	326.4	265.6	220.1	195.6	180.5	171.5	167.7	162.9	157.2
60°	288.1	315.8	289.5	238.4	196.9	173.8	160.8	153.5	149.7	146.6	141.9
62.5°	246.4	274.5	253.5	210.7	174.0	153.1	142.2	135.0	132.3	131.0	127.3
65°	208.8	232.9	218.3	181.8	152.4	133.6	123.3	118.3	115.5	114.9	112.4
67.5°	176.3	195.0	183.7	156.2	132.3	115.1	106.1	101.7	99.4	99.2	97.1
70°	144.5	161.7	153.5	129.2	109.2	96.4	88.9	85.1	83.9	83.7	82.6
72.5°	119.7	130.4	124.3	105.0	90.8	79.5	74.4	70.4	69.0	69.4	68.8
75°	92.3	101.3	97.5	83.4	71.1	63.5	58.9	56.4	55.1	55.8	54.9
77.5°	70.4	76.7	73.0	62.3	54.3	48.6	45.1	43.4	42.1	42.1	41.7
80°	50.1	53.5	51.6	45.7	39.4	34.8	32.1	31.0	30.4	30.2	30.0
82.5°	32.1	34.8	32.5	28.9	25.2	22.9	21.6	20.1	19.7	19.9	19.7
85°	18.0	19.1	18.2	15.7	14.0	12.8	12.0	11.3	10.9	11.1	10.7
87.5°	7.8	8.0	7.3	6.5	6.1	5.5	5.5	5.0	4.6	4.6	4.4
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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8	432.8
2.5°	423.7	422.3	420.2	417.0	414.5	410.5	410.5	411.2	411.2	410.9	410.5
5°	412.6	409.5	405.7	401.3	396.7	392.1	391.2	389.6	388.3	387.5	386.4
7.5°	401.3	396.1	390.8	384.7	379.5	375.1	371.9	369.2	367.5	365.7	364.2
10°	389.8	382.8	376.4	369.9	362.7	357.1	353.5	351.0	349.1	347.4	346.6
12.5°	376.1	368.0	360.6	354.5	346.6	340.7	337.4	336.5	334.2	330.2	328.1
15°	362.9	355.6	347.0	337.6	333.8	326.7	322.7	320.8	319.5	316.8	316.0
17.5°	352.0	342.2	332.3	325.4	318.5	312.8	310.5	308.0	306.3	303.8	303.2
20°	338.4	329.8	321.0	313.5	306.1	299.8	297.9	296.3	294.6	293.5	292.7
22.5°	324.6	316.0	309.0	302.1	294.2	290.6	288.5	286.6	285.6	284.9	284.1
25°	311.8	304.2	296.0	289.8	283.5	280.7	279.5	278.4	277.6	276.5	276.3
27.5°	300.5	292.1	285.1	279.1	274.5	272.1	270.7	270.0	270.0	270.5	270.7
30°	287.5	279.9	274.5	269.4	265.2	263.1	262.9	262.9	263.8	264.0	264.4
32.5°	275.5	269.6	264.2	259.4	256.4	255.2	256.2	256.2	256.8	257.5	258.3
35°	264.0	258.5	254.3	250.1	247.4	248.0	248.5	248.9	249.9	251.2	252.0
37.5°	253.1	248.0	243.6	240.3	238.6	239.9	240.9	241.7	243.0	244.1	244.9
40°	241.1	237.6	233.4	230.4	230.8	231.5	232.3	233.4	234.4	235.0	235.9
42.5°	230.0	226.2	223.3	221.0	221.6	222.5	222.9	223.3	224.6	225.8	226.2
45°	218.7	215.7	212.8	211.3	211.8	212.2	212.6	213.2	214.3	215.1	215.3
47.5°	205.9	203.8	201.9	200.2	201.1	200.9	201.5	202.7	203.2	203.6	204.8
50°	193.7	191.8	189.5	189.1	189.1	189.1	189.3	191.0	191.0	191.8	192.7
52.5°	180.3	179.3	178.0	177.2	176.7	176.7	177.8	178.4	178.8	180.1	180.9
55°	167.1	165.8	164.6	164.0	163.5	164.0	165.6	166.1	167.1	167.7	168.4
57.5°	153.3	152.4	151.4	151.0	151.0	151.2	152.4	153.5	153.7	155.8	156.6
60°	139.6	138.2	137.3	137.3	136.9	138.8	138.4	140.5	140.9	142.2	143.6
62.5°	125.6	123.5	123.3	123.3	124.1	124.3	125.2	125.8	127.1	128.7	129.8
65°	110.3	109.2	110.7	110.5	110.1	111.3	111.3	112.4	113.6	115.1	117.4
67.5°	96.0	95.2	95.6	95.4	96.0	96.9	97.5	98.3	99.8	101.5	102.9
70°	81.6	82.2	81.1	82.0	82.6	82.8	83.2	84.5	86.2	87.2	88.9
72.5°	67.5	67.3	67.7	67.9	68.6	69.0	69.4	70.9	72.8	73.6	74.9
75°	54.1	53.9	54.5	54.5	55.6	56.0	56.4	57.0	58.7	60.0	61.0
77.5°	41.9	42.1	41.9	42.8	42.4	42.6	43.8	44.4	44.7	47.4	47.8
80°	29.8	30.2	30.4	30.6	30.8	30.4	31.9	32.5	32.5	34.0	35.0
82.5°	19.3	19.5	20.1	20.3	20.3	21.0	20.8	21.2	21.8	22.2	23.7
85°	10.7	11.3	11.5	11.3	11.5	11.1	11.7	12.0	12.2	12.2	12.2
87.5°	4.2	4.4	4.2	4.4	4.2	4.4	4.4	4.0	4.0	4.6	3.8
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: P273713

CATALOG NUMBER: 4RCG-4-34D-L830-A

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	432.8	432.8	432.8	432.8
2.5°	409.1	408.8	410.3	409.3
5°	385.2	385.8	383.7	383.7
7.5°	363.6	362.7	362.9	361.5
10°	344.1	342.8	342.4	342.6
12.5°	327.9	327.9	324.6	324.6
15°	316.0	312.0	311.6	312.8
17.5°	302.8	300.5	300.7	300.2
20°	292.7	291.4	291.2	289.8
22.5°	283.5	283.3	283.5	281.8
25°	276.1	277.2	276.3	276.3
27.5°	271.1	271.1	270.5	270.5
30°	265.2	265.0	265.4	265.4
32.5°	259.4	259.8	259.8	260.0
35°	253.3	253.5	254.1	253.7
37.5°	245.3	246.4	246.1	246.6
40°	236.1	236.7	236.5	236.5
42.5°	226.6	227.1	226.4	226.0
45°	216.2	215.7	216.4	215.5
47.5°	204.6	204.8	205.1	205.9
50°	193.1	194.4	194.4	194.2
52.5°	181.8	182.2	183.2	183.2
55°	170.0	170.5	170.9	171.1
57.5°	158.1	157.9	158.7	158.9
60°	145.3	145.3	147.0	147.6
62.5°	131.7	132.5	134.2	132.9
65°	118.5	120.1	119.9	120.8
67.5°	104.6	105.7	107.3	107.3
70°	90.6	91.6	92.5	93.1
72.5°	76.9	77.4	79.7	78.4
75°	62.5	63.9	65.2	64.6
77.5°	48.6	50.5	50.9	50.3
80°	36.5	36.3	37.5	37.3
82.5°	24.3	24.1	24.5	24.7
85°	13.0	13.6	12.8	12.6
87.5°	3.8	3.8	3.6	3.4
90°	0.0	0.0	0.0	0.0

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