

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: P273740

Luminaire Tested: **4RCG-4-56D-L840-A**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P273740  
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-L840-A  
Description: RCG SERIES DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC FLUSH LENS  
Light Source: (168) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

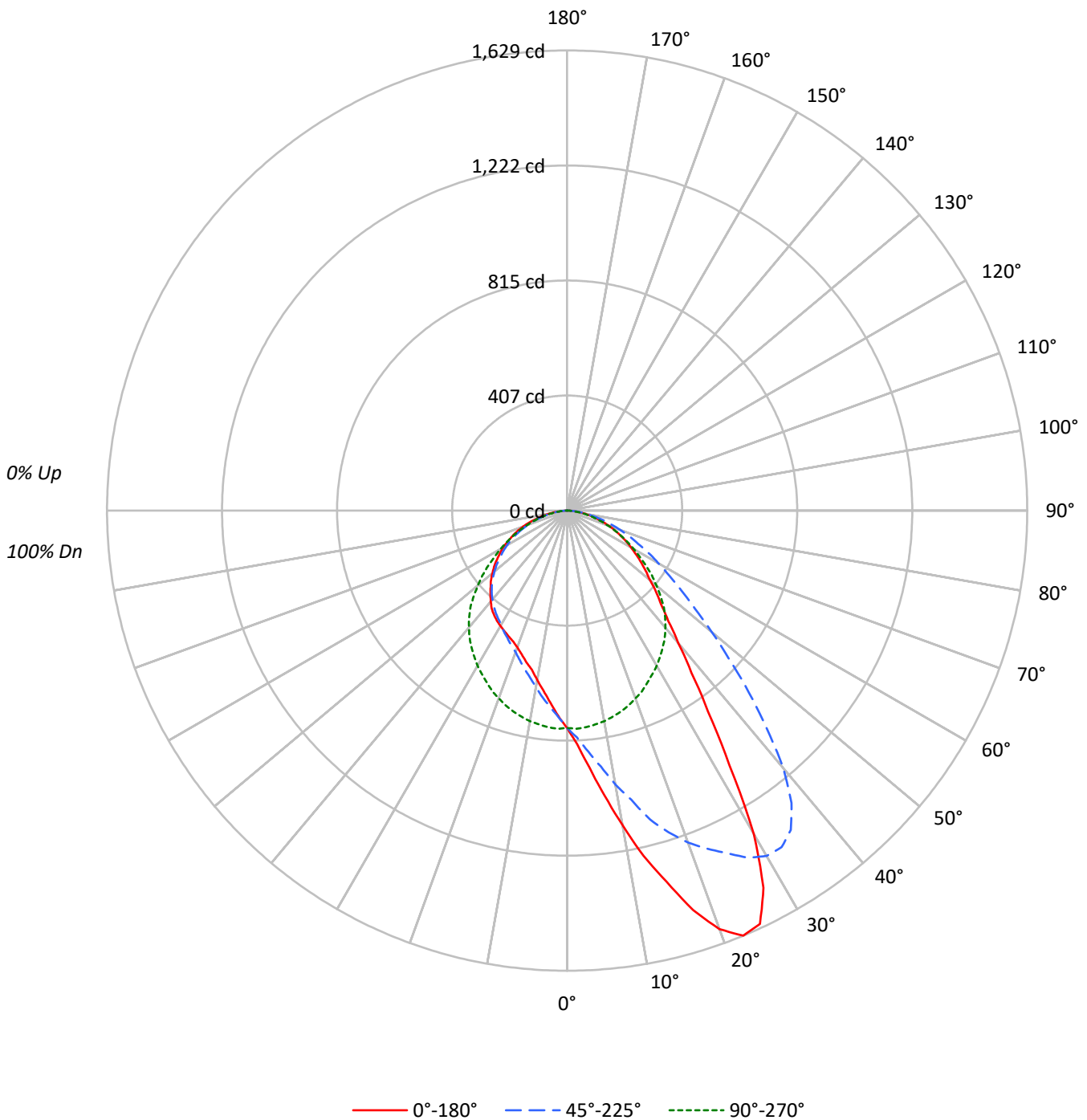
Lumens per Lamp: N/A  
Luminaire Lumens: 2321.9 lumens  
Efficiency: N/A  
Efficacy: 124.8 lumens/watt  
Spacing Criteria (0/90/45): 1.37 / 1.23 / 1.5  
Luminous Opening: Rectangular (W 3.88' x L: 0.23' x H: 0')  
CIE Type: Direct

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



TEST NUMBER: P273740  
CATALOG NUMBER: 4RCG-4-56D-L840-A

### Luminous Intensity Polar Plot





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CATALOG NUMBER: 4RCG-4-56D-L840-A

**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°	9325	9325	9325
5°	11120	9364	8299
10°	13918	9317	7496
15°	17071	9242	6978
20°	20337	9125	6644
25°	21594	8982	6569
30°	18509	8878	6603
35°	12872	8730	6674
40°	9695	8557	6652
45°	8050	8298	6567
50°	7211	7773	6508
55°	6741	7206	6426
60°	6325	6613	6361
65°	5943	6029	6158
70°	5575	5362	5865
75°	4992	4697	5376
80°	4370	3853	4628
85°	3421	2795	3115



TEST NUMBER: P273740

CATALOG NUMBER: 4RCG-4-56D-L840-A

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.7	3.3
10°-20°	243.0	10.5
20°-30°	408.9	17.6
30°-40°	462.1	19.9
40°-50°	413.9	17.8
50°-60°	334.1	14.4
60°-70°	232.8	10.0
70°-80°	122.2	5.3
80°-90°	29.3	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°	727.5	31.3
0°-40°	1189.6	51.2
0°-60°	1937.6	83.5
0°-90°	2321.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2321.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	769	769	769	769	769	
5°	914	856	770	697	682	94
15°	1360	1132	736	581	556	393
25°	1615	1338	672	499	491	714
35°	870	1380	590	441	451	561
45°	470	909	484	377	383	370
55°	319	494	341	292	304	286
65°	207	277	210	198	215	206
75°	107	131	100	100	115	114
85°	25	28	20	20	22	30
90°	0	0	0	0	0	



TEST NUMBER: P273740

CATALOG NUMBER: 4RCG-4-56D-L840-A

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	828.2	827.4	825.5	827.0	824.1	820.0	819.6	815.9	805.0	804.3	801.3
5°	913.9	910.9	910.5	910.2	904.9	897.9	884.4	883.3	865.4	856.5	845.7
7.5°	1017.5	1016.4	1013.4	1010.0	992.5	983.9	971.3	954.9	934.0	913.9	901.2
10°	1130.8	1143.1	1127.8	1117.4	1107.7	1089.4	1068.2	1041.7	1015.3	984.3	960.8
12.5°	1252.3	1256.8	1256.8	1247.1	1230.7	1200.5	1158.7	1128.9	1105.1	1048.4	1028.3
15°	1360.4	1383.1	1368.6	1335.0	1335.8	1309.3	1260.1	1206.1	1177.4	1132.3	1070.8
17.5°	1482.6	1486.7	1482.3	1450.9	1435.7	1397.3	1352.9	1302.6	1248.6	1193.8	1130.0
20°	1576.6	1574.3	1561.3	1546.7	1514.7	1486.4	1436.8	1379.0	1304.5	1250.8	1179.6
22.5°	1628.7	1624.6	1620.2	1608.6	1583.3	1552.3	1509.1	1444.6	1374.5	1295.5	1210.6
25°	1614.6	1619.4	1620.2	1616.8	1607.5	1589.2	1554.2	1503.9	1433.1	1338.0	1252.3
27.5°	1505.0	1517.3	1532.9	1543.4	1560.2	1571.3	1560.2	1528.5	1470.3	1385.4	1279.9
30°	1322.4	1307.5	1344.4	1390.9	1422.6	1478.5	1509.8	1511.7	1482.3	1411.8	1309.7
32.5°	1068.9	1093.2	1104.3	1164.3	1243.0	1307.5	1377.5	1439.8	1454.3	1413.3	1327.2
35°	869.9	890.4	920.2	950.0	1024.6	1088.7	1198.3	1293.7	1369.7	1379.8	1325.0
37.5°	723.1	735.0	753.2	784.9	836.0	915.4	1002.2	1126.3	1231.1	1304.8	1297.4
40°	612.7	615.7	637.0	659.7	699.2	761.8	838.2	944.8	1076.8	1191.2	1238.9
42.5°	530.0	537.4	543.4	565.0	594.5	637.7	707.4	790.9	909.0	1045.1	1149.8
45°	469.6	477.1	482.7	497.2	519.6	551.2	600.8	681.3	773.4	909.4	1035.0
47.5°	427.9	427.1	432.0	443.5	459.5	484.9	521.4	575.1	663.4	777.1	908.7
50°	382.4	388.4	389.9	398.4	410.4	427.9	456.9	500.9	570.2	667.1	785.7
52.5°	350.3	351.1	355.9	361.5	371.6	384.3	408.5	440.5	491.2	570.2	676.8
55°	319.0	319.0	323.1	328.0	333.9	346.2	363.0	388.4	429.7	493.8	584.0
57.5°	290.0	291.5	295.2	296.3	301.5	310.1	324.6	344.8	376.4	428.2	502.8
60°	260.9	264.2	263.9	266.9	271.3	277.7	289.6	305.2	332.8	372.3	432.7
62.5°	235.6	234.4	234.4	238.2	242.6	248.6	255.3	268.3	290.7	324.6	373.8
65°	207.2	206.5	209.1	211.3	212.8	217.3	223.3	235.2	250.8	276.9	316.8
67.5°	182.6	180.4	182.3	183.0	185.6	189.3	195.3	202.8	215.4	237.4	269.5
70°	157.3	155.4	155.0	155.8	158.0	160.6	164.7	171.8	183.4	200.1	222.1
72.5°	131.2	130.1	130.1	131.9	132.7	134.2	136.8	143.1	151.7	163.2	183.4
75°	106.6	106.6	106.6	107.0	108.1	109.6	111.8	115.2	122.2	131.2	145.0
77.5°	84.2	84.6	83.9	83.5	85.3	86.1	86.5	90.2	94.3	101.0	111.8
80°	62.6	60.8	61.5	62.6	63.4	63.7	64.9	65.6	69.0	72.3	79.4
82.5°	42.5	41.0	41.0	42.9	42.9	43.2	44.4	45.5	46.2	49.2	52.2
85°	24.6	24.6	25.0	25.0	25.3	25.0	26.1	26.5	26.5	28.3	30.6
87.5°	11.2	10.4	10.8	11.2	10.8	11.2	11.6	11.9	12.3	12.7	13.0
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: P273740

CATALOG NUMBER: 4RCG-4-56D-L840-A

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	799.1	796.1	793.1	787.9	783.4	777.1	775.2	773.0	766.3	760.3	755.9
5°	841.6	832.6	819.6	807.7	798.0	784.9	777.5	769.6	758.5	748.4	740.2
7.5°	882.2	866.5	848.3	828.5	809.5	791.3	776.7	763.7	749.1	735.0	724.2
10°	932.5	907.2	878.8	848.3	822.2	796.8	775.6	757.0	736.8	719.3	704.8
12.5°	989.9	949.3	907.5	868.8	836.7	799.1	772.2	747.3	723.8	701.8	685.0
15°	1032.8	985.1	938.8	887.8	840.8	796.8	766.3	736.5	710.0	688.4	667.5
17.5°	1075.3	1023.1	964.2	902.7	847.5	796.8	755.1	723.1	690.6	664.5	644.4
20°	1110.3	1048.8	979.8	915.4	852.8	794.6	747.7	707.4	671.6	643.7	620.2
22.5°	1140.5	1065.9	994.0	923.9	852.4	788.6	733.9	692.1	652.6	625.4	600.1
25°	1159.5	1073.4	1001.8	921.0	843.1	778.2	718.6	671.6	632.9	600.8	575.1
27.5°	1177.4	1072.3	991.4	904.2	831.9	767.4	703.3	653.0	612.4	577.7	551.2
30°	1195.3	1074.1	973.1	887.0	814.0	746.9	685.0	634.3	591.1	555.7	531.1
32.5°	1206.5	1073.0	956.4	863.2	785.7	728.3	665.3	612.4	567.6	533.0	509.5
35°	1209.4	1066.7	936.6	828.5	754.7	697.0	644.4	590.0	543.4	511.0	484.1
37.5°	1203.1	1055.1	915.0	797.2	717.5	660.1	614.2	567.6	522.9	486.8	463.3
40°	1182.6	1044.0	888.9	763.7	678.7	623.9	586.3	540.8	496.8	462.9	441.3
42.5°	1143.5	1021.2	860.2	726.4	638.4	583.7	549.7	513.6	472.6	441.3	419.7
45°	1074.9	986.2	831.5	689.1	598.9	542.3	511.7	484.1	446.5	415.6	396.9
47.5°	987.3	938.8	790.1	650.0	557.6	502.8	470.7	448.0	418.6	393.6	375.3
50°	895.2	877.7	748.0	609.7	516.2	462.9	432.3	412.2	392.5	367.5	351.1
52.5°	789.0	806.9	698.8	568.0	474.1	421.9	393.6	378.7	361.2	341.8	328.0
55°	690.6	729.8	640.7	520.3	432.3	382.4	355.2	341.0	330.6	315.3	303.0
57.5°	595.2	645.2	580.3	472.2	391.3	347.7	320.9	304.9	298.2	289.6	279.5
60°	512.1	561.3	514.7	423.8	350.0	309.0	285.9	272.8	266.1	260.5	252.3
62.5°	437.9	487.9	450.6	374.6	309.3	272.1	252.7	240.0	235.2	232.9	226.2
65°	371.2	414.1	388.0	323.1	271.0	237.4	219.2	210.2	205.4	204.2	199.8
67.5°	313.4	346.6	326.5	277.7	235.2	204.6	188.6	180.8	176.7	176.3	172.6
70°	256.8	287.4	272.8	229.6	194.2	171.4	158.0	151.3	149.1	148.7	146.8
72.5°	212.8	231.8	221.0	186.7	161.4	141.3	132.3	125.2	122.6	123.4	122.2
75°	164.0	180.0	173.3	148.3	126.3	112.9	104.7	100.3	98.0	99.1	97.6
77.5°	125.2	136.4	129.7	110.7	96.5	86.5	80.1	77.2	74.9	74.9	74.2
80°	89.1	95.0	91.7	81.3	70.1	61.9	57.0	55.2	54.0	53.7	53.3
82.5°	57.0	61.9	57.8	51.4	44.7	40.6	38.4	35.8	35.0	35.4	35.0
85°	32.1	33.9	32.4	28.0	25.0	22.7	21.2	20.1	19.4	19.8	19.0
87.5°	13.8	14.2	13.0	11.6	10.8	9.7	9.7	8.9	8.2	8.2	7.8
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: P273740

CATALOG NUMBER: 4RCG-4-56D-L840-A

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	753.2	750.6	746.9	741.3	736.8	729.8	729.8	730.9	730.9	730.5	729.8
5°	733.5	727.9	721.2	713.4	705.2	697.0	695.5	692.5	690.3	688.8	686.9
7.5°	713.4	704.0	694.7	683.9	674.6	666.8	661.2	656.3	653.4	650.0	647.4
10°	692.9	680.6	669.0	657.5	644.8	634.7	628.4	623.9	620.6	617.6	616.1
12.5°	668.6	654.1	641.1	630.2	616.1	605.6	599.7	598.2	594.1	587.0	583.3
15°	645.2	632.1	616.8	600.1	593.4	580.7	573.6	570.2	568.0	563.2	561.7
17.5°	625.8	608.3	590.7	578.4	566.1	556.1	552.0	547.5	544.5	540.1	538.9
20°	601.5	586.3	570.6	557.2	544.2	533.0	529.6	526.6	523.7	521.8	520.3
22.5°	577.0	561.7	549.4	537.1	522.9	516.6	512.8	509.5	507.6	506.5	505.0
25°	554.2	540.8	526.3	515.1	503.9	499.1	496.8	495.0	493.5	491.6	491.2
27.5°	534.1	519.2	506.9	496.1	487.9	483.8	481.2	480.0	480.0	480.8	481.2
30°	511.0	497.6	487.9	478.9	471.5	467.7	467.4	467.4	468.9	469.2	470.0
32.5°	489.7	479.3	469.6	461.0	455.8	453.6	455.4	455.4	456.6	457.7	459.2
35°	469.2	459.5	452.1	444.6	439.8	440.9	441.7	442.4	444.3	446.5	448.0
37.5°	449.9	440.9	433.1	427.1	424.1	426.4	428.2	429.7	432.0	433.8	435.3
40°	428.6	422.3	414.8	409.6	410.4	411.5	413.0	414.8	416.7	417.8	419.3
42.5°	408.9	402.2	396.9	392.8	394.0	395.4	396.2	396.9	399.2	401.4	402.2
45°	388.7	383.5	378.3	375.7	376.4	377.2	377.9	379.0	380.9	382.4	382.8
47.5°	366.0	362.3	358.9	355.9	357.4	357.1	358.2	360.4	361.2	361.9	364.1
50°	344.4	341.0	336.9	336.2	336.2	336.2	336.6	339.5	339.5	341.0	342.5
52.5°	320.5	318.7	316.4	314.9	314.2	314.2	316.1	317.2	317.9	320.2	321.6
55°	297.0	294.8	292.6	291.5	290.7	291.5	294.4	295.2	297.0	298.2	299.3
57.5°	272.4	271.0	269.1	268.3	268.3	268.7	271.0	272.8	273.2	276.9	278.4
60°	248.2	245.6	244.1	244.1	243.4	246.7	246.0	249.7	250.5	252.7	255.3
62.5°	223.3	219.5	219.2	219.2	220.6	221.0	222.5	223.6	225.9	228.8	230.7
65°	196.0	194.2	196.8	196.4	195.7	197.9	197.9	199.8	202.0	204.6	208.7
67.5°	170.7	169.2	170.0	169.6	170.7	172.2	173.3	174.8	177.4	180.4	183.0
70°	145.0	146.1	144.2	145.7	146.8	147.2	148.0	150.2	153.2	155.0	158.0
72.5°	120.0	119.6	120.4	120.8	121.9	122.6	123.4	126.0	129.3	130.8	133.1
75°	96.2	95.8	96.9	96.9	98.8	99.5	100.3	101.4	104.4	106.6	108.5
77.5°	74.5	74.9	74.5	76.0	75.3	75.7	77.9	79.0	79.4	84.2	85.0
80°	52.9	53.7	54.0	54.4	54.8	54.0	56.7	57.8	57.8	60.4	62.2
82.5°	34.3	34.7	35.8	36.2	36.2	37.3	36.9	37.6	38.8	39.5	42.1
85°	19.0	20.1	20.5	20.1	20.5	19.8	20.9	21.2	21.6	21.6	21.6
87.5°	7.5	7.8	7.5	7.8	7.5	7.8	7.8	7.1	7.1	8.2	6.7
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: P273740

CATALOG NUMBER: 4RCG-4-56D-L840-A

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	769.3	769.3	769.3	769.3
2.5°	727.2	726.8	729.4	727.5
5°	684.7	685.8	682.1	682.1
7.5°	646.3	644.8	645.2	642.5
10°	611.6	609.4	608.6	609.0
12.5°	582.9	582.9	577.0	577.0
15°	561.7	554.6	553.8	556.1
17.5°	538.2	534.1	534.5	533.7
20°	520.3	518.1	517.7	515.1
22.5°	503.9	503.5	503.9	500.9
25°	490.9	492.7	491.2	491.2
27.5°	481.9	481.9	480.8	480.8
30°	471.5	471.1	471.8	471.8
32.5°	461.0	461.8	461.8	462.2
35°	450.2	450.6	451.7	451.0
37.5°	436.1	437.9	437.6	438.3
40°	419.7	420.8	420.4	420.4
42.5°	402.9	403.6	402.5	401.8
45°	384.3	383.5	384.6	383.1
47.5°	363.8	364.1	364.5	366.0
50°	343.3	345.5	345.5	345.1
52.5°	323.1	323.9	325.7	325.7
55°	302.3	303.0	303.8	304.1
57.5°	281.0	280.6	282.1	282.5
60°	258.3	258.3	261.3	262.4
62.5°	234.1	235.6	238.5	236.3
65°	210.6	213.6	213.2	214.7
67.5°	186.0	187.8	190.8	190.8
70°	161.0	162.9	164.4	165.5
72.5°	136.8	137.5	141.6	139.4
75°	111.1	113.7	115.9	114.8
77.5°	86.5	89.8	90.6	89.4
80°	64.9	64.5	66.7	66.3
82.5°	43.2	42.9	43.6	44.0
85°	23.1	24.2	22.7	22.4
87.5°	6.7	6.7	6.3	6.0
90°	0.0	0.0	0.0	0.0

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