

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: PORTFOLIO

Report Number: P249535

Luminaire Tested: **LSR8B90D010 EC8B90835 8LBDW0MW**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P249535  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P13957)  
Test Lab: INNOVATION CENTER-P1  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LSR8B90D010 EC8B90835 8LBDW0MW  
Description: PORTFOLIO 8 INCH DOUBLE WALL WASH DISTRIBUTION 60 DEGREE CUTOFF  
RECESSED DOWNLIGHT- CYLINDEC  
80 CRI 3500 CCT WITH MATTE WHITE TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9452.0 lumens  
Efficiency: N/A  
Efficacy: 109.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.26 / 1.18  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

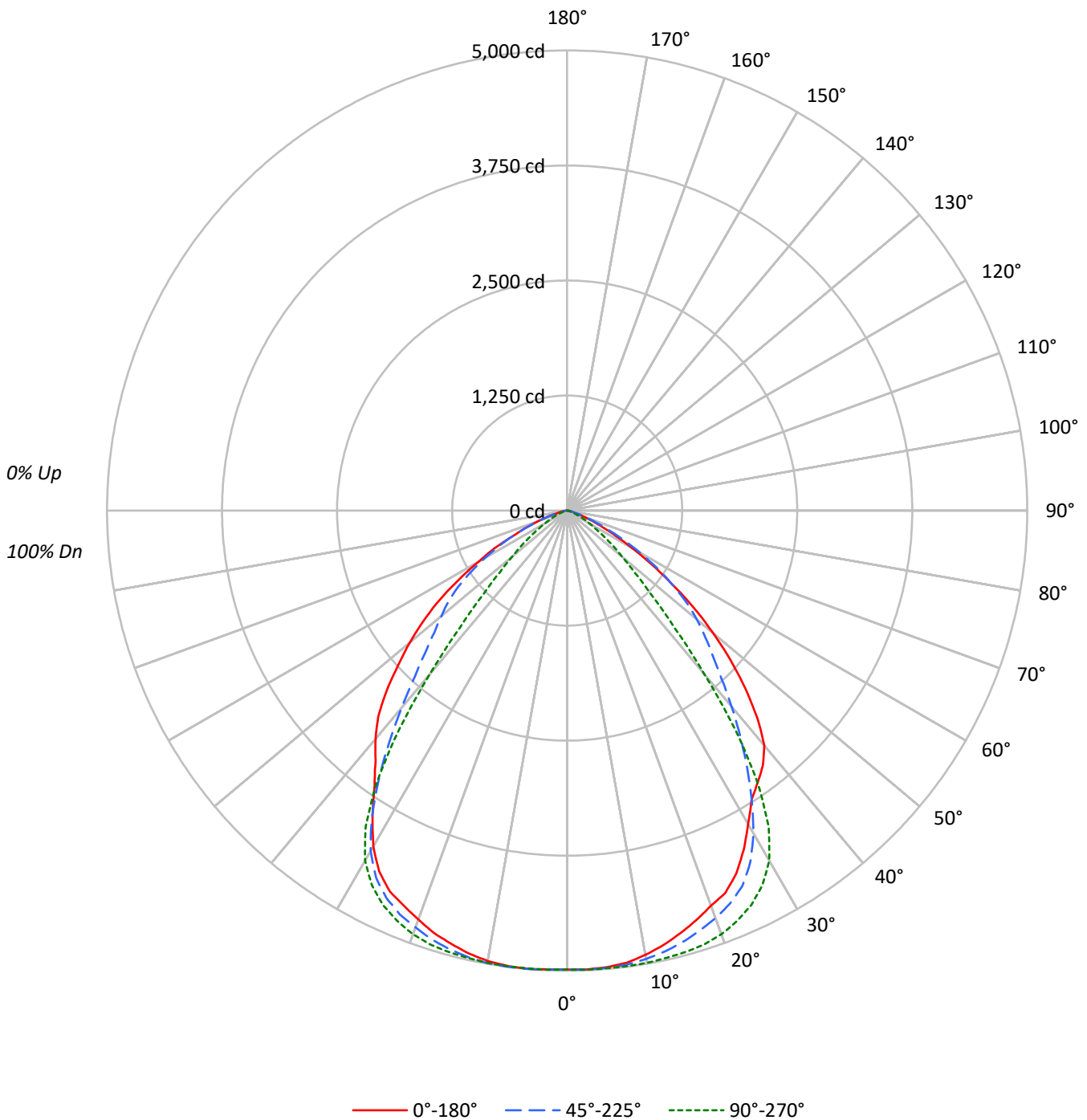
Input Watts (W): 86.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	90					90			
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79					79			
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70					70			
4	89	80	72	67	87	78	72	66	76	70	66	74	69	65	72	67	64	62					62			
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55					55			
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	51	50					50			
7	72	61	53	48	71	60	53	48	59	52	47	57	51	47	56	51	47	45					45			
8	68	56	48	43	66	55	48	43	54	48	43	53	47	43	52	46	42	41					41			
9	64	52	44	39	62	51	44	39	50	44	39	49	43	39	48	43	39	37					37			
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34					34			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	153784	153784	153784
5°	154120	154535	154702
10°	153473	156238	155567
15°	151770	158522	155534
20°	149950	160752	155131
25°	148001	160937	155289
30°	140020	156413	150025
35°	135839	135937	137349
40°	134154	93530	130387
45°	119541	56151	121172
50°	99395	37371	107099
55°	74546	25762	90809
60°	50516	17170	68512
65°	30470	11134	47070
70°	16896	6032	28959
75°	7661	2550	14988
80°	6659	2841	10459
85°	7571	3786	10437



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	475.9	5.0
10°-20°	1382.2	14.6
20°-30°	2097.9	22.2
30°-40°	2203.5	23.3
40°-50°	1652.0	17.5
50°-60°	1060.0	11.2
60°-70°	453.4	4.8
70°-80°	107.1	1.1
80°-90°	19.9	0.2
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°	3956.1	41.9
0°-40°	6159.5	65.2
0°-60°	8871.5	93.9
0°-90°	9452.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9452.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	4987	4987	4987	4987	4987	
5°	4979	4987	4992	5000	4998	473
15°	4754	4853	4966	4934	4872	1341
25°	4350	4503	4730	4644	4564	1987
35°	3608	3408	3611	3568	3649	2265
45°	2741	2240	1288	2176	2779	2099
55°	1387	1387	479	1446	1689	1258
65°	418	493	153	634	645	446
75°	64	75	21	128	126	94
85°	21	13	11	21	30	23
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°	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1
2.5°	4989.7	4995.1	4992.4	4992.4	4989.7	4992.4	4992.4	4997.8	4997.8	4992.4	4989.7
5°	4979.0	4984.4	4984.4	4979.0	4979.0	4992.4	4984.4	4989.7	4989.7	4987.1	4987.1
7.5°	4955.0	4955.0	4965.6	4957.7	4957.7	4965.6	4963.0	4968.3	4973.7	4976.4	4976.4
10°	4901.4	4906.8	4909.4	4909.4	4912.1	4920.1	4925.5	4936.2	4941.5	4946.9	4949.6
12.5°	4834.5	4842.5	4845.2	4842.5	4850.6	4861.2	4874.7	4888.0	4896.1	4906.8	4914.8
15°	4754.1	4754.1	4759.5	4767.6	4772.9	4789.0	4802.4	4818.4	4839.8	4853.2	4866.6
17.5°	4665.9	4671.2	4679.2	4679.2	4690.0	4716.7	4724.7	4748.8	4772.9	4786.3	4813.1
20°	4569.5	4574.8	4582.9	4588.2	4601.6	4623.0	4639.1	4660.5	4687.3	4711.4	4738.1
22.5°	4494.5	4483.8	4489.1	4494.5	4507.9	4526.7	4545.4	4572.1	4598.9	4623.0	4649.8
25°	4349.9	4352.6	4360.7	4366.0	4382.1	4398.2	4419.6	4451.7	4475.8	4502.6	4532.0
27.5°	4154.6	4157.2	4170.6	4170.6	4184.0	4210.8	4224.1	4250.9	4283.1	4309.8	4344.6
30°	3932.4	3937.7	3937.7	3948.4	3956.4	3969.9	3983.2	4010.0	4026.1	4050.2	4098.4
32.5°	3728.9	3734.3	3731.6	3728.9	3720.9	3718.2	3715.5	3720.9	3726.3	3734.3	3753.0
35°	3608.5	3595.1	3584.4	3565.7	3544.2	3517.5	3493.3	3461.3	3431.8	3407.7	3380.9
37.5°	3493.3	3490.7	3474.6	3447.8	3405.0	3356.8	3300.6	3231.0	3161.4	3086.5	3014.2
40°	3332.7	3324.7	3311.3	3273.9	3225.7	3166.8	3091.8	3006.2	2893.7	2778.6	2660.8
42.5°	3059.7	3062.4	3046.3	3016.8	2971.4	2915.1	2837.5	2743.8	2623.4	2486.8	2334.3
45°	2741.2	2741.2	2735.8	2711.7	2679.6	2634.1	2575.2	2497.6	2379.8	2240.5	2077.3
47.5°	2409.2	2411.9	2403.8	2398.5	2385.1	2355.7	2312.8	2254.0	2171.0	2037.1	1873.8
50°	2071.9	2071.9	2085.3	2082.6	2082.6	2071.9	2053.2	2018.4	1946.1	1839.0	1686.5
52.5°	1734.6	1740.0	1748.0	1758.7	1772.1	1793.5	1772.1	1756.0	1710.5	1627.5	1496.4
55°	1386.6	1392.0	1405.4	1424.1	1440.2	1461.6	1466.9	1466.9	1442.8	1386.6	1287.6
57.5°	1089.5	1081.5	1092.2	1108.2	1129.7	1151.1	1167.1	1185.9	1183.2	1145.7	1065.4
60°	819.1	821.8	829.8	845.9	862.0	880.7	902.1	918.2	926.2	907.5	856.6
62.5°	597.0	597.0	607.6	623.7	631.7	658.5	671.9	679.9	687.9	685.3	653.2
65°	417.6	422.9	428.3	436.4	444.3	460.4	468.5	484.5	489.9	492.6	468.5
67.5°	294.5	286.4	291.8	297.1	305.2	315.9	332.0	332.0	339.9	339.9	323.9
70°	187.4	187.4	190.1	198.1	203.4	206.1	211.5	216.8	224.9	222.2	222.2
72.5°	125.8	123.1	125.8	128.5	131.2	139.2	139.2	141.9	147.2	149.9	139.2
75°	64.3	66.9	72.2	69.6	77.6	72.2	74.9	83.0	80.3	74.9	74.9
77.5°	53.5	53.5	53.5	50.9	56.2	56.2	53.5	58.9	56.2	56.2	53.5
80°	37.5	40.2	37.5	34.8	37.5	34.8	34.8	34.8	34.8	34.8	32.1
82.5°	29.5	24.1	26.8	24.1	26.8	26.8	24.1	21.4	21.4	24.1	21.4
85°	21.4	16.0	18.7	18.7	16.0	16.0	16.0	16.0	16.0	13.4	13.4
87.5°	13.4	8.1	8.1	8.1	10.7	10.7	10.7	8.1	10.7	10.7	5.4
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°	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1
2.5°	4995.1	4992.4	4997.8	4995.1	4995.1	4992.4	4995.1	4992.4	4997.8	4987.1	4989.7
5°	4995.1	4989.7	4992.4	4995.1	4997.8	4992.4	4992.4	4992.4	4997.8	4992.4	4995.1
7.5°	4984.4	4981.7	4989.7	4995.1	4992.4	4989.7	4995.1	4992.4	4997.8	4995.1	5000.4
10°	4963.0	4965.6	4971.0	4979.0	4981.7	4984.4	4989.7	4989.7	4997.8	4987.1	4992.4
12.5°	4930.9	4941.5	4955.0	4960.3	4971.0	4971.0	4976.4	4979.0	4984.4	4981.7	4989.7
15°	4890.7	4904.1	4920.1	4933.5	4946.9	4955.0	4963.0	4965.6	4973.7	4965.6	4968.3
17.5°	4842.5	4858.6	4882.7	4898.7	4920.1	4928.2	4938.9	4944.2	4952.3	4946.9	4949.6
20°	4775.6	4794.4	4821.1	4845.2	4858.6	4877.3	4890.7	4898.7	4904.1	4898.7	4901.4
22.5°	4681.9	4708.7	4743.5	4762.2	4789.0	4805.0	4807.7	4826.5	4839.8	4826.5	4831.8
25°	4572.1	4598.9	4625.7	4665.9	4690.0	4708.7	4727.4	4730.1	4743.5	4740.8	4738.1
27.5°	4390.1	4424.9	4470.4	4502.6	4534.7	4564.1	4585.5	4590.9	4604.3	4598.9	4601.6
30°	4141.1	4178.7	4221.5	4272.3	4317.9	4347.3	4374.1	4392.8	4406.1	4398.2	4395.5
32.5°	3787.8	3825.3	3870.8	3921.6	3975.2	4018.0	4050.2	4074.3	4090.3	4084.9	4071.6
35°	3383.6	3394.3	3423.8	3463.9	3509.4	3554.9	3584.4	3611.1	3629.8	3635.2	3635.2
37.5°	2968.7	2933.9	2912.5	2912.5	2939.2	2958.0	2984.7	3000.8	3030.3	3040.9	3049.0
40°	2567.1	2486.8	2411.9	2355.7	2318.2	2315.5	2315.5	2323.5	2350.3	2385.1	2417.3
42.5°	2208.4	2079.9	1964.9	1860.4	1785.5	1742.7	1723.9	1726.6	1748.0	1780.1	1833.7
45°	1922.0	1761.4	1616.9	1491.0	1389.3	1322.4	1290.3	1287.6	1303.6	1341.1	1400.0
47.5°	1699.8	1528.5	1365.2	1220.6	1110.9	1038.6	1001.2	990.5	1001.2	1035.9	1105.6
50°	1515.1	1338.5	1169.8	1019.9	902.1	827.2	792.3	779.0	792.3	821.8	891.4
52.5°	1343.8	1161.8	1003.8	859.3	733.5	669.2	631.7	623.7	631.7	666.5	722.8
55°	1145.7	990.5	835.2	690.6	580.9	516.7	487.2	479.2	487.2	519.3	578.2
57.5°	950.3	816.5	679.9	548.8	455.1	398.8	372.1	361.4	380.1	401.5	471.1
60°	768.2	661.2	546.1	431.0	353.4	302.5	281.1	278.4	283.7	310.5	358.7
62.5°	602.3	514.0	422.9	329.3	265.0	243.6	216.8	214.2	219.5	235.5	273.1
65°	433.7	377.5	307.8	240.9	190.1	160.6	149.9	152.6	157.9	168.7	203.4
67.5°	302.5	262.3	214.2	168.7	131.2	117.8	107.1	104.4	107.1	125.8	144.6
70°	203.4	179.3	144.6	128.5	91.0	72.2	74.9	66.9	77.6	77.6	93.7
72.5°	133.8	117.8	96.4	74.9	64.3	50.9	50.9	48.2	53.5	56.2	69.6
75°	69.6	53.5	53.5	37.5	26.8	13.4	24.1	21.4	18.7	21.4	26.8
77.5°	48.2	40.2	37.5	29.5	26.8	21.4	21.4	21.4	21.4	24.1	26.8
80°	29.5	29.5	21.4	18.7	16.0	13.4	16.0	16.0	16.0	16.0	18.7
82.5°	18.7	16.0	16.0	13.4	13.4	10.7	10.7	10.7	10.7	10.7	16.0
85°	16.0	10.7	10.7	8.1	10.7	18.7	8.1	10.7	10.7	10.7	8.1
87.5°	5.4	8.1	8.1	8.1	5.4	2.7	5.4	8.1	8.1	13.4	10.7
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°	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1	4987.1
2.5°	4995.1	4997.8	4997.8	4995.1	4995.1	4989.7	5000.4	4992.4	4995.1	5005.8	4997.8
5°	5000.4	5003.1	5003.1	5000.4	5000.4	5000.4	5003.1	5003.1	5000.4	4997.8	5003.1
7.5°	5011.2	5008.5	5008.5	5003.1	5003.1	4997.8	5003.1	4995.1	5000.4	4995.1	5003.1
10°	4997.8	5000.4	4997.8	4995.1	4995.1	4992.4	4992.4	4984.4	4987.1	4979.0	4984.4
12.5°	4989.7	4987.1	4987.1	4981.7	4976.4	4971.0	4968.3	4960.3	4960.3	4941.5	4949.6
15°	4968.3	4971.0	4963.0	4952.3	4946.9	4933.5	4928.2	4917.4	4906.8	4893.4	4896.1
17.5°	4949.6	4941.5	4930.9	4920.1	4898.7	4888.0	4877.3	4861.2	4855.9	4839.8	4834.5
20°	4893.4	4888.0	4874.7	4855.9	4842.5	4818.4	4807.7	4791.7	4778.2	4762.2	4754.1
22.5°	4821.1	4815.7	4799.7	4780.9	4759.5	4748.8	4738.1	4708.7	4695.3	4679.2	4676.5
25°	4730.1	4722.1	4706.0	4684.6	4673.8	4644.4	4633.7	4612.3	4607.0	4590.9	4588.2
27.5°	4590.9	4580.2	4561.4	4534.7	4515.9	4497.2	4486.5	4470.4	4465.1	4449.0	4446.4
30°	4382.1	4368.7	4331.2	4320.5	4288.4	4269.6	4269.6	4248.2	4250.9	4240.2	4240.2
32.5°	4052.8	4031.4	4002.0	3980.5	3959.1	3948.4	3948.4	3940.4	3945.8	3945.8	3951.1
35°	3616.5	3587.1	3571.0	3557.6	3557.6	3568.3	3600.4	3608.5	3624.5	3637.9	3648.6
37.5°	3057.0	3054.4	3073.1	3089.1	3129.3	3174.8	3231.0	3279.2	3324.7	3356.8	3388.9
40°	2452.0	2519.0	2572.5	2647.5	2709.0	2797.4	2899.1	2982.1	3059.7	3115.9	3174.8
42.5°	1914.0	1999.6	2112.1	2221.8	2331.6	2452.0	2585.9	2701.0	2802.7	2880.3	2941.9
45°	1491.0	1608.8	1745.4	1884.5	2026.4	2176.3	2315.5	2433.3	2540.4	2620.7	2682.3
47.5°	1201.9	1330.4	1485.7	1638.3	1798.9	1956.8	2112.1	2213.8	2302.1	2366.4	2422.6
50°	993.1	1129.7	1293.0	1466.9	1627.5	1785.5	1919.3	2018.4	2090.7	2146.9	2181.7
52.5°	829.8	974.4	1148.4	1322.4	1483.0	1627.5	1748.0	1823.0	1881.9	1922.0	1954.1
55°	685.3	824.5	987.8	1151.1	1309.0	1445.5	1544.5	1600.8	1646.3	1670.4	1689.1
57.5°	559.5	687.9	837.9	987.8	1124.3	1236.8	1314.4	1370.6	1392.0	1410.7	1408.0
60°	439.0	559.5	696.0	824.5	942.3	1033.3	1089.5	1121.6	1137.7	1145.7	1140.3
62.5°	345.3	455.1	559.5	671.9	757.6	835.2	888.8	888.8	896.8	899.4	907.5
65°	257.0	339.9	431.0	514.0	583.5	634.4	663.9	671.9	682.6	679.9	674.6
67.5°	190.1	251.6	318.5	380.1	428.3	460.4	481.8	500.6	497.9	492.6	489.9
70°	131.2	171.3	230.2	267.7	302.5	334.6	339.9	342.6	345.3	348.0	342.6
72.5°	91.0	120.5	152.6	184.7	206.1	219.5	232.9	235.5	235.5	235.5	232.9
75°	45.5	61.6	91.0	104.4	123.1	128.5	139.2	139.2	147.2	136.5	133.8
77.5°	40.2	48.2	64.3	74.9	83.0	91.0	93.7	101.7	99.0	93.7	96.4
80°	24.1	29.5	40.2	45.5	56.2	58.9	61.6	64.3	61.6	64.3	64.3
82.5°	18.7	21.4	26.8	26.8	34.8	34.8	37.5	37.5	40.2	40.2	40.2
85°	10.7	18.7	16.0	32.1	21.4	21.4	26.8	32.1	26.8	26.8	32.1
87.5°	10.7	10.7	8.1	10.7	10.7	10.7	13.4	16.0	16.0	18.7	16.0
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: P249535

CATALOG NUMBER: LSR8B90D010 EC8B90835 8LBDW0MW

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	4987.1	4987.1	4987.1	4987.1
2.5°	4995.1	5000.4	4992.4	4989.7
5°	5003.1	5003.1	4997.8	4997.8
7.5°	5003.1	5003.1	4995.1	4989.7
10°	4981.7	4981.7	4973.7	4968.3
12.5°	4941.5	4941.5	4938.9	4930.9
15°	4890.7	4890.7	4880.0	4872.0
17.5°	4821.1	4826.5	4813.1	4813.1
20°	4746.2	4743.5	4732.8	4727.4
22.5°	4668.5	4663.2	4660.5	4644.4
25°	4585.5	4580.2	4572.1	4564.1
27.5°	4443.7	4441.0	4432.9	4422.3
30°	4226.8	4224.1	4213.4	4213.4
32.5°	3945.8	3943.1	3932.4	3935.1
35°	3654.0	3664.7	3659.3	3648.6
37.5°	3410.4	3418.4	3423.8	3418.4
40°	3206.9	3231.0	3233.7	3239.1
42.5°	2990.1	3022.2	3032.9	3038.3
45°	2730.4	2759.9	2784.0	2778.6
47.5°	2465.4	2486.8	2508.2	2492.2
50°	2211.1	2224.5	2232.5	2232.5
52.5°	1970.2	1970.2	1967.5	1970.2
55°	1694.5	1694.5	1683.8	1689.1
57.5°	1405.4	1410.7	1402.7	1389.3
60°	1137.7	1124.3	1118.9	1110.9
62.5°	886.1	886.1	867.3	891.4
65°	663.9	655.8	647.8	645.1
67.5°	481.8	479.2	471.1	468.5
70°	339.9	329.3	326.6	321.2
72.5°	227.5	227.5	222.2	222.2
75°	139.2	125.8	123.1	125.8
77.5°	96.4	93.7	93.7	91.0
80°	64.3	61.6	66.9	58.9
82.5°	40.2	42.8	40.2	42.8
85°	26.8	32.1	29.5	29.5
87.5°	16.0	16.0	16.0	16.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)