

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: P249409

Luminaire Tested: **LSR8B90D010 EC8B90827 8LBDW0B**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P249409  
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 EC8B90827 8LBDW0B  
Description: PORTFOLIO 8 INCH DOUBLE WALL WASH DISTRIBUTION 60 DEGREE CUTOFF  
RECESSED DOWNLIGHT- CYLINDEC  
80 CRI 2700 CCT WITH SPECULAR BLACK TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7936.0 lumens  
Efficiency: N/A  
Efficacy: 92.2 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

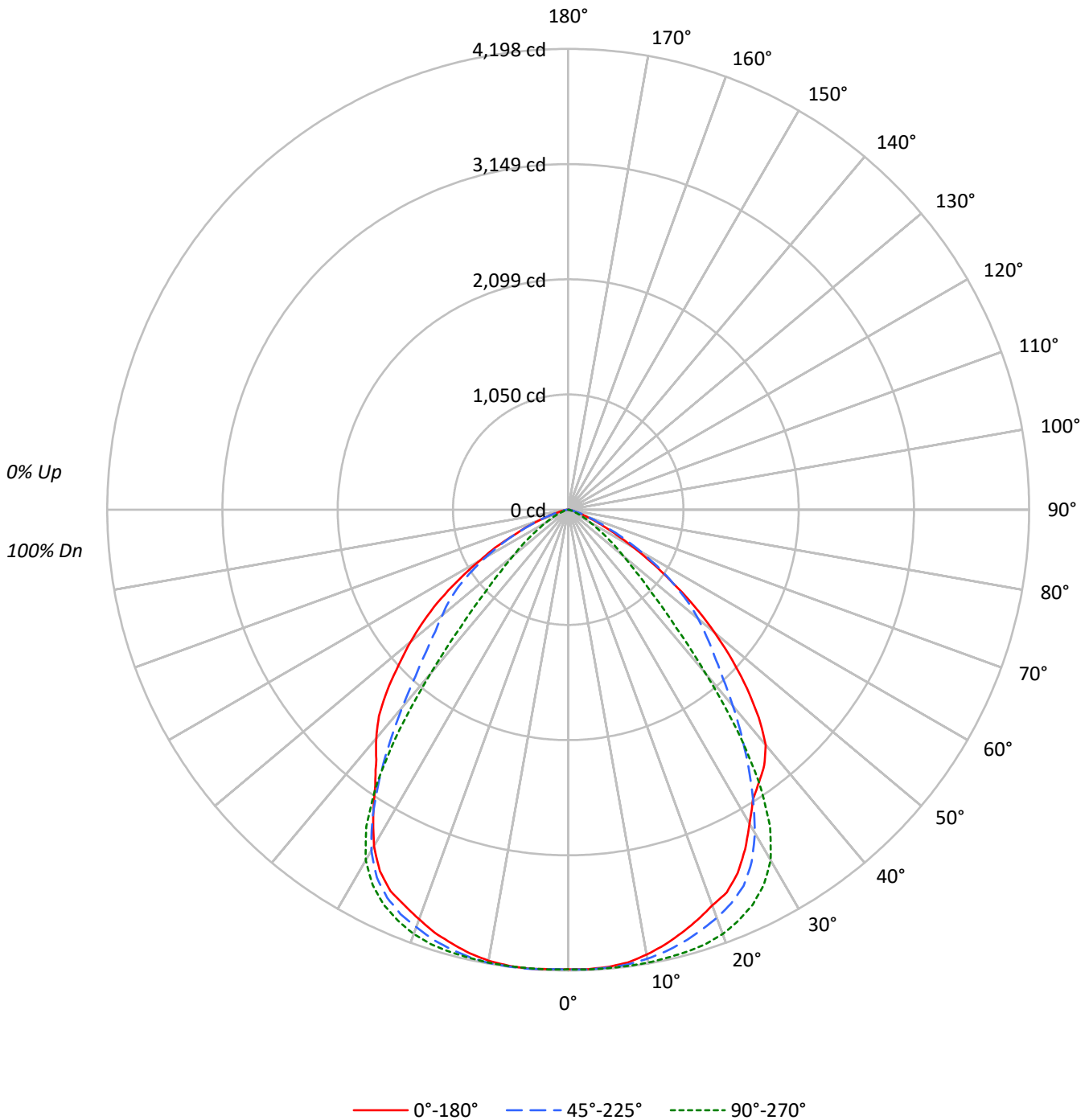
Input Watts (W): 86.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	129118	129118	129118
5°	129401	129750	129890
10°	128858	131179	130618
15°	127428	133098	130589
20°	125899	134969	130251
25°	124266	135123	130384
30°	117563	131325	125966
35°	114051	114133	115319
40°	112639	78531	109475
45°	100366	47146	101740
50°	83453	31374	89925
55°	62589	21628	76245
60°	42418	14413	57528
65°	25582	9347	39518
70°	14182	5067	24316
75°	6422	2145	12581
80°	5594	2397	8772
85°	6369	3184	8739



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	399.6	5.0
10°-20°	1160.5	14.6
20°-30°	1761.4	22.2
30°-40°	1850.0	23.3
40°-50°	1387.0	17.5
50°-60°	890.0	11.2
60°-70°	380.7	4.8
70°-80°	89.9	1.1
80°-90°	16.7	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°	3321.6	41.9
0°-40°	5171.6	65.2
0°-60°	7448.6	93.9
0°-90°	7936.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7936.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	4187	4187	4187	4187	4187	
5°	4180	4187	4192	4198	4196	397
15°	3992	4075	4169	4142	4091	1126
25°	3652	3780	3971	3900	3832	1669
35°	3030	2861	3032	2996	3063	1902
45°	2302	1881	1081	1827	2333	1763
55°	1164	1164	402	1214	1418	1056
65°	351	414	128	533	542	374
75°	54	63	18	108	106	79
85°	18	11	9	18	25	19
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°	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2
2.5°	4189.4	4194.0	4191.7	4191.7	4189.4	4191.7	4191.7	4196.2	4196.2	4191.7	4189.4
5°	4180.4	4184.9	4184.9	4180.4	4180.4	4191.7	4184.9	4189.4	4189.4	4187.2	4187.2
7.5°	4160.2	4160.2	4169.2	4162.5	4162.5	4169.2	4167.0	4171.5	4176.0	4178.2	4178.2
10°	4115.3	4119.8	4122.0	4122.0	4124.3	4131.0	4135.5	4144.5	4149.0	4153.5	4155.7
12.5°	4059.1	4065.8	4068.1	4065.8	4072.6	4081.5	4092.8	4104.0	4110.8	4119.8	4126.5
15°	3991.6	3991.6	3996.1	4002.9	4007.4	4020.9	4032.1	4045.6	4063.6	4074.8	4086.1
17.5°	3917.5	3922.0	3928.7	3928.7	3937.7	3960.2	3966.9	3987.2	4007.4	4018.6	4041.1
20°	3836.6	3841.1	3847.8	3852.3	3863.5	3881.5	3895.0	3913.0	3935.5	3955.7	3978.2
22.5°	3773.6	3764.7	3769.1	3773.6	3784.9	3800.6	3816.4	3838.8	3861.3	3881.5	3904.0
25°	3652.3	3654.5	3661.3	3665.7	3679.3	3692.7	3710.7	3737.7	3757.9	3780.4	3805.1
27.5°	3488.2	3490.5	3501.7	3501.7	3512.9	3535.4	3546.6	3569.1	3596.1	3618.6	3647.8
30°	3301.7	3306.1	3306.1	3315.1	3321.9	3333.1	3344.4	3366.8	3380.3	3400.6	3441.0
32.5°	3130.9	3135.3	3133.1	3130.9	3124.1	3121.8	3119.6	3124.1	3128.6	3135.3	3151.0
35°	3029.7	3018.5	3009.5	2993.8	2975.8	2953.3	2933.1	2906.1	2881.4	2861.1	2838.7
37.5°	2933.1	2930.8	2917.3	2894.8	2858.9	2818.4	2771.3	2712.8	2654.3	2591.4	2530.8
40°	2798.2	2791.4	2780.2	2748.8	2708.3	2658.9	2595.9	2524.0	2429.6	2333.0	2234.1
42.5°	2568.9	2571.2	2557.7	2533.0	2494.8	2447.6	2382.4	2303.8	2202.6	2088.0	1959.9
45°	2301.5	2301.5	2297.0	2276.8	2249.8	2211.6	2162.1	2097.0	1998.1	1881.2	1744.1
47.5°	2022.8	2025.0	2018.3	2013.8	2002.6	1977.9	1941.9	1892.5	1822.8	1710.4	1573.3
50°	1739.6	1739.6	1750.8	1748.6	1748.6	1739.6	1723.9	1694.6	1634.0	1544.1	1416.0
52.5°	1456.4	1460.9	1467.7	1476.6	1487.9	1505.8	1487.9	1474.4	1436.2	1366.5	1256.4
55°	1164.2	1168.7	1180.0	1195.7	1209.2	1227.2	1231.6	1231.6	1211.4	1164.2	1081.1
57.5°	914.8	908.0	917.0	930.5	948.5	966.5	979.9	995.7	993.4	962.0	894.5
60°	687.8	690.0	696.7	710.2	723.7	739.4	757.4	770.9	777.7	761.9	719.2
62.5°	501.2	501.2	510.2	523.7	530.4	552.9	564.1	570.9	577.6	575.3	548.4
65°	350.6	355.1	359.6	366.4	373.1	386.6	393.3	406.8	411.3	413.6	393.3
67.5°	247.3	240.5	245.0	249.5	256.2	265.2	278.7	278.7	285.4	285.4	271.9
70°	157.3	157.3	159.6	166.3	170.8	173.1	177.6	182.0	188.8	186.5	186.5
72.5°	105.6	103.4	105.6	107.9	110.2	116.9	116.9	119.1	123.6	125.9	116.9
75°	53.9	56.2	60.7	58.5	65.2	60.7	62.9	69.7	67.4	62.9	62.9
77.5°	44.9	44.9	44.9	42.7	47.2	47.2	44.9	49.4	47.2	47.2	44.9
80°	31.5	33.7	31.5	29.2	31.5	29.2	29.2	29.2	29.2	29.2	26.9
82.5°	24.7	20.2	22.5	20.2	22.5	22.5	20.2	18.0	18.0	20.2	18.0
85°	18.0	13.5	15.7	15.7	13.5	13.5	13.5	13.5	13.5	11.2	11.2
87.5°	11.2	6.8	6.8	6.8	9.0	9.0	9.0	6.8	9.0	9.0	4.5
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°	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2
2.5°	4194.0	4191.7	4196.2	4194.0	4194.0	4191.7	4194.0	4191.7	4196.2	4187.2	4189.4
5°	4194.0	4189.4	4191.7	4194.0	4196.2	4191.7	4191.7	4191.7	4196.2	4191.7	4194.0
7.5°	4184.9	4182.7	4189.4	4194.0	4191.7	4189.4	4194.0	4191.7	4196.2	4194.0	4198.4
10°	4167.0	4169.2	4173.7	4180.4	4182.7	4184.9	4189.4	4189.4	4196.2	4187.2	4191.7
12.5°	4140.0	4149.0	4160.2	4164.7	4173.7	4173.7	4178.2	4180.4	4184.9	4182.7	4189.4
15°	4106.3	4117.5	4131.0	4142.3	4153.5	4160.2	4167.0	4169.2	4176.0	4169.2	4171.5
17.5°	4065.8	4079.3	4099.5	4113.0	4131.0	4137.7	4146.7	4151.2	4158.0	4153.5	4155.7
20°	4009.6	4025.4	4047.8	4068.1	4079.3	4095.0	4106.3	4113.0	4117.5	4113.0	4115.3
22.5°	3931.0	3953.5	3982.7	3998.4	4020.9	4034.4	4036.6	4052.3	4063.6	4052.3	4056.9
25°	3838.8	3861.3	3883.8	3917.5	3937.7	3953.5	3969.2	3971.4	3982.7	3980.4	3978.2
27.5°	3686.0	3715.2	3753.4	3780.4	3807.3	3832.1	3850.1	3854.5	3865.8	3861.3	3863.5
30°	3476.9	3508.5	3544.4	3587.1	3625.3	3650.0	3672.5	3688.2	3699.4	3692.7	3690.5
32.5°	3180.3	3211.8	3250.0	3292.7	3337.6	3373.6	3400.6	3420.8	3434.3	3429.8	3418.5
35°	2840.9	2849.9	2874.6	2908.4	2946.5	2984.7	3009.5	3031.9	3047.7	3052.2	3052.2
37.5°	2492.5	2463.3	2445.4	2445.4	2467.8	2483.5	2506.0	2519.5	2544.2	2553.2	2560.0
40°	2155.4	2088.0	2025.0	1977.9	1946.4	1944.1	1944.1	1950.9	1973.4	2002.6	2029.6
42.5°	1854.2	1746.3	1649.7	1562.1	1499.1	1463.2	1447.4	1449.7	1467.7	1494.6	1539.6
45°	1613.7	1478.9	1357.5	1251.9	1166.5	1110.3	1083.3	1081.1	1094.5	1126.0	1175.5
47.5°	1427.2	1283.3	1146.2	1024.9	932.8	872.0	840.6	831.6	840.6	869.8	928.2
50°	1272.1	1123.8	982.2	856.3	757.4	694.5	665.3	654.0	665.3	690.0	748.4
52.5°	1128.3	975.4	842.8	721.5	615.8	561.9	530.4	523.7	530.4	559.6	606.9
55°	962.0	831.6	701.2	579.9	487.7	433.8	409.0	402.3	409.0	436.0	485.5
57.5°	797.9	685.5	570.9	460.7	382.1	334.9	312.4	303.4	319.1	337.1	395.6
60°	645.0	555.2	458.5	361.9	296.7	254.0	236.0	233.7	238.2	260.7	301.1
62.5°	505.7	431.5	355.1	276.5	222.5	204.5	182.0	179.8	184.3	197.8	229.3
65°	364.1	316.9	258.5	202.3	159.6	134.8	125.9	128.1	132.6	141.6	170.8
67.5°	254.0	220.3	179.8	141.6	110.2	98.9	89.9	87.7	89.9	105.6	121.4
70°	170.8	150.6	121.4	107.9	76.4	60.7	62.9	56.2	65.2	65.2	78.6
72.5°	112.4	98.9	80.9	62.9	53.9	42.7	42.7	40.5	44.9	47.2	58.5
75°	58.5	44.9	44.9	31.5	22.5	11.2	20.2	18.0	15.7	18.0	22.5
77.5°	40.5	33.7	31.5	24.7	22.5	18.0	18.0	18.0	18.0	20.2	22.5
80°	24.7	24.7	18.0	15.7	13.5	11.2	13.5	13.5	13.5	13.5	15.7
82.5°	15.7	13.5	13.5	11.2	11.2	9.0	9.0	9.0	9.0	9.0	13.5
85°	13.5	9.0	9.0	6.8	9.0	15.7	6.8	9.0	9.0	9.0	6.8
87.5°	4.5	6.8	6.8	6.8	4.5	2.3	4.5	6.8	6.8	11.2	9.0
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°	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2	4187.2
2.5°	4194.0	4196.2	4196.2	4194.0	4194.0	4189.4	4198.4	4191.7	4194.0	4202.9	4196.2
5°	4198.4	4200.7	4200.7	4198.4	4198.4	4198.4	4200.7	4200.7	4198.4	4196.2	4200.7
7.5°	4207.4	4205.2	4205.2	4200.7	4200.7	4196.2	4200.7	4194.0	4198.4	4194.0	4200.7
10°	4196.2	4198.4	4196.2	4194.0	4194.0	4191.7	4191.7	4184.9	4187.2	4180.4	4184.9
12.5°	4189.4	4187.2	4187.2	4182.7	4178.2	4173.7	4171.5	4164.7	4164.7	4149.0	4155.7
15°	4171.5	4173.7	4167.0	4158.0	4153.5	4142.3	4137.7	4128.7	4119.8	4108.5	4110.8
17.5°	4155.7	4149.0	4140.0	4131.0	4113.0	4104.0	4095.0	4081.5	4077.0	4063.6	4059.1
20°	4108.5	4104.0	4092.8	4077.0	4065.8	4045.6	4036.6	4023.1	4011.9	3998.4	3991.6
22.5°	4047.8	4043.3	4029.9	4014.1	3996.1	3987.2	3978.2	3953.5	3942.2	3928.7	3926.5
25°	3971.4	3964.7	3951.2	3933.2	3924.2	3899.5	3890.5	3872.5	3868.1	3854.5	3852.3
27.5°	3854.5	3845.6	3829.8	3807.3	3791.6	3775.9	3766.9	3753.4	3748.9	3735.4	3733.2
30°	3679.3	3668.0	3636.5	3627.6	3600.6	3584.8	3584.8	3566.9	3569.1	3560.1	3560.1
32.5°	3402.8	3384.8	3360.1	3342.1	3324.1	3315.1	3315.1	3308.4	3312.9	3312.9	3317.4
35°	3036.4	3011.7	2998.2	2987.0	2987.0	2996.0	3023.0	3029.7	3043.2	3054.4	3063.4
37.5°	2566.7	2564.5	2580.2	2593.7	2627.4	2665.6	2712.8	2753.3	2791.4	2818.4	2845.4
40°	2058.8	2115.0	2159.9	2222.9	2274.5	2348.7	2434.1	2503.8	2568.9	2616.2	2665.6
42.5°	1607.0	1678.9	1773.3	1865.5	1957.6	2058.8	2171.2	2267.8	2353.2	2418.4	2470.1
45°	1251.9	1350.8	1465.4	1582.3	1701.4	1827.3	1944.1	2043.0	2132.9	2200.4	2252.1
47.5°	1009.1	1117.0	1247.4	1375.5	1510.4	1642.9	1773.3	1858.7	1932.9	1986.8	2034.1
50°	833.8	948.5	1085.6	1231.6	1366.5	1499.1	1611.5	1694.6	1755.4	1802.5	1831.7
52.5°	696.7	818.1	964.2	1110.3	1245.1	1366.5	1467.7	1530.6	1580.0	1613.7	1640.7
55°	575.3	692.3	829.4	966.5	1099.1	1213.7	1296.8	1344.1	1382.2	1402.5	1418.2
57.5°	469.8	577.6	703.5	829.4	944.0	1038.4	1103.6	1150.7	1168.7	1184.5	1182.2
60°	368.6	469.8	584.4	692.3	791.1	867.5	914.8	941.7	955.2	962.0	957.4
62.5°	289.9	382.1	469.8	564.1	636.1	701.2	746.2	746.2	752.9	755.2	761.9
65°	215.7	285.4	361.9	431.5	489.9	532.7	557.4	564.1	573.1	570.9	566.4
67.5°	159.6	211.3	267.4	319.1	359.6	386.6	404.5	420.3	418.1	413.6	411.3
70°	110.2	143.9	193.3	224.8	254.0	281.0	285.4	287.7	289.9	292.2	287.7
72.5°	76.4	101.1	128.1	155.1	173.1	184.3	195.6	197.8	197.8	197.8	195.6
75°	38.2	51.7	76.4	87.7	103.4	107.9	116.9	116.9	123.6	114.6	112.4
77.5°	33.7	40.5	53.9	62.9	69.7	76.4	78.6	85.4	83.2	78.6	80.9
80°	20.2	24.7	33.7	38.2	47.2	49.4	51.7	53.9	51.7	53.9	53.9
82.5°	15.7	18.0	22.5	22.5	29.2	29.2	31.5	31.5	33.7	33.7	33.7
85°	9.0	15.7	13.5	26.9	18.0	18.0	22.5	26.9	22.5	22.5	26.9
87.5°	9.0	9.0	6.8	9.0	9.0	9.0	11.2	13.5	13.5	15.7	13.5
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: P249409

CATALOG NUMBER: LSR8B90D010 EC8B90827 8LBDW0B

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	4187.2	4187.2	4187.2	4187.2
2.5°	4194.0	4198.4	4191.7	4189.4
5°	4200.7	4200.7	4196.2	4196.2
7.5°	4200.7	4200.7	4194.0	4189.4
10°	4182.7	4182.7	4176.0	4171.5
12.5°	4149.0	4149.0	4146.7	4140.0
15°	4106.3	4106.3	4097.3	4090.6
17.5°	4047.8	4052.3	4041.1	4041.1
20°	3984.9	3982.7	3973.7	3969.2
22.5°	3919.8	3915.2	3913.0	3899.5
25°	3850.1	3845.6	3838.8	3832.1
27.5°	3731.0	3728.7	3721.9	3713.0
30°	3548.9	3546.6	3537.7	3537.7
32.5°	3312.9	3310.6	3301.7	3303.9
35°	3067.9	3076.9	3072.4	3063.4
37.5°	2863.4	2870.1	2874.6	2870.1
40°	2692.6	2712.8	2715.1	2719.6
42.5°	2510.5	2537.5	2546.5	2551.0
45°	2292.5	2317.2	2337.5	2333.0
47.5°	2070.0	2088.0	2105.9	2092.5
50°	1856.5	1867.7	1874.5	1874.5
52.5°	1654.2	1654.2	1652.0	1654.2
55°	1422.7	1422.7	1413.7	1418.2
57.5°	1180.0	1184.5	1177.7	1166.5
60°	955.2	944.0	939.5	932.8
62.5°	744.0	744.0	728.2	748.4
65°	557.4	550.7	543.9	541.6
67.5°	404.5	402.3	395.6	393.3
70°	285.4	276.5	274.2	269.7
72.5°	191.0	191.0	186.5	186.5
75°	116.9	105.6	103.4	105.6
77.5°	80.9	78.6	78.6	76.4
80°	53.9	51.7	56.2	49.4
82.5°	33.7	36.0	33.7	36.0
85°	22.5	26.9	24.7	24.7
87.5°	13.5	13.5	13.5	13.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)