

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: P249373

Luminaire Tested: **LSR8B90D010 EC8B90940 8LBDW0GPH**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P249373
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 EC8B90940 8LBDW0GPH
Description: PORTFOLIO 8 INCH DOUBLE WALL WASH DISTRIBUTION 60 DEGREE CUTOFF
RECESSED DOWNLIGHT- CYLINDEC
90 CRI 4000 CCT WITH GRAPHITE TRIM
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8323.0 lumens
Efficiency: N/A
Efficacy: 96.7 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

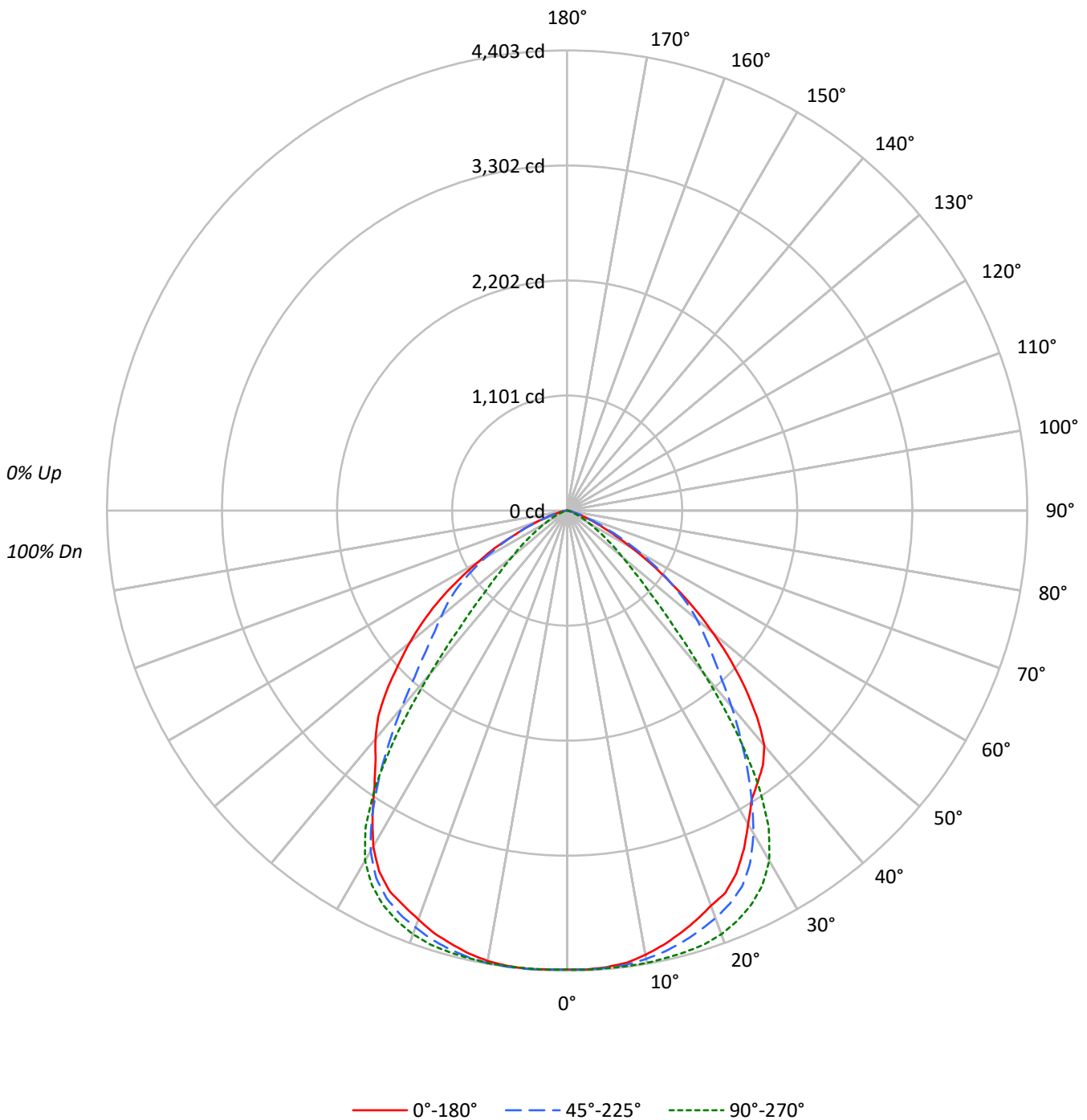
Input Watts (W): 86.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	135415	135415	135415
5°	135712	136077	136223
10°	135140	137576	136987
15°	133644	139588	136954
20°	132039	141552	136604
25°	130326	141714	136743
30°	123295	137730	132108
35°	119614	119701	120943
40°	118133	82360	114812
45°	105259	49444	106698
50°	87526	32905	94310
55°	65643	22687	79959
60°	44484	15116	60328
65°	26829	9806	41451
70°	14876	5310	25497
75°	6743	2252	13201
80°	5860	2504	9216
85°	6687	3326	9199



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	419.1	5.0
10°-20°	1217.1	14.6
20°-30°	1847.3	22.2
30°-40°	1940.3	23.3
40°-50°	1454.7	17.5
50°-60°	933.4	11.2
60°-70°	399.3	4.8
70°-80°	94.3	1.1
80°-90°	17.6	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°	3483.6	41.9
0°-40°	5423.8	65.2
0°-60°	7811.9	93.9
0°-90°	8323.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8323.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4391	4391	4391	4391	4391	
5°	4384	4391	4396	4403	4401	416
15°	4186	4274	4372	4344	4290	1181
25°	3830	3965	4165	4090	4019	1750
35°	3178	3001	3180	3142	3213	1994
45°	2414	1973	1134	1916	2447	1849
55°	1221	1221	422	1273	1487	1108
65°	368	434	134	559	568	393
75°	57	66	19	113	111	82
85°	19	12	9	19	26	20
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°	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4
2.5°	4393.7	4398.5	4396.1	4396.1	4393.7	4396.1	4396.1	4400.8	4400.8	4396.1	4393.7
5°	4384.3	4389.0	4389.0	4384.3	4384.3	4396.1	4389.0	4393.7	4393.7	4391.4	4391.4
7.5°	4363.1	4363.1	4372.5	4365.5	4365.5	4372.5	4370.2	4374.9	4379.6	4382.0	4382.0
10°	4315.9	4320.7	4323.0	4323.0	4325.4	4332.4	4337.2	4346.6	4351.3	4356.0	4358.4
12.5°	4257.1	4264.1	4266.5	4264.1	4271.2	4280.6	4292.4	4304.2	4311.3	4320.7	4327.8
15°	4186.3	4186.3	4191.0	4198.1	4202.8	4217.0	4228.7	4242.9	4261.7	4273.5	4285.3
17.5°	4108.5	4113.3	4120.3	4120.3	4129.8	4153.3	4160.4	4181.6	4202.8	4214.6	4238.2
20°	4023.7	4028.4	4035.5	4040.2	4052.0	4070.8	4084.9	4103.8	4127.4	4148.6	4172.2
22.5°	3957.7	3948.3	3952.9	3957.7	3969.5	3986.0	4002.5	4026.0	4049.6	4070.8	4094.4
25°	3830.4	3832.7	3839.8	3844.5	3858.7	3872.8	3891.7	3919.9	3941.2	3964.7	3990.6
27.5°	3658.3	3660.7	3672.4	3672.4	3684.2	3707.8	3719.6	3743.2	3771.5	3795.0	3825.7
30°	3462.7	3467.4	3467.4	3476.8	3483.9	3495.7	3507.4	3531.0	3545.2	3566.4	3608.8
32.5°	3283.5	3288.2	3285.8	3283.5	3276.4	3274.1	3271.7	3276.4	3281.2	3288.2	3304.7
35°	3177.5	3165.7	3156.3	3139.8	3120.9	3097.3	3076.1	3047.8	3021.9	3000.6	2977.1
37.5°	3076.1	3073.7	3059.6	3036.0	2998.3	2955.9	2906.4	2845.1	2783.8	2717.8	2654.2
40°	2934.7	2927.6	2915.8	2882.8	2840.4	2788.5	2722.5	2647.1	2548.1	2446.7	2343.0
42.5°	2694.2	2696.6	2682.4	2656.5	2616.5	2566.9	2498.6	2416.1	2310.0	2189.8	2055.5
45°	2413.7	2413.7	2409.0	2387.8	2359.5	2319.4	2267.6	2199.2	2095.5	1972.9	1829.1
47.5°	2121.4	2123.8	2116.7	2112.0	2100.2	2074.3	2036.6	1984.7	1911.7	1793.8	1650.0
50°	1824.5	1824.5	1836.2	1833.9	1833.9	1824.5	1808.0	1777.3	1713.7	1619.4	1485.0
52.5°	1527.4	1532.2	1539.3	1548.7	1560.4	1579.3	1560.4	1546.3	1506.2	1433.1	1317.7
55°	1221.0	1225.7	1237.5	1254.0	1268.2	1287.0	1291.7	1291.7	1270.5	1221.0	1133.8
57.5°	959.4	952.3	961.7	975.9	994.7	1013.6	1027.7	1044.2	1041.9	1008.9	938.2
60°	721.3	723.7	730.7	744.9	759.0	775.5	794.4	808.5	815.6	799.1	754.3
62.5°	525.7	525.7	535.1	549.2	556.3	579.9	591.6	598.7	605.8	603.4	575.1
65°	367.7	372.4	377.1	384.2	391.3	405.4	412.5	426.6	431.4	433.7	412.5
67.5°	259.3	252.2	256.9	261.6	268.7	278.2	292.3	292.3	299.3	299.3	285.2
70°	165.0	165.0	167.4	174.4	179.1	181.5	186.2	190.9	198.0	195.6	195.6
72.5°	110.8	108.4	110.8	113.2	115.5	122.6	122.6	124.9	129.7	132.0	122.6
75°	56.6	58.9	63.6	61.3	68.3	63.6	66.0	73.1	70.7	66.0	66.0
77.5°	47.1	47.1	47.1	44.8	49.5	49.5	47.1	51.9	49.5	49.5	47.1
80°	33.0	35.4	33.0	30.6	33.0	30.6	30.6	30.6	30.6	30.6	28.3
82.5°	26.0	21.2	23.6	21.2	23.6	23.6	21.2	18.9	18.9	21.2	18.9
85°	18.9	14.1	16.5	16.5	14.1	14.1	14.1	14.1	14.1	11.8	11.8
87.5°	11.8	7.1	7.1	7.1	9.4	9.4	9.4	7.1	9.4	9.4	4.7
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4
2.5°	4398.5	4396.1	4400.8	4398.5	4398.5	4396.1	4398.5	4396.1	4400.8	4391.4	4393.7
5°	4398.5	4393.7	4396.1	4398.5	4400.8	4396.1	4396.1	4396.1	4400.8	4396.1	4398.5
7.5°	4389.0	4386.6	4393.7	4398.5	4396.1	4393.7	4398.5	4396.1	4400.8	4398.5	4403.1
10°	4370.2	4372.5	4377.2	4384.3	4386.6	4389.0	4393.7	4393.7	4400.8	4391.4	4396.1
12.5°	4341.9	4351.3	4363.1	4367.8	4377.2	4377.2	4382.0	4384.3	4389.0	4386.6	4393.7
15°	4306.5	4318.3	4332.4	4344.3	4356.0	4363.1	4370.2	4372.5	4379.6	4372.5	4374.9
17.5°	4264.1	4278.2	4299.4	4313.6	4332.4	4339.5	4348.9	4353.7	4360.8	4356.0	4358.4
20°	4205.1	4221.7	4245.2	4266.5	4278.2	4294.7	4306.5	4313.6	4318.3	4313.6	4315.9
22.5°	4122.7	4146.3	4176.9	4193.4	4217.0	4231.1	4233.5	4250.0	4261.7	4250.0	4254.7
25°	4026.0	4049.6	4073.2	4108.5	4129.8	4146.3	4162.8	4165.1	4176.9	4174.5	4172.2
27.5°	3865.7	3896.4	3936.4	3964.7	3993.0	4019.0	4037.8	4042.5	4054.3	4049.6	4052.0
30°	3646.5	3679.5	3717.3	3762.0	3802.1	3828.0	3851.6	3868.1	3879.9	3872.8	3870.5
32.5°	3335.4	3368.4	3408.5	3453.2	3500.4	3538.1	3566.4	3587.6	3601.7	3597.0	3585.2
35°	2979.5	2988.9	3014.8	3050.2	3090.2	3130.3	3156.3	3179.8	3196.3	3201.0	3201.0
37.5°	2614.1	2583.5	2564.6	2564.6	2588.1	2604.6	2628.2	2642.4	2668.3	2677.7	2684.8
40°	2260.5	2189.8	2123.8	2074.3	2041.3	2039.0	2039.0	2046.0	2069.6	2100.2	2128.5
42.5°	1944.7	1831.5	1730.2	1638.2	1572.2	1534.5	1518.0	1520.4	1539.3	1567.5	1614.6
45°	1692.4	1551.0	1423.7	1312.9	1223.4	1164.4	1136.2	1133.8	1147.9	1180.9	1232.8
47.5°	1496.8	1345.9	1202.1	1074.8	978.2	914.6	881.6	872.2	881.6	912.2	973.5
50°	1334.2	1178.6	1030.1	898.1	794.4	728.4	697.7	685.9	697.7	723.7	784.9
52.5°	1183.3	1023.0	883.9	756.6	645.9	589.3	556.3	549.2	556.3	586.9	636.5
55°	1008.9	872.2	735.4	608.1	511.5	454.9	429.0	422.0	429.0	457.3	509.2
57.5°	836.8	718.9	598.7	483.2	400.7	351.2	327.7	318.2	334.7	353.6	414.9
60°	676.5	582.2	480.8	379.5	311.2	266.3	247.5	245.1	249.9	273.4	315.8
62.5°	530.4	452.6	372.4	289.9	233.4	214.5	190.9	188.6	193.3	207.4	240.4
65°	381.9	332.4	271.1	212.1	167.4	141.4	132.0	134.4	139.1	148.5	179.1
67.5°	266.3	231.0	188.6	148.5	115.5	103.7	94.3	91.9	94.3	110.8	127.3
70°	179.1	157.9	127.3	113.2	80.2	63.6	66.0	58.9	68.3	68.3	82.5
72.5°	117.8	103.7	84.8	66.0	56.6	44.8	44.8	42.4	47.1	49.5	61.3
75°	61.3	47.1	47.1	33.0	23.6	11.8	21.2	18.9	16.5	18.9	23.6
77.5°	42.4	35.4	33.0	26.0	23.6	18.9	18.9	18.9	18.9	21.2	23.6
80°	26.0	26.0	18.9	16.5	14.1	11.8	14.1	14.1	14.1	14.1	16.5
82.5°	16.5	14.1	14.1	11.8	11.8	9.4	9.4	9.4	9.4	9.4	14.1
85°	14.1	9.4	9.4	7.1	9.4	16.5	7.1	9.4	9.4	9.4	7.1
87.5°	4.7	7.1	7.1	7.1	4.7	2.4	4.7	7.1	7.1	11.8	9.4
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°	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4	4391.4
2.5°	4398.5	4400.8	4400.8	4398.5	4398.5	4393.7	4403.1	4396.1	4398.5	4407.9	4400.8
5°	4403.1	4405.5	4405.5	4403.1	4403.1	4403.1	4405.5	4405.5	4403.1	4400.8	4405.5
7.5°	4412.6	4410.2	4410.2	4405.5	4405.5	4400.8	4405.5	4398.5	4403.1	4398.5	4405.5
10°	4400.8	4403.1	4400.8	4398.5	4398.5	4396.1	4396.1	4389.0	4391.4	4384.3	4389.0
12.5°	4393.7	4391.4	4391.4	4386.6	4382.0	4377.2	4374.9	4367.8	4367.8	4351.3	4358.4
15°	4374.9	4377.2	4370.2	4360.8	4356.0	4344.3	4339.5	4330.1	4320.7	4308.9	4311.3
17.5°	4358.4	4351.3	4341.9	4332.4	4313.6	4304.2	4294.7	4280.6	4275.9	4261.7	4257.1
20°	4308.9	4304.2	4292.4	4275.9	4264.1	4242.9	4233.5	4219.3	4207.5	4193.4	4186.3
22.5°	4245.2	4240.5	4226.4	4209.9	4191.0	4181.6	4172.2	4146.3	4134.4	4120.3	4117.9
25°	4165.1	4158.0	4143.9	4125.0	4115.6	4089.7	4080.2	4061.4	4056.7	4042.5	4040.2
27.5°	4042.5	4033.1	4016.6	3993.0	3976.5	3960.0	3950.6	3936.4	3931.8	3917.6	3915.3
30°	3858.7	3846.9	3813.9	3804.5	3776.2	3759.7	3759.7	3740.8	3743.2	3733.8	3733.8
32.5°	3568.7	3549.9	3523.9	3505.1	3486.2	3476.8	3476.8	3469.7	3474.4	3474.4	3479.2
35°	3184.5	3158.6	3144.4	3132.7	3132.7	3142.1	3170.4	3177.5	3191.6	3203.4	3212.8
37.5°	2691.8	2689.5	2706.0	2720.2	2755.5	2795.6	2845.1	2887.5	2927.6	2955.9	2984.1
40°	2159.2	2218.1	2265.2	2331.3	2385.4	2463.2	2552.8	2625.9	2694.2	2743.8	2795.6
42.5°	1685.3	1760.8	1859.8	1956.4	2053.1	2159.2	2277.0	2378.4	2467.9	2536.3	2590.5
45°	1312.9	1416.6	1536.9	1659.4	1784.4	1916.4	2039.0	2142.7	2237.0	2307.7	2361.9
47.5°	1058.4	1171.5	1308.2	1442.6	1584.0	1723.1	1859.8	1949.4	2027.1	2083.7	2133.3
50°	874.5	994.7	1138.5	1291.7	1433.1	1572.2	1690.1	1777.3	1841.0	1890.4	1921.1
52.5°	730.7	858.0	1011.2	1164.4	1305.8	1433.1	1539.3	1605.2	1657.1	1692.4	1720.7
55°	603.4	726.0	869.8	1013.6	1152.7	1272.8	1360.1	1409.6	1449.6	1470.8	1487.3
57.5°	492.7	605.8	737.8	869.8	990.0	1089.0	1157.4	1206.9	1225.7	1242.2	1239.9
60°	386.6	492.7	612.9	726.0	829.7	909.8	959.4	987.6	1001.8	1008.9	1004.1
62.5°	304.1	400.7	492.7	591.6	667.1	735.4	782.6	782.6	789.6	792.0	799.1
65°	226.3	299.3	379.5	452.6	513.8	558.6	584.6	591.6	601.1	598.7	594.0
67.5°	167.4	221.6	280.5	334.7	377.1	405.4	424.3	440.8	438.5	433.7	431.4
70°	115.5	150.9	202.7	235.7	266.3	294.7	299.3	301.7	304.1	306.4	301.7
72.5°	80.2	106.1	134.4	162.6	181.5	193.3	205.1	207.4	207.4	207.4	205.1
75°	40.1	54.2	80.2	91.9	108.4	113.2	122.6	122.6	129.7	120.2	117.8
77.5°	35.4	42.4	56.6	66.0	73.1	80.2	82.5	89.6	87.2	82.5	84.8
80°	21.2	26.0	35.4	40.1	49.5	51.9	54.2	56.6	54.2	56.6	56.6
82.5°	16.5	18.9	23.6	23.6	30.6	30.6	33.0	33.0	35.4	35.4	35.4
85°	9.4	16.5	14.1	28.3	18.9	18.9	23.6	28.3	23.6	23.6	28.3
87.5°	9.4	9.4	7.1	9.4	9.4	9.4	11.8	14.1	14.1	16.5	14.1
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: P249373

CATALOG NUMBER: LSR8B90D010 EC8B90940 8LBDW0GPH

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	4391.4	4391.4	4391.4	4391.4
2.5°	4398.5	4403.1	4396.1	4393.7
5°	4405.5	4405.5	4400.8	4400.8
7.5°	4405.5	4405.5	4398.5	4393.7
10°	4386.6	4386.6	4379.6	4374.9
12.5°	4351.3	4351.3	4348.9	4341.9
15°	4306.5	4306.5	4297.1	4290.0
17.5°	4245.2	4250.0	4238.2	4238.2
20°	4179.2	4176.9	4167.5	4162.8
22.5°	4110.9	4106.2	4103.8	4089.7
25°	4037.8	4033.1	4026.0	4019.0
27.5°	3912.9	3910.5	3903.4	3894.0
30°	3721.9	3719.6	3710.2	3710.2
32.5°	3474.4	3472.1	3462.7	3465.0
35°	3217.5	3227.0	3222.2	3212.8
37.5°	3003.0	3010.1	3014.8	3010.1
40°	2823.9	2845.1	2847.5	2852.2
42.5°	2633.0	2661.2	2670.7	2675.4
45°	2404.3	2430.2	2451.5	2446.7
47.5°	2170.9	2189.8	2208.6	2194.5
50°	1947.0	1958.8	1965.9	1965.9
52.5°	1734.9	1734.9	1732.5	1734.9
55°	1492.1	1492.1	1482.7	1487.3
57.5°	1237.5	1242.2	1235.1	1223.4
60°	1001.8	990.0	985.3	978.2
62.5°	780.2	780.2	763.7	784.9
65°	584.6	577.5	570.4	568.1
67.5°	424.3	422.0	414.9	412.5
70°	299.3	289.9	287.6	282.8
72.5°	200.4	200.4	195.6	195.6
75°	122.6	110.8	108.4	110.8
77.5°	84.8	82.5	82.5	80.2
80°	56.6	54.2	58.9	51.9
82.5°	35.4	37.7	35.4	37.7
85°	23.6	28.3	26.0	26.0
87.5°	14.1	14.1	14.1	14.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)