

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: P248509

Luminaire Tested: **LSR8B90D010 EC8B90940 8LBDW0WH**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P248509
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P13956)
Test Lab: INNOVATION CENTER-P1
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LSR8B90D010 EC8B90940 8LBDW0WH
Description: PORTFOLIO 8 INCH DOUBLE WALL WASH DISTRIBUTION 60 DEGREE CUTOFF
RECESSED DOWNLIGHT- CYLINDEC
90 CRI 4000 CCT WITH WHEAT TRIM
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8581.0 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.33 / 1.2
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

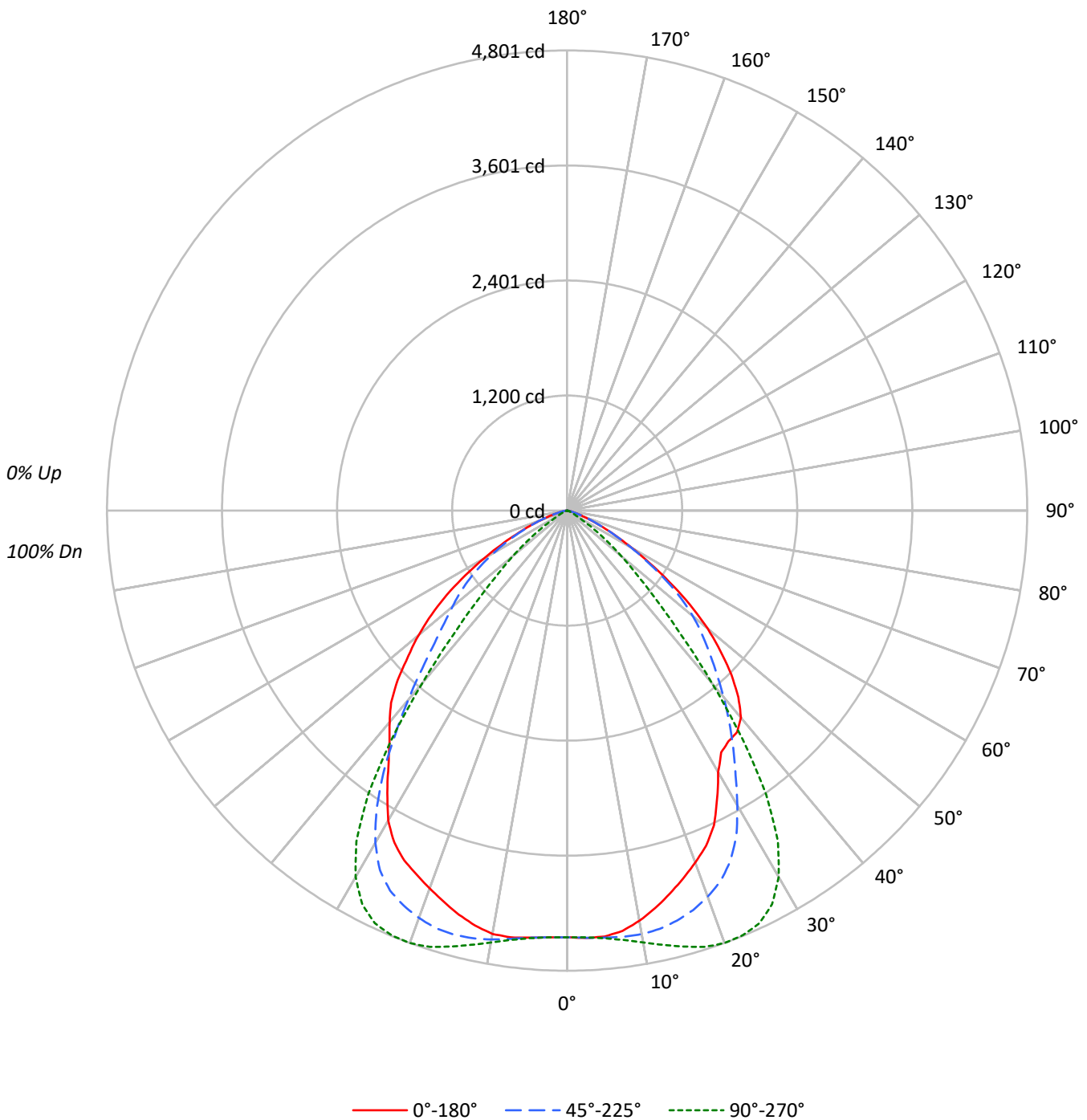
Input Watts (W): 86.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	90					90			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79					79			
3	97	88	82	76	94	87	81	76	84	79	74	81	77	73	79	75	72	70					70			
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64	62					62			
5	84	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56					56			
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50					50			
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45					45			
8	68	56	49	44	67	56	48	43	54	48	43	53	47	43	52	47	43	41					41			
9	64	52	45	40	63	51	44	40	50	44	39	49	44	39	48	43	39	38					38			
10	60	48	41	36	59	48	41	36	47	41	36	46	40	36	45	40	36	34					34			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	137268	137268	137268
5°	138086	138597	138452
10°	136057	143234	140422
15°	132080	150334	139320
20°	128246	157553	137627
25°	123320	161591	136988
30°	112232	157161	132927
35°	110561	136178	122302
40°	113564	94448	115939
45°	105722	57084	109018
50°	91700	35250	97140
55°	70374	18419	82443
60°	47944	7432	62222
65°	29821	3794	42925
70°	16193	2344	26200
75°	8447	1120	15489
80°	3782	1261	8382
85°	2512	849	7536



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	428.1	5.0
10°-20°	1268.2	14.8
20°-30°	1934.7	22.5
30°-40°	2018.9	23.5
40°-50°	1516.5	17.7
50°-60°	933.1	10.9
60°-70°	379.7	4.4
70°-80°	89.5	1.0
80°-90°	12.3	0.1
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°	3631.0	42.3
0°-40°	5650.0	65.8
0°-60°	8099.5	94.4
0°-90°	8581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8581.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4452	4452	4452	4452	4452	
5°	4461	4473	4478	4473	4473	422
15°	4137	4428	4709	4579	4364	1165
25°	3624	4031	4749	4374	4026	1648
35°	2937	3020	3618	3343	3249	1854
45°	2424	2098	1309	1954	2500	1850
55°	1309	1243	343	1243	1534	1177
65°	409	414	52	555	588	426
75°	71	71	9	125	130	85
85°	7	7	2	16	21	10
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°	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5
2.5°	4463.4	4456.3	4463.4	4463.4	4465.7	4461.0	4463.4	4465.7	4461.0	4461.0	4461.0
5°	4461.0	4456.3	4461.0	4458.6	4463.4	4463.4	4468.1	4468.1	4472.8	4472.8	4479.9
7.5°	4423.2	4413.8	4423.2	4430.3	4435.0	4444.5	4456.3	4465.7	4475.2	4484.6	4496.4
10°	4345.2	4345.2	4352.3	4366.5	4380.6	4397.2	4418.5	4442.1	4465.7	4487.0	4508.2
12.5°	4248.4	4241.2	4255.4	4274.3	4295.6	4321.6	4354.7	4390.1	4427.9	4470.4	4503.6
15°	4137.3	4130.2	4146.7	4165.6	4191.6	4229.5	4269.6	4316.9	4371.2	4427.9	4482.3
17.5°	4023.9	4021.5	4038.0	4064.0	4085.3	4125.4	4177.5	4234.1	4295.6	4371.2	4442.1
20°	3908.1	3905.8	3922.3	3943.6	3971.9	4009.7	4061.7	4127.8	4201.1	4286.2	4368.8
22.5°	3787.6	3790.0	3804.1	3827.8	3851.4	3891.5	3945.9	4012.1	4092.4	4184.5	4276.7
25°	3624.5	3612.8	3631.7	3655.3	3695.4	3728.5	3780.5	3851.4	3934.1	4031.0	4139.7
27.5°	3388.3	3385.9	3402.5	3423.7	3459.1	3499.3	3556.0	3629.3	3716.7	3823.0	3929.3
30°	3152.0	3156.7	3163.8	3185.1	3208.7	3248.9	3305.6	3367.0	3449.7	3551.3	3664.7
32.5°	2991.3	2991.3	3000.8	3015.0	3031.5	3052.8	3092.9	3137.8	3201.6	3272.5	3355.2
35°	2937.0	2927.5	2937.0	2939.3	2941.7	2946.4	2953.5	2967.7	2988.9	3019.7	3050.4
37.5°	2913.4	2906.3	2906.3	2896.8	2885.0	2870.8	2851.9	2830.6	2807.1	2776.3	2752.7
40°	2821.2	2816.5	2811.7	2802.3	2776.3	2748.0	2717.2	2667.6	2613.3	2537.6	2462.1
42.5°	2644.0	2639.3	2636.9	2618.0	2594.4	2561.3	2525.8	2473.9	2405.4	2308.5	2199.8
45°	2424.3	2414.8	2407.7	2391.2	2374.6	2346.3	2313.2	2265.9	2197.4	2098.2	1968.2
47.5°	2169.1	2164.3	2162.0	2154.9	2138.4	2121.8	2100.6	2062.8	2001.3	1906.8	1772.1
50°	1911.5	1902.1	1906.8	1904.5	1897.3	1885.6	1871.3	1845.4	1798.1	1713.0	1590.2
52.5°	1616.1	1616.1	1613.8	1620.9	1623.2	1620.9	1623.2	1594.9	1554.7	1490.9	1387.0
55°	1309.0	1309.0	1316.1	1325.6	1335.0	1337.4	1335.0	1323.2	1294.8	1242.8	1150.7
57.5°	1020.7	1016.0	1030.2	1044.4	1053.8	1063.3	1056.2	1046.7	1030.2	987.6	916.8
60°	777.4	777.4	786.8	796.3	805.7	815.2	812.8	810.4	796.3	767.9	711.2
62.5°	571.8	574.2	574.2	581.3	590.7	600.2	607.2	600.2	593.1	574.2	536.3
65°	408.7	406.4	408.7	415.9	423.0	432.4	437.1	434.8	427.7	413.5	385.2
67.5°	274.1	271.7	281.2	283.5	288.3	297.7	295.4	297.7	295.4	283.5	259.9
70°	179.6	174.8	179.6	177.2	184.3	186.7	191.4	193.7	191.4	184.3	177.2
72.5°	111.1	108.7	111.1	113.4	115.8	118.1	122.9	122.9	120.5	115.8	106.3
75°	70.9	63.8	66.1	61.5	66.1	66.1	70.9	73.3	70.9	70.9	66.1
77.5°	42.6	42.6	42.6	42.6	42.6	42.6	42.6	44.9	47.2	42.6	40.2
80°	21.3	21.3	23.6	23.6	23.6	26.0	23.6	23.6	23.6	26.0	18.9
82.5°	16.5	14.2	14.2	14.2	16.5	14.2	14.2	14.2	14.2	14.2	14.2
85°	7.1	9.4	7.1	4.7	7.1	7.1	9.4	7.1	7.1	7.1	9.4
87.5°	2.4	2.4	0.0	0.0	0.0	2.4	0.0	2.4	2.4	4.7	0.0
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5
2.5°	4463.4	4458.6	4458.6	4456.3	4461.0	4456.3	4458.6	4456.3	4456.3	4461.0	4456.3
5°	4479.9	4482.3	4477.5	4475.2	4482.3	4482.3	4482.3	4477.5	4477.5	4479.9	4477.5
7.5°	4503.6	4508.2	4510.6	4513.0	4517.7	4520.1	4520.1	4517.7	4515.3	4522.5	4513.0
10°	4529.5	4536.6	4550.8	4557.9	4569.7	4569.7	4574.4	4574.4	4569.7	4574.4	4572.1
12.5°	4520.1	4562.6	4586.2	4602.8	4619.3	4633.5	4638.2	4640.6	4638.2	4647.7	4638.2
15°	4536.6	4572.1	4609.9	4638.2	4668.9	4685.4	4690.2	4709.1	4713.8	4716.2	4702.0
17.5°	4510.6	4574.4	4614.6	4657.1	4702.0	4732.7	4761.1	4772.9	4775.3	4780.0	4761.1
20°	4451.5	4522.5	4583.9	4645.3	4697.3	4744.5	4768.2	4801.2	4791.8	4810.7	4784.7
22.5°	4371.2	4451.5	4529.5	4609.9	4664.2	4720.9	4770.5	4794.1	4806.0	4806.0	4777.6
25°	4243.6	4338.1	4423.2	4505.9	4588.6	4657.1	4713.8	4749.3	4756.4	4754.0	4720.9
27.5°	4045.1	4146.7	4246.0	4340.5	4442.1	4522.5	4588.6	4631.1	4642.9	4642.9	4607.5
30°	3771.0	3879.7	3976.6	4090.0	4194.0	4283.8	4376.0	4413.8	4435.0	4435.0	4394.9
32.5°	3445.0	3537.1	3626.9	3738.0	3851.4	3953.0	4040.4	4092.4	4118.4	4116.0	4080.6
35°	3090.6	3135.4	3204.0	3286.7	3388.3	3482.8	3567.8	3617.5	3662.4	3660.0	3626.9
37.5°	2736.1	2724.3	2731.4	2762.1	2825.9	2892.1	2958.2	3005.5	3043.3	3059.9	3052.8
40°	2388.8	2327.4	2268.3	2247.1	2251.7	2275.4	2310.8	2346.3	2388.8	2410.1	2419.5
42.5°	2076.9	1973.0	1869.0	1791.0	1746.1	1731.9	1748.5	1760.3	1786.3	1817.0	1847.7
45°	1826.5	1687.1	1550.0	1429.5	1353.9	1309.0	1299.5	1309.0	1323.2	1353.9	1394.1
47.5°	1620.9	1457.8	1304.3	1169.6	1058.5	999.5	983.0	978.2	992.4	1020.7	1075.1
50°	1438.9	1275.9	1105.8	949.8	834.1	767.9	744.3	734.8	751.4	772.6	822.2
52.5°	1240.5	1079.8	905.0	753.7	633.2	564.7	538.7	524.5	534.0	562.4	612.0
55°	1025.5	876.6	718.3	562.4	446.6	382.8	352.0	342.6	352.0	382.8	432.4
57.5°	810.4	685.2	552.9	406.4	302.4	238.7	207.9	198.5	224.5	236.3	288.3
60°	633.2	531.7	418.2	297.7	207.9	158.3	127.6	120.5	132.3	153.6	196.1
62.5°	474.9	411.1	321.3	212.6	153.6	101.6	85.0	78.0	85.0	101.6	134.7
65°	345.0	295.4	224.5	155.9	104.0	75.6	56.7	52.0	59.1	70.9	99.3
67.5°	236.3	198.5	155.9	108.7	70.9	47.2	40.2	40.2	42.6	52.0	73.3
70°	153.6	130.0	99.3	70.9	47.2	35.4	30.7	26.0	30.7	37.8	49.6
72.5°	96.9	82.7	63.8	49.6	35.4	26.0	21.3	18.9	23.6	28.3	37.8
75°	59.1	44.9	33.1	26.0	18.9	18.9	18.9	9.4	11.8	18.9	23.6
77.5°	35.4	30.7	26.0	21.3	16.5	9.4	9.4	9.4	11.8	14.2	21.3
80°	18.9	16.5	11.8	11.8	9.4	7.1	9.4	7.1	4.7	11.8	14.2
82.5°	11.8	9.4	9.4	9.4	11.8	4.7	7.1	4.7	7.1	9.4	7.1
85°	7.1	7.1	7.1	4.7	11.8	4.7	4.7	2.4	2.4	4.7	4.7
87.5°	0.0	2.4	2.4	0.0	2.4	0.0	2.4	2.4	2.4	2.4	2.4
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°	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5	4451.5
2.5°	4458.6	4456.3	4458.6	4456.3	4456.3	4456.3	4458.6	4458.6	4456.3	4456.3	4461.0
5°	4477.5	4477.5	4477.5	4475.2	4472.8	4472.8	4477.5	4477.5	4470.4	4477.5	4477.5
7.5°	4517.7	4510.6	4517.7	4508.2	4503.6	4505.9	4508.2	4503.6	4498.8	4501.2	4501.2
10°	4569.7	4562.6	4562.6	4555.5	4548.4	4543.7	4539.0	4527.1	4515.3	4513.0	4503.6
12.5°	4631.1	4619.3	4612.2	4598.0	4586.2	4569.7	4555.5	4536.6	4513.0	4496.4	4479.9
15°	4692.5	4673.6	4657.1	4633.5	4607.5	4579.1	4548.4	4517.7	4479.9	4446.8	4418.5
17.5°	4742.2	4716.2	4685.4	4647.7	4609.9	4567.3	4522.5	4477.5	4423.2	4380.6	4347.6
20°	4758.7	4720.9	4680.8	4631.1	4581.5	4522.5	4465.7	4406.7	4345.2	4300.3	4262.5
22.5°	4737.5	4692.5	4642.9	4591.0	4524.8	4461.0	4394.9	4326.3	4271.9	4210.5	4175.1
25°	4678.4	4624.0	4569.7	4508.2	4444.5	4373.6	4302.7	4231.8	4165.6	4132.6	4087.7
27.5°	4557.9	4498.8	4439.7	4376.0	4302.7	4231.8	4158.6	4090.0	4033.3	3988.4	3962.5
30°	4345.2	4276.7	4208.2	4139.7	4075.8	4002.6	3934.1	3877.4	3820.7	3785.2	3759.3
32.5°	4019.1	3957.7	3889.2	3823.0	3764.0	3702.5	3645.8	3596.2	3556.0	3532.4	3513.5
35°	3579.7	3518.2	3466.2	3419.0	3369.4	3343.4	3308.0	3279.6	3263.0	3253.6	3251.2
37.5°	3026.7	2991.3	2974.8	2965.3	2955.9	2948.8	2953.5	2965.3	2974.8	2991.3	3010.2
40°	2436.1	2466.8	2476.2	2509.3	2540.0	2580.2	2625.1	2677.1	2719.6	2773.9	2811.7
42.5°	1897.3	1954.1	2020.2	2091.1	2166.7	2240.0	2329.7	2412.4	2488.0	2556.5	2615.6
45°	1457.8	1545.3	1644.5	1746.1	1847.7	1954.1	2062.8	2164.3	2254.1	2327.4	2388.8
47.5°	1136.5	1233.4	1361.0	1486.2	1609.1	1734.3	1854.8	1961.1	2036.7	2107.6	2162.0
50°	900.2	1011.3	1150.7	1294.8	1429.5	1561.8	1689.4	1788.7	1864.3	1921.0	1961.1
52.5°	697.0	829.3	971.1	1122.3	1266.5	1410.6	1528.7	1620.9	1682.3	1731.9	1762.6
55°	519.8	649.8	801.0	956.9	1103.4	1242.8	1353.9	1434.3	1488.6	1516.9	1533.5
57.5°	375.7	493.8	645.0	801.0	933.3	1065.6	1155.4	1228.7	1259.4	1275.9	1283.0
60°	274.1	382.8	517.4	652.1	777.4	883.7	961.7	1011.3	1034.9	1044.4	1042.0
62.5°	200.8	295.4	411.1	524.5	626.1	713.5	775.0	808.1	819.9	824.6	817.5
65°	153.6	226.8	326.1	413.5	491.5	555.2	600.2	621.4	628.5	626.1	621.4
67.5°	113.4	170.1	243.4	309.5	366.3	415.9	439.5	458.4	463.1	456.0	448.9
70°	80.4	125.2	177.2	222.1	264.6	293.0	319.0	321.3	321.3	319.0	314.3
72.5°	56.7	87.4	120.5	151.2	177.2	198.5	207.9	215.0	212.6	210.3	205.6
75°	37.8	54.3	87.4	94.5	118.1	125.2	134.7	134.7	137.0	130.0	130.0
77.5°	23.6	37.8	52.0	61.5	70.9	80.4	85.0	85.0	87.4	85.0	85.0
80°	14.2	23.6	28.3	42.6	42.6	49.6	52.0	54.3	49.6	56.7	49.6
82.5°	9.4	14.2	21.3	21.3	26.0	30.7	30.7	33.1	33.1	30.7	30.7
85°	7.1	9.4	11.8	14.2	14.2	16.5	14.2	14.2	16.5	18.9	16.5
87.5°	2.4	4.7	2.4	4.7	4.7	9.4	7.1	7.1	7.1	9.4	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



TEST NUMBER: P248509

CATALOG NUMBER: LSR8B90D010 EC8B90940 8LBDW0WH

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	4451.5	4451.5	4451.5	4451.5
2.5°	4456.3	4458.6	4456.3	4456.3
5°	4477.5	4475.2	4477.5	4472.8
7.5°	4494.1	4494.1	4491.7	4491.7
10°	4494.1	4484.6	4484.6	4484.6
12.5°	4458.6	4446.8	4439.7	4435.0
15°	4397.2	4376.0	4366.5	4364.1
17.5°	4316.9	4298.0	4286.2	4279.1
20°	4224.7	4205.8	4191.6	4194.0
22.5°	4144.4	4123.1	4113.7	4108.9
25°	4064.0	4038.0	4031.0	4026.2
27.5°	3934.1	3919.9	3912.8	3905.8
30°	3735.6	3728.5	3716.7	3733.2
32.5°	3506.4	3494.6	3485.2	3492.3
35°	3253.6	3246.5	3253.6	3248.9
37.5°	3022.1	3029.1	3038.6	3043.3
40°	2840.1	2866.1	2875.6	2880.2
42.5°	2658.2	2688.9	2707.8	2719.6
45°	2433.7	2464.4	2485.7	2499.9
47.5°	2202.1	2228.2	2249.4	2247.1
50°	1991.9	2006.0	2015.5	2024.9
52.5°	1779.2	1779.2	1781.5	1781.5
55°	1538.2	1533.5	1531.1	1533.5
57.5°	1273.5	1268.8	1266.5	1259.4
60°	1032.6	1018.4	1008.9	1008.9
62.5°	808.1	791.5	784.5	782.1
65°	607.2	604.9	590.7	588.3
67.5°	439.5	430.0	420.6	423.0
70°	309.5	295.4	295.4	290.6
72.5°	200.8	193.7	191.4	191.4
75°	125.2	125.2	120.5	130.0
77.5°	82.7	82.7	80.4	82.7
80°	49.6	49.6	49.6	47.2
82.5°	30.7	33.1	30.7	30.7
85°	16.5	18.9	14.2	21.3
87.5°	9.4	11.8	9.4	11.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)