

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: P249589

Luminaire Tested: **LSR8B90D010 EC8B90940 8LBDW0MW**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P249589
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 8LBDW0MW
Description: PORTFOLIO 8 INCH DOUBLE WALL WASH DISTRIBUTION 60 DEGREE CUTOFF
RECESSED DOWNLIGHT- CYLINDEC
90 CRI 4000 CCT WITH MATTE WHITE TRIM
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8419.0 lumens
Efficiency: N/A
Efficacy: 97.8 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

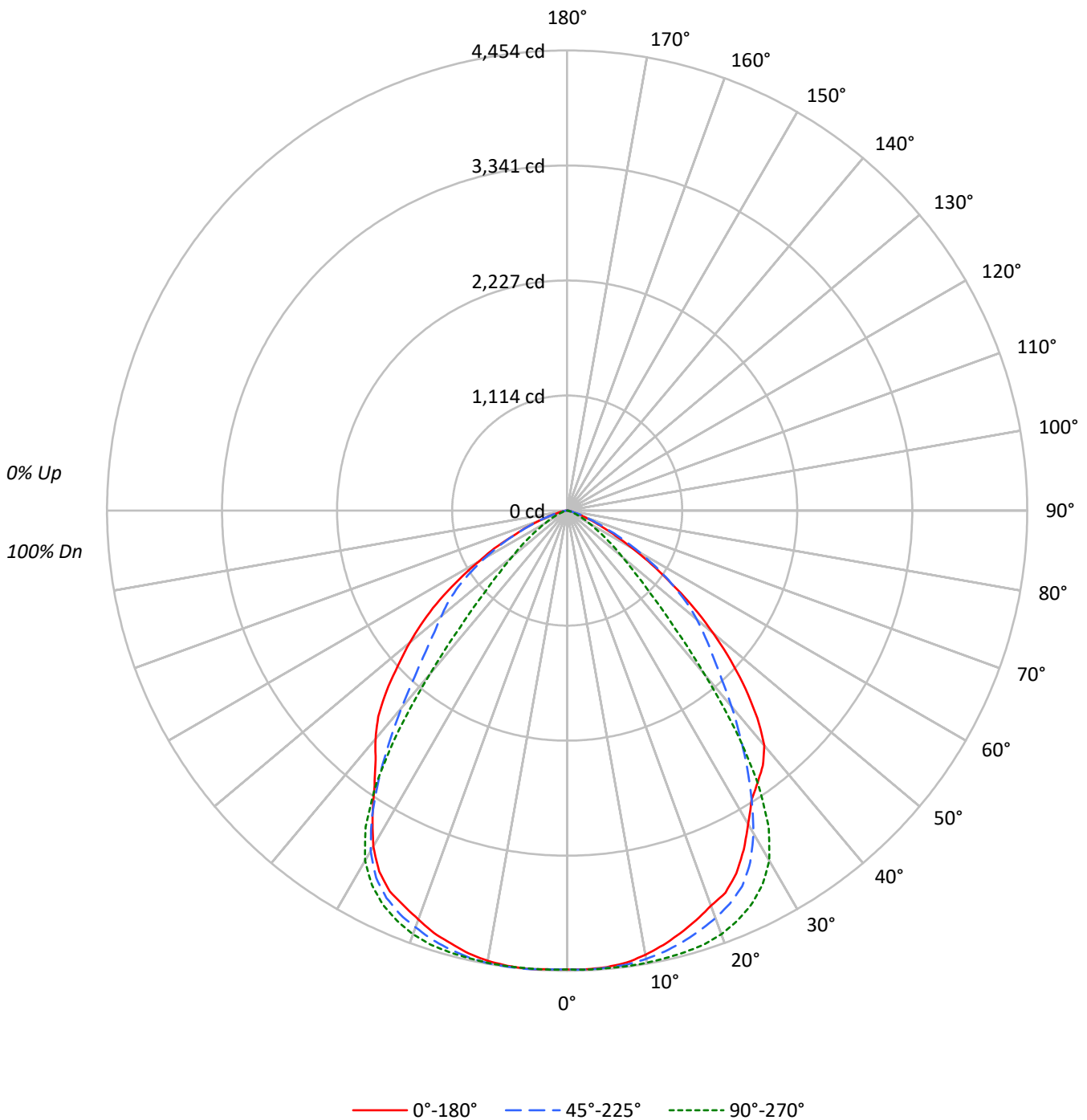
Input Watts (W): 86.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	136975	136975	136975
5°	137278	137647	137795
10°	136699	139163	138565
15°	135186	141200	138535
20°	133562	143183	138179
25°	131826	143350	138318
30°	124716	139318	133632
35°	120992	121083	122340
40°	119494	83310	116137
45°	106476	50015	107928
50°	88534	33284	95399
55°	66401	22945	80884
60°	44996	15295	61025
65°	27143	9916	41926
70°	15048	5373	25795
75°	6815	2276	13356
80°	5931	2539	9305
85°	6758	3361	9305



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	423.9	5.0
10°-20°	1231.1	14.6
20°-30°	1868.7	22.2
30°-40°	1962.6	23.3
40°-50°	1471.5	17.5
50°-60°	944.1	11.2
60°-70°	403.9	4.8
70°-80°	95.4	1.1
80°-90°	17.8	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°	3523.7	41.9
0°-40°	5486.4	65.2
0°-60°	7901.9	93.9
0°-90°	8419.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8419.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4442	4442	4442	4442	4442	
5°	4435	4442	4447	4454	4452	421
15°	4235	4323	4423	4394	4340	1194
25°	3874	4010	4213	4137	4065	1770
35°	3214	3035	3216	3178	3250	2017
45°	2442	1996	1147	1938	2475	1870
55°	1235	1235	427	1288	1504	1120
65°	372	439	136	565	575	397
75°	57	67	19	114	112	83
85°	19	12	10	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°	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0
2.5°	4444.4	4449.2	4446.8	4446.8	4444.4	4446.8	4446.8	4451.6	4451.6	4446.8	4444.4
5°	4434.9	4439.6	4439.6	4434.9	4434.9	4446.8	4439.6	4444.4	4444.4	4442.0	4442.0
7.5°	4413.4	4413.4	4423.0	4415.8	4415.8	4423.0	4420.6	4425.3	4430.1	4432.5	4432.5
10°	4365.7	4370.5	4372.9	4372.9	4375.3	4382.4	4387.2	4396.8	4401.5	4406.3	4408.7
12.5°	4306.2	4313.3	4315.7	4313.3	4320.4	4330.0	4341.9	4353.8	4361.0	4370.5	4377.7
15°	4234.6	4234.6	4239.4	4246.5	4251.3	4265.6	4277.5	4291.8	4310.9	4322.8	4334.7
17.5°	4155.9	4160.7	4167.8	4167.8	4177.4	4201.2	4208.4	4229.8	4251.3	4263.2	4287.1
20°	4070.1	4074.8	4082.0	4086.8	4098.7	4117.8	4132.1	4151.1	4175.0	4196.5	4220.3
22.5°	4003.3	3993.8	3998.5	4003.3	4015.3	4031.9	4048.6	4072.4	4096.3	4117.8	4141.6
25°	3874.5	3876.9	3884.1	3888.8	3903.2	3917.5	3936.6	3965.2	3986.6	4010.5	4036.7
27.5°	3700.5	3702.9	3714.8	3714.8	3726.7	3750.6	3762.5	3786.3	3815.0	3838.8	3869.8
30°	3502.6	3507.3	3507.3	3516.9	3524.0	3536.0	3547.9	3571.8	3586.1	3607.5	3650.5
32.5°	3321.4	3326.1	3323.7	3321.4	3314.2	3311.8	3309.5	3314.2	3319.0	3326.1	3342.8
35°	3214.1	3202.2	3192.7	3176.0	3156.9	3133.0	3111.6	3083.0	3056.7	3035.3	3011.4
37.5°	3111.6	3109.2	3094.9	3071.0	3032.9	2990.0	2939.9	2877.9	2815.9	2749.1	2684.8
40°	2968.5	2961.3	2949.4	2916.1	2873.1	2820.7	2753.9	2677.6	2577.5	2474.9	2370.0
42.5°	2725.3	2727.7	2713.4	2687.1	2646.6	2596.5	2527.4	2444.0	2336.7	2215.0	2079.2
45°	2441.6	2441.6	2436.8	2415.3	2386.7	2346.2	2293.7	2224.6	2119.7	1995.7	1850.2
47.5°	2145.9	2148.3	2141.1	2136.4	2124.4	2098.2	2060.1	2007.6	1933.7	1814.5	1669.0
50°	1845.5	1845.5	1857.4	1855.0	1855.0	1845.5	1828.8	1797.8	1733.4	1638.0	1502.2
52.5°	1545.0	1549.8	1557.0	1566.5	1578.4	1597.5	1578.4	1564.1	1523.6	1449.7	1332.9
55°	1235.1	1239.9	1251.8	1268.5	1282.8	1301.9	1306.6	1306.6	1285.1	1235.1	1146.9
57.5°	970.4	963.3	972.8	987.1	1006.2	1025.3	1039.6	1056.3	1053.9	1020.5	949.0
60°	729.6	732.0	739.1	753.5	767.8	784.5	803.5	817.8	825.0	808.3	763.0
62.5°	531.7	531.7	541.2	555.5	562.7	586.6	598.5	605.6	612.8	610.4	581.8
65°	372.0	376.7	381.5	388.7	395.8	410.1	417.3	431.5	436.3	438.7	417.3
67.5°	262.3	255.1	259.9	264.6	271.8	281.4	295.7	295.7	302.8	302.8	288.5
70°	166.9	166.9	169.3	176.4	181.2	183.6	188.4	193.1	200.3	197.9	197.9
72.5°	112.1	109.7	112.1	114.5	116.9	124.0	124.0	126.4	131.2	133.5	124.0
75°	57.2	59.6	64.4	62.0	69.1	64.4	66.7	73.9	71.5	66.7	66.7
77.5°	47.7	47.7	47.7	45.3	50.1	50.1	47.7	52.4	50.1	50.1	47.7
80°	33.4	35.8	33.4	31.0	33.4	31.0	31.0	31.0	31.0	31.0	28.6
82.5°	26.3	21.5	23.9	21.5	23.9	23.9	21.5	19.1	19.1	21.5	19.1
85°	19.1	14.3	16.7	16.7	14.3	14.3	14.3	14.3	14.3	11.9	11.9
87.5°	11.9	7.2	7.2	7.2	9.5	9.5	9.5	7.2	9.5	9.5	4.8
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: P249589

CATALOG NUMBER: LSR8B90D010 EC8B90940 8LBDW0MW

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0
2.5°	4449.2	4446.8	4451.6	4449.2	4449.2	4446.8	4449.2	4446.8	4451.6	4442.0	4444.4
5°	4449.2	4444.4	4446.8	4449.2	4451.6	4446.8	4446.8	4446.8	4451.6	4446.8	4449.2
7.5°	4439.6	4437.2	4444.4	4449.2	4446.8	4444.4	4449.2	4446.8	4451.6	4449.2	4453.9
10°	4420.6	4423.0	4427.7	4434.9	4437.2	4439.6	4444.4	4444.4	4451.6	4442.0	4446.8
12.5°	4392.0	4401.5	4413.4	4418.2	4427.7	4427.7	4432.5	4434.9	4439.6	4437.2	4444.4
15°	4356.2	4368.1	4382.4	4394.4	4406.3	4413.4	4420.6	4423.0	4430.1	4423.0	4425.3
17.5°	4313.3	4327.6	4349.0	4363.3	4382.4	4389.6	4399.1	4403.9	4411.1	4406.3	4408.7
20°	4253.6	4270.4	4294.2	4315.7	4327.6	4344.3	4356.2	4363.3	4368.1	4363.3	4365.7
22.5°	4170.2	4194.1	4225.1	4241.7	4265.6	4279.9	4282.3	4299.0	4310.9	4299.0	4303.8
25°	4072.4	4096.3	4120.2	4155.9	4177.4	4194.1	4210.8	4213.2	4225.1	4222.7	4220.3
27.5°	3910.3	3941.3	3981.8	4010.5	4039.1	4065.3	4084.4	4089.1	4101.1	4096.3	4098.7
30°	3688.6	3722.0	3760.1	3805.4	3846.0	3872.2	3896.0	3912.7	3924.6	3917.5	3915.1
32.5°	3373.9	3407.2	3447.8	3493.1	3540.8	3578.9	3607.5	3629.0	3643.3	3638.5	3626.6
35°	3013.8	3023.4	3049.6	3085.4	3125.9	3166.4	3192.7	3216.5	3233.1	3237.9	3237.9
37.5°	2644.2	2613.3	2594.2	2594.2	2618.0	2634.7	2658.5	2672.8	2699.1	2708.6	2715.8
40°	2286.6	2215.0	2148.3	2098.2	2064.9	2062.5	2062.5	2069.6	2093.5	2124.4	2153.1
42.5°	1967.1	1852.6	1750.1	1657.1	1590.4	1552.2	1535.5	1537.9	1557.0	1585.6	1633.3
45°	1712.0	1568.9	1440.1	1328.1	1237.5	1177.8	1149.3	1146.9	1161.2	1194.5	1247.0
47.5°	1514.1	1361.4	1216.0	1087.2	989.5	925.1	891.7	882.2	891.7	922.7	984.7
50°	1349.5	1192.2	1042.0	908.4	803.5	736.8	705.8	693.8	705.8	732.0	794.0
52.5°	1196.9	1034.8	894.1	765.4	653.3	596.1	562.7	555.5	562.7	593.7	643.8
55°	1020.5	882.2	743.9	615.1	517.4	460.2	433.9	426.8	433.9	462.6	515.0
57.5°	846.5	727.2	605.6	488.8	405.4	355.2	331.4	321.9	338.6	357.6	419.6
60°	684.3	589.0	486.4	383.9	314.7	269.4	250.3	248.0	252.7	276.6	319.5
62.5°	536.5	457.8	376.7	293.3	236.0	217.0	193.1	190.8	195.5	209.8	243.2
65°	386.3	336.2	274.2	214.6	169.3	143.1	133.5	135.9	140.7	150.2	181.2
67.5°	269.4	233.7	190.8	150.2	116.9	104.9	95.4	93.0	95.4	112.1	128.8
70°	181.2	159.7	128.8	114.5	81.1	64.4	66.7	59.6	69.1	69.1	83.4
72.5°	119.2	104.9	85.8	66.7	57.2	45.3	45.3	42.9	47.7	50.1	62.0
75°	62.0	47.7	47.7	33.4	23.9	11.9	21.5	19.1	16.7	19.1	23.9
77.5°	42.9	35.8	33.4	26.3	23.9	19.1	19.1	19.1	19.1	21.5	23.9
80°	26.3	26.3	19.1	16.7	14.3	11.9	14.3	14.3	14.3	14.3	16.7
82.5°	16.7	14.3	14.3	11.9	11.9	9.5	9.5	9.5	9.5	9.5	14.3
85°	14.3	9.5	9.5	7.2	9.5	16.7	7.2	9.5	9.5	9.5	7.2
87.5°	4.8	7.2	7.2	7.2	4.8	2.4	4.8	7.2	7.2	11.9	9.5
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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CATALOG NUMBER: LSR8B90D010 EC8B90940 8LBDW0MW

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0	4442.0
2.5°	4449.2	4451.6	4451.6	4449.2	4449.2	4444.4	4453.9	4446.8	4449.2	4458.7	4451.6
5°	4453.9	4456.3	4456.3	4453.9	4453.9	4453.9	4456.3	4456.3	4453.9	4451.6	4456.3
7.5°	4463.5	4461.1	4461.1	4456.3	4456.3	4451.6	4456.3	4449.2	4453.9	4449.2	4456.3
10°	4451.6	4453.9	4451.6	4449.2	4449.2	4446.8	4446.8	4439.6	4442.0	4434.9	4439.6
12.5°	4444.4	4442.0	4442.0	4437.2	4432.5	4427.7	4425.3	4418.2	4418.2	4401.5	4408.7
15°	4425.3	4427.7	4420.6	4411.1	4406.3	4394.4	4389.6	4380.0	4370.5	4358.6	4361.0
17.5°	4408.7	4401.5	4392.0	4382.4	4363.3	4353.8	4344.3	4330.0	4325.2	4310.9	4306.2
20°	4358.6	4353.8	4341.9	4325.2	4313.3	4291.8	4282.3	4268.0	4256.0	4241.7	4234.6
22.5°	4294.2	4289.4	4275.1	4258.4	4239.4	4229.8	4220.3	4194.1	4182.1	4167.8	4165.4
25°	4213.2	4206.0	4191.7	4172.6	4163.0	4136.8	4127.3	4108.2	4103.5	4089.1	4086.8
27.5°	4089.1	4079.6	4062.9	4039.1	4022.4	4005.7	3996.2	3981.8	3977.1	3962.8	3960.4
30°	3903.2	3891.2	3857.9	3848.4	3819.7	3803.0	3803.0	3783.9	3786.3	3776.8	3776.8
32.5°	3609.9	3590.8	3564.6	3545.5	3526.4	3516.9	3516.9	3509.7	3514.5	3514.5	3519.3
35°	3221.2	3195.0	3180.7	3168.8	3168.8	3178.3	3206.9	3214.1	3228.4	3240.3	3249.9
37.5°	2722.9	2720.6	2737.2	2751.5	2787.3	2827.8	2877.9	2920.8	2961.3	2990.0	3018.6
40°	2184.1	2243.7	2291.3	2358.1	2412.9	2491.6	2582.2	2656.2	2725.3	2775.4	2827.8
42.5°	1704.8	1781.1	1881.3	1979.0	2076.8	2184.1	2303.3	2405.8	2496.4	2565.5	2620.4
45°	1328.1	1433.0	1554.6	1678.6	1805.0	1938.5	2062.5	2167.4	2262.8	2334.3	2389.1
47.5°	1070.6	1185.0	1323.3	1459.2	1602.3	1742.9	1881.3	1971.9	2050.5	2107.7	2157.9
50°	884.6	1006.2	1151.7	1306.6	1449.7	1590.4	1709.6	1797.8	1862.2	1912.2	1943.2
52.5°	739.1	867.9	1022.9	1177.8	1320.9	1449.7	1557.0	1623.7	1676.2	1712.0	1740.5
55°	610.4	734.4	879.8	1025.3	1165.9	1287.5	1375.7	1425.9	1466.3	1487.8	1504.5
57.5°	498.3	612.8	746.3	879.8	1001.4	1101.6	1170.7	1220.8	1239.9	1256.5	1254.2
60°	391.1	498.3	619.9	734.4	839.3	920.3	970.4	999.0	1013.3	1020.5	1015.7
62.5°	307.6	405.4	498.3	598.5	674.8	743.9	791.6	791.6	798.7	801.1	808.3
65°	228.9	302.8	383.9	457.8	519.8	565.1	591.3	598.5	608.0	605.6	600.9
67.5°	169.3	224.1	283.7	338.6	381.5	410.1	429.2	445.9	443.5	438.7	436.3
70°	116.9	152.6	205.1	238.4	269.4	298.1	302.8	305.2	307.6	310.0	305.2
72.5°	81.1	107.3	135.9	164.5	183.6	195.5	207.5	209.8	209.8	209.8	207.5
75°	40.5	54.8	81.1	93.0	109.7	114.5	124.0	124.0	131.2	121.6	119.2
77.5°	35.8	42.9	57.2	66.7	73.9	81.1	83.4	90.6	88.2	83.4	85.8
80°	21.5	26.3	35.8	40.5	50.1	52.4	54.8	57.2	54.8	57.2	57.2
82.5°	16.7	19.1	23.9	23.9	31.0	31.0	33.4	33.4	35.8	35.8	35.8
85°	9.5	16.7	14.3	28.6	19.1	19.1	23.9	28.6	23.9	23.9	28.6
87.5°	9.5	9.5	7.2	9.5	9.5	9.5	11.9	14.3	14.3	16.7	14.3
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: P249589

CATALOG NUMBER: LSR8B90D010 EC8B90940 8LBDW0MW

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	4442.0	4442.0	4442.0	4442.0
2.5°	4449.2	4453.9	4446.8	4444.4
5°	4456.3	4456.3	4451.6	4451.6
7.5°	4456.3	4456.3	4449.2	4444.4
10°	4437.2	4437.2	4430.1	4425.3
12.5°	4401.5	4401.5	4399.1	4392.0
15°	4356.2	4356.2	4346.6	4339.5
17.5°	4294.2	4299.0	4287.1	4287.1
20°	4227.5	4225.1	4215.5	4210.8
22.5°	4158.3	4153.5	4151.1	4136.8
25°	4084.4	4079.6	4072.4	4065.3
27.5°	3958.0	3955.6	3948.5	3939.0
30°	3764.9	3762.5	3753.0	3753.0
32.5°	3514.5	3512.1	3502.6	3505.0
35°	3254.6	3264.2	3259.4	3249.9
37.5°	3037.6	3044.8	3049.6	3044.8
40°	2856.4	2877.9	2880.3	2885.1
42.5°	2663.3	2691.9	2701.5	2706.2
45°	2432.0	2458.3	2479.7	2474.9
47.5°	2196.0	2215.0	2234.1	2219.8
50°	1969.5	1981.4	1988.6	1988.6
52.5°	1754.9	1754.9	1752.5	1754.9
55°	1509.3	1509.3	1499.8	1504.5
57.5°	1251.8	1256.5	1249.4	1237.5
60°	1013.3	1001.4	996.6	989.5
62.5°	789.2	789.2	772.6	794.0
65°	591.3	584.2	577.0	574.6
67.5°	429.2	426.8	419.6	417.3
70°	302.8	293.3	290.9	286.1
72.5°	202.7	202.7	197.9	197.9
75°	124.0	112.1	109.7	112.1
77.5°	85.8	83.4	83.4	81.1
80°	57.2	54.8	59.6	52.4
82.5°	35.8	38.2	35.8	38.2
85°	23.9	28.6	26.3	26.3
87.5°	14.3	14.3	14.3	14.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)