

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: P249436

Luminaire Tested: **LSR8B90D010 EC8B90840 8LBDW0B**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P249436
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 EC8B90840 8LBDW0B
Description: PORTFOLIO 8 INCH DOUBLE WALL WASH DISTRIBUTION 60 DEGREE CUTOFF
RECESSED DOWNLIGHT- CYLINDEC
80 CRI 4000 CCT WITH SPECULAR BLACK TRIM
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8404.0 lumens
Efficiency: N/A
Efficacy: 97.6 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

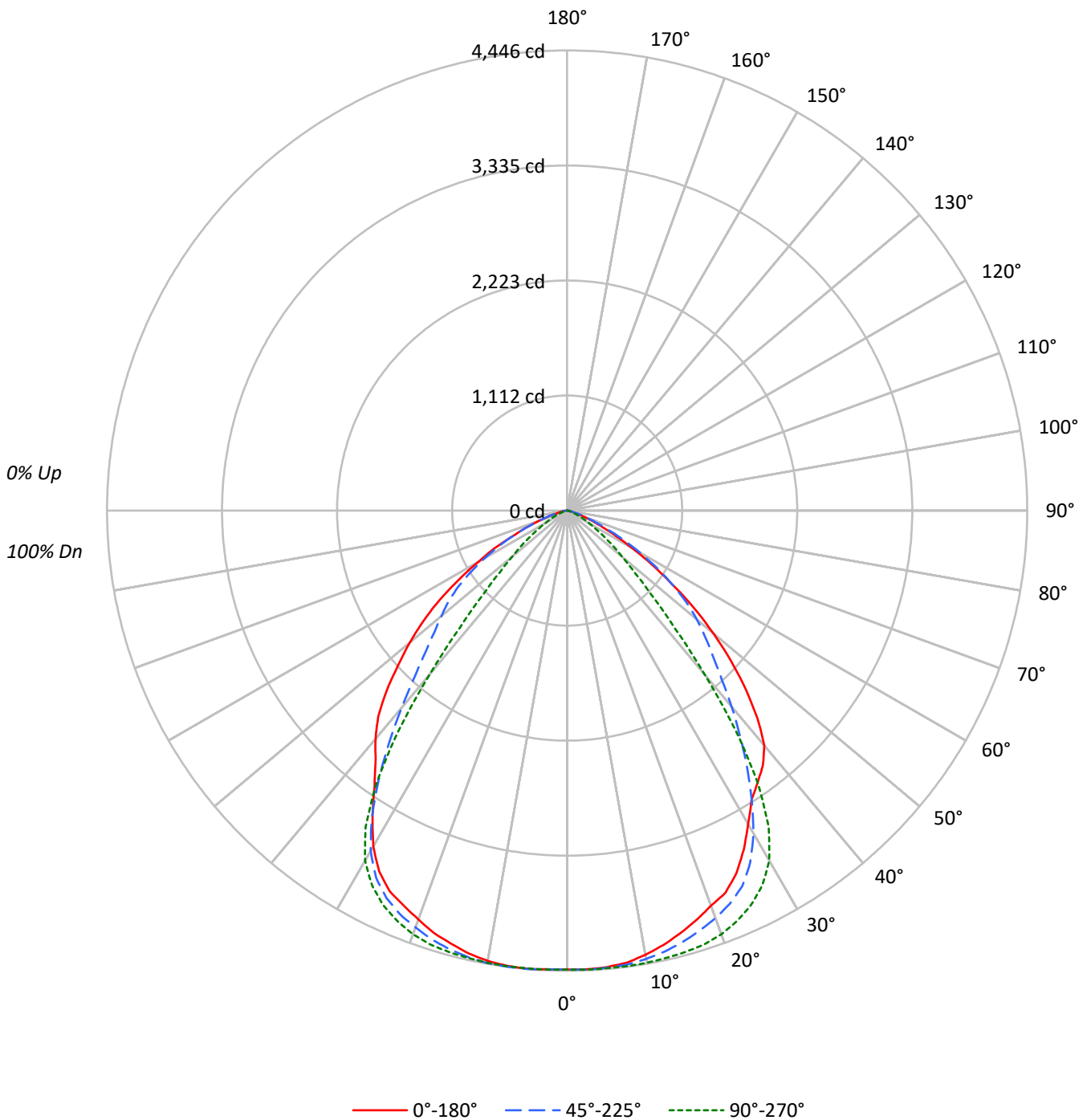
Input Watts (W): 86.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	90
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70
4	89	80	72	67	87	78	72	66	76	70	66	74	69	65	72	67	64	62
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	51	50
7	72	61	53	48	71	60	53	48	59	52	47	57	51	47	56	51	47	45
8	68	56	48	43	66	55	48	43	54	48	43	53	47	43	52	46	42	41
9	64	52	44	39	62	51	44	39	50	44	39	49	43	39	48	43	39	37
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	136731	136731	136731
5°	137034	137402	137551
10°	136455	138916	138321
15°	134943	140948	138289
20°	133325	142930	137933
25°	131592	143095	138073
30°	124495	139069	133393
35°	120778	120864	122122
40°	119281	83161	115927
45°	106284	49924	107736
50°	88375	33226	95226
55°	66283	22908	80739
60°	44916	15264	60920
65°	27092	9901	41853
70°	15021	5364	25750
75°	6803	2264	13332
80°	5913	2539	9305
85°	6722	3361	9270



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	423.2	5.0
10°-20°	1229.0	14.6
20°-30°	1865.3	22.2
30°-40°	1959.1	23.3
40°-50°	1468.8	17.5
50°-60°	942.4	11.2
60°-70°	403.2	4.8
70°-80°	95.2	1.1
80°-90°	17.7	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°	3517.5	41.9
0°-40°	5476.6	65.2
0°-60°	7887.9	93.9
0°-90°	8404.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8404.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4434	4434	4434	4434	4434	
5°	4427	4434	4439	4446	4444	421
15°	4227	4315	4415	4386	4332	1192
25°	3868	4003	4206	4130	4058	1767
35°	3208	3030	3211	3173	3244	2014
45°	2437	1992	1145	1935	2470	1867
55°	1233	1233	426	1285	1502	1118
65°	371	438	136	564	574	396
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°	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1
2.5°	4436.5	4441.3	4438.9	4438.9	4436.5	4438.9	4438.9	4443.7	4443.7	4438.9	4436.5
5°	4427.0	4431.7	4431.7	4427.0	4427.0	4438.9	4431.7	4436.5	4436.5	4434.1	4434.1
7.5°	4405.6	4405.6	4415.1	4408.0	4408.0	4415.1	4412.7	4417.5	4422.2	4424.6	4424.6
10°	4357.9	4362.7	4365.1	4365.1	4367.5	4374.6	4379.4	4388.9	4393.6	4398.4	4400.8
12.5°	4298.5	4305.6	4308.0	4305.6	4312.7	4322.2	4334.2	4346.1	4353.2	4362.7	4369.9
15°	4227.0	4227.0	4231.8	4239.0	4243.7	4258.0	4269.9	4284.2	4303.2	4315.1	4327.0
17.5°	4148.5	4153.3	4160.4	4160.4	4170.0	4193.7	4200.9	4222.3	4243.7	4255.6	4279.4
20°	4062.9	4067.6	4074.7	4079.5	4091.4	4110.4	4124.7	4143.7	4167.6	4189.0	4212.8
22.5°	3996.2	3986.7	3991.4	3996.2	4008.1	4024.8	4041.4	4065.2	4089.0	4110.4	4134.3
25°	3867.6	3870.0	3877.2	3881.9	3896.2	3910.5	3929.5	3958.1	3979.5	4003.3	4029.5
27.5°	3693.9	3696.3	3708.2	3708.2	3720.1	3743.9	3755.8	3779.6	3808.2	3831.9	3862.9
30°	3496.4	3501.1	3501.1	3510.6	3517.8	3529.7	3541.6	3565.4	3579.7	3601.1	3644.0
32.5°	3315.5	3320.2	3317.8	3315.5	3308.3	3305.9	3303.6	3308.3	3313.1	3320.2	3336.9
35°	3208.4	3196.5	3187.0	3170.3	3151.3	3127.4	3106.0	3077.5	3051.3	3029.8	3006.1
37.5°	3106.0	3103.6	3089.4	3065.5	3027.5	2984.7	2934.7	2872.8	2810.9	2744.2	2680.0
40°	2963.2	2956.1	2944.2	2910.9	2868.0	2815.6	2749.0	2672.9	2572.9	2470.5	2365.8
42.5°	2720.4	2722.8	2708.5	2682.3	2641.9	2591.9	2522.9	2439.6	2332.5	2211.1	2075.5
45°	2437.2	2437.2	2432.4	2411.0	2382.5	2342.0	2289.7	2220.6	2115.9	1992.1	1846.9
47.5°	2142.1	2144.5	2137.3	2132.6	2120.6	2094.5	2056.4	2004.1	1930.3	1811.2	1666.0
50°	1842.2	1842.2	1854.1	1851.7	1851.7	1842.2	1825.6	1794.6	1730.3	1635.1	1499.5
52.5°	1542.3	1547.1	1554.2	1563.7	1575.6	1594.6	1575.6	1561.3	1520.9	1447.1	1330.5
55°	1232.9	1237.7	1249.5	1266.2	1280.5	1299.6	1304.3	1304.3	1282.8	1232.9	1144.8
57.5°	968.7	961.6	971.1	985.4	1004.4	1023.5	1037.7	1054.4	1052.0	1018.7	947.3
60°	728.3	730.7	737.8	752.1	766.4	783.1	802.1	816.4	823.5	806.9	761.6
62.5°	530.8	530.8	540.3	554.5	561.7	585.5	597.4	604.6	611.7	609.3	580.7
65°	371.3	376.0	380.8	388.0	395.1	409.3	416.5	430.8	435.6	437.9	416.5
67.5°	261.8	254.7	259.4	264.2	271.3	280.9	295.1	295.1	302.3	302.3	288.0
70°	166.6	166.6	169.0	176.1	180.9	183.3	188.0	192.8	199.9	197.5	197.5
72.5°	111.9	109.5	111.9	114.3	116.6	123.8	123.8	126.1	130.9	133.3	123.8
75°	57.1	59.5	64.2	61.9	69.0	64.2	66.6	73.8	71.4	66.6	66.6
77.5°	47.6	47.6	47.6	45.2	50.0	50.0	47.6	52.4	50.0	50.0	47.6
80°	33.3	35.7	33.3	30.9	33.3	30.9	30.9	30.9	30.9	30.9	28.5
82.5°	26.2	21.4	23.8	21.4	23.8	23.8	21.4	19.0	19.0	21.4	19.0
85°	19.0	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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1
2.5°	4441.3	4438.9	4443.7	4441.3	4441.3	4438.9	4441.3	4438.9	4443.7	4434.1	4436.5
5°	4441.3	4436.5	4438.9	4441.3	4443.7	4438.9	4438.9	4438.9	4443.7	4438.9	4441.3
7.5°	4431.7	4429.3	4436.5	4441.3	4438.9	4436.5	4441.3	4438.9	4443.7	4441.3	4446.0
10°	4412.7	4415.1	4419.8	4427.0	4429.3	4431.7	4436.5	4436.5	4443.7	4434.1	4438.9
12.5°	4384.1	4393.6	4405.6	4410.3	4419.8	4419.8	4424.6	4427.0	4431.7	4429.3	4436.5
15°	4348.4	4360.3	4374.6	4386.5	4398.4	4405.6	4412.7	4415.1	4422.2	4415.1	4417.5
17.5°	4305.6	4319.9	4341.3	4355.6	4374.6	4381.8	4391.3	4396.0	4403.2	4398.4	4400.8
20°	4246.1	4262.8	4286.5	4308.0	4319.9	4336.5	4348.4	4355.6	4360.3	4355.6	4357.9
22.5°	4162.8	4186.6	4217.5	4234.2	4258.0	4272.3	4274.7	4291.3	4303.2	4291.3	4296.1
25°	4065.2	4089.0	4112.8	4148.5	4170.0	4186.6	4203.3	4205.7	4217.5	4215.1	4212.8
27.5°	3903.3	3934.3	3974.7	4003.3	4031.9	4058.1	4077.1	4081.8	4093.8	4089.0	4091.4
30°	3682.0	3715.4	3753.4	3798.6	3839.1	3865.3	3889.1	3905.7	3917.6	3910.5	3908.1
32.5°	3367.9	3401.2	3441.6	3486.8	3534.5	3572.5	3601.1	3622.5	3636.8	3632.0	3620.1
35°	3008.5	3018.0	3044.2	3079.9	3120.3	3160.8	3187.0	3210.7	3227.4	3232.2	3232.2
37.5°	2639.5	2608.6	2589.6	2589.6	2613.3	2630.0	2653.8	2668.1	2694.3	2703.8	2710.9
40°	2282.5	2211.1	2144.5	2094.5	2061.2	2058.8	2058.8	2065.9	2089.7	2120.6	2149.2
42.5°	1963.6	1849.3	1747.0	1654.2	1587.5	1549.5	1532.8	1535.2	1554.2	1582.8	1630.3
45°	1708.9	1566.1	1437.6	1325.7	1235.3	1175.7	1147.2	1144.8	1159.1	1192.4	1244.8
47.5°	1511.4	1359.0	1213.8	1085.3	987.8	923.5	890.2	880.7	890.2	921.1	983.0
50°	1347.1	1190.1	1040.1	906.8	802.1	735.5	704.5	692.6	704.5	730.7	792.5
52.5°	1194.8	1033.0	892.5	764.0	652.1	595.0	561.7	554.5	561.7	592.6	642.6
55°	1018.7	880.7	742.6	614.1	516.5	459.4	433.2	426.1	433.2	461.8	514.1
57.5°	845.0	725.9	604.6	487.9	404.6	354.6	330.8	321.3	338.0	357.0	418.9
60°	683.1	587.9	485.5	383.2	314.2	268.9	249.9	247.5	252.3	276.1	318.9
62.5°	535.5	457.0	376.0	292.8	235.6	216.6	192.8	190.4	195.2	209.4	242.8
65°	385.6	335.6	273.7	214.2	169.0	142.8	133.3	135.7	140.4	150.0	180.9
67.5°	268.9	233.2	190.4	150.0	116.6	104.7	95.2	92.8	95.2	111.9	128.5
70°	180.9	159.5	128.5	114.3	80.9	64.2	66.6	59.5	69.0	69.0	83.3
72.5°	119.0	104.7	85.7	66.6	57.1	45.2	45.2	42.9	47.6	50.0	61.9
75°	61.9	47.6	47.6	33.3	23.8	11.9	21.4	19.0	16.7	19.0	23.8
77.5°	42.9	35.7	33.3	26.2	23.8	19.0	19.0	19.0	19.0	21.4	23.8
80°	26.2	26.2	19.0	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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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1	4434.1
2.5°	4441.3	4443.7	4443.7	4441.3	4441.3	4436.5	4446.0	4438.9	4441.3	4450.8	4443.7
5°	4446.0	4448.4	4448.4	4446.0	4446.0	4446.0	4448.4	4448.4	4446.0	4443.7	4448.4
7.5°	4455.5	4453.2	4453.2	4448.4	4448.4	4443.7	4448.4	4441.3	4446.0	4441.3	4448.4
10°	4443.7	4446.0	4443.7	4441.3	4441.3	4438.9	4438.9	4431.7	4434.1	4427.0	4431.7
12.5°	4436.5	4434.1	4434.1	4429.3	4424.6	4419.8	4417.5	4410.3	4410.3	4393.6	4400.8
15°	4417.5	4419.8	4412.7	4403.2	4398.4	4386.5	4381.8	4372.2	4362.7	4350.8	4353.2
17.5°	4400.8	4393.6	4384.1	4374.6	4355.6	4346.1	4336.5	4322.2	4317.5	4303.2	4298.5
20°	4350.8	4346.1	4334.2	4317.5	4305.6	4284.2	4274.7	4260.4	4248.5	4234.2	4227.0
22.5°	4286.5	4281.8	4267.5	4250.8	4231.8	4222.3	4212.8	4186.6	4174.7	4160.4	4158.0
25°	4205.7	4198.5	4184.2	4165.2	4155.6	4129.5	4119.9	4100.9	4096.2	4081.8	4079.5
27.5°	4081.8	4072.3	4055.7	4031.9	4015.2	3998.6	3989.1	3974.7	3970.0	3955.7	3953.4
30°	3896.2	3884.3	3851.0	3841.5	3812.9	3796.2	3796.2	3777.2	3779.6	3770.1	3770.1
32.5°	3603.5	3584.4	3558.2	3539.2	3520.1	3510.6	3510.6	3503.5	3508.3	3508.3	3513.0
35°	3215.5	3189.4	3175.0	3163.1	3163.1	3172.6	3201.2	3208.4	3222.7	3234.5	3244.1
37.5°	2718.0	2715.7	2732.4	2746.6	2782.3	2822.8	2872.8	2915.6	2956.1	2984.7	3013.2
40°	2180.2	2239.7	2287.3	2353.9	2408.6	2487.2	2577.6	2651.4	2720.4	2770.5	2822.8
42.5°	1701.7	1777.9	1877.9	1975.5	2073.1	2180.2	2299.2	2401.5	2492.0	2561.0	2615.7
45°	1325.7	1430.4	1551.8	1675.6	1801.7	1935.0	2058.8	2163.5	2258.7	2330.1	2384.9
47.5°	1068.7	1182.9	1320.9	1456.6	1599.4	1739.8	1877.9	1968.4	2046.9	2104.0	2154.0
50°	883.0	1004.4	1149.6	1304.3	1447.1	1587.5	1706.5	1794.6	1858.9	1908.8	1939.8
52.5°	737.8	866.3	1021.1	1175.7	1318.5	1447.1	1554.2	1620.9	1673.2	1708.9	1737.4
55°	609.3	733.1	878.3	1023.5	1163.9	1285.2	1373.3	1423.3	1463.7	1485.2	1501.8
57.5°	497.5	611.7	745.0	878.3	999.6	1099.6	1168.6	1218.6	1237.7	1254.3	1251.9
60°	390.4	497.5	618.8	733.1	837.8	918.7	968.7	997.3	1011.5	1018.7	1013.9
62.5°	307.0	404.6	497.5	597.4	673.6	742.6	790.2	790.2	797.3	799.7	806.9
65°	228.5	302.3	383.2	457.0	518.8	564.1	590.3	597.4	606.9	604.6	599.8
67.5°	169.0	223.7	283.2	338.0	380.8	409.3	428.4	445.1	442.7	437.9	435.6
70°	116.6	152.3	204.7	238.0	268.9	297.5	302.3	304.6	307.0	309.4	304.6
72.5°	80.9	107.1	135.7	164.2	183.3	195.2	207.1	209.4	209.4	209.4	207.1
75°	40.5	54.7	80.9	92.8	109.5	114.3	123.8	123.8	130.9	121.4	119.0
77.5°	35.7	42.9	57.1	66.6	73.8	80.9	83.3	90.4	88.1	83.3	85.7
80°	21.4	26.2	35.7	40.5	50.0	52.4	54.7	57.1	54.7	57.1	57.1
82.5°	16.7	19.0	23.8	23.8	30.9	30.9	33.3	33.3	35.7	35.7	35.7
85°	9.5	16.7	14.3	28.5	19.0	19.0	23.8	28.5	23.8	23.8	28.5
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: P249436

CATALOG NUMBER: LSR8B90D010 EC8B90840 8LBDW0B

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	4434.1	4434.1	4434.1	4434.1
2.5°	4441.3	4446.0	4438.9	4436.5
5°	4448.4	4448.4	4443.7	4443.7
7.5°	4448.4	4448.4	4441.3	4436.5
10°	4429.3	4429.3	4422.2	4417.5
12.5°	4393.6	4393.6	4391.3	4384.1
15°	4348.4	4348.4	4338.9	4331.8
17.5°	4286.5	4291.3	4279.4	4279.4
20°	4219.9	4217.5	4208.0	4203.3
22.5°	4150.9	4146.1	4143.7	4129.5
25°	4077.1	4072.3	4065.2	4058.1
27.5°	3951.0	3948.6	3941.4	3931.9
30°	3758.2	3755.8	3746.3	3746.3
32.5°	3508.3	3505.9	3496.4	3498.8
35°	3248.8	3258.4	3253.6	3244.1
37.5°	3032.2	3039.4	3044.2	3039.4
40°	2851.3	2872.8	2875.2	2879.9
42.5°	2658.6	2687.1	2696.7	2701.4
45°	2427.7	2453.9	2475.3	2470.5
47.5°	2192.0	2211.1	2230.1	2215.9
50°	1966.0	1977.8	1985.0	1985.0
52.5°	1751.8	1751.8	1749.4	1751.8
55°	1506.6	1506.6	1497.1	1501.8
57.5°	1249.5	1254.3	1247.1	1235.3
60°	1011.5	999.6	994.9	987.8
62.5°	787.8	787.8	771.2	792.5
65°	590.3	583.1	576.0	573.6
67.5°	428.4	426.1	418.9	416.5
70°	302.3	292.8	290.4	285.6
72.5°	202.3	202.3	197.5	197.5
75°	123.8	111.9	109.5	111.9
77.5°	85.7	83.3	83.3	80.9
80°	57.1	54.7	59.5	52.4
82.5°	35.7	38.1	35.7	38.1
85°	23.8	28.5	26.2	26.2
87.5°	14.3	14.3	14.3	14.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)