

Scaled data based on original data using
LM-66-11 Electrical and Photometric Measurements of Single-Ended Compact
Fluorescent Lamps

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: SHAPER

Report Number: 20430A

Luminaire Tested: **635-LS-14-CFL/2/13**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 20430A
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 635-LS-14-CFL/2/13
Description: INTERIOR WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC LENS
Light Source: TWO 13 WATT CPFL LAMPS. LUMEN RATING = 1800 LMS.

Ballast/Driver: -

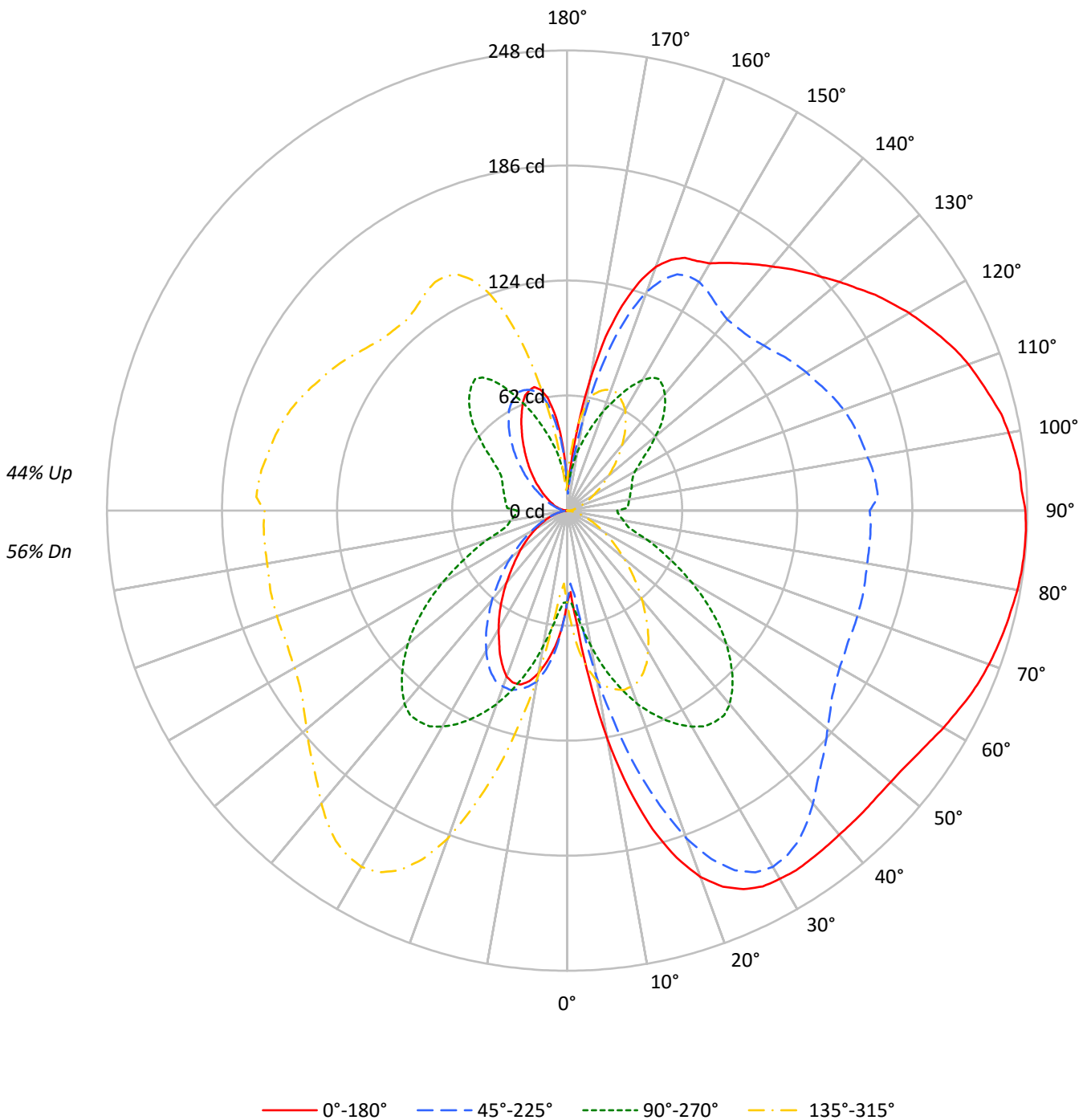
Summary

Lumens per Lamp: 1800 (1 lamp)
Luminaire Lumens: 1179.3 lumens
Efficiency: 65.5%
Efficacy: -
Spacing Criteria (0/90/45): 2.82 / 2.56 / 2.43
Luminous Opening: Rectangular w/ Sides (W: 0.21' x L: 1.08' x H: 0.75')
CIE Type: General Diffuse

Input Watts (W): 0
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

TEST NUMBER: 20430A
CATALOG NUMBER: 635-LS-14-CFL/2/13

Luminous Intensity Polar Plot





TEST NUMBER: 20430A

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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	50	30	10	50	30	10	0																
RCR																																														
0	71	71	71	71	66	66	66	66	57	57	57	48	48	48	40	40	40	40	36	36	36	36	36	36	36	36	36	36	36	36																
1	63	59	55	52	58	55	52	49	46	44	42	39	37	36	32	31	30	30	26	26	26	26	26	26	26	26	26	26	26	26																
2	56	50	45	41	52	47	42	38	40	36	33	33	30	28	27	25	23	23	20	20	20	20	20	20	20	20	20	20	20	20																
3	51	44	38	33	47	40	35	31	34	30	27	29	25	23	23	21	19	19	16	16	16	16	16	16	16	16	16	16	16	16																
4	46	38	32	28	42	35	30	26	30	26	22	25	22	19	20	18	16	16	13	13	13	13	13	13	13	13	13	13	13	13																
5	42	34	28	23	39	31	26	22	27	22	19	22	19	16	18	16	13	13	10	10	10	10	10	10	10	10	10	10	10	10																
6	39	30	24	20	36	28	23	19	24	19	16	20	16	14	16	14	12	12	8	8	8	8	8	8	8	8	8	8	8	8																
7	36	27	21	17	33	25	20	16	21	17	14	18	15	12	15	12	10	10	7	7	7	7	7	7	7	7	7	7	7	7																
8	33	24	19	15	30	23	18	14	19	15	12	16	13	11	13	11	9	9	6	6	6	6	6	6	6	6	6	6	6	6																
9	31	22	17	13	28	21	16	12	18	14	11	15	12	9	12	10	8	8	5	5	5	5	5	5	5	5	5	5	5	5																
10	29	20	15	12	26	19	14	11	16	12	10	14	11	8	11	9	7	7	4	4	4	4	4	4	4	4	4	4	4	4																

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	2345	2345	2345	2345
5°	2789	2007	3301	2007
10°	5363	2194	3821	2194
15°	7366	2350	4022	2350
20°	8470	2435	3842	2435
25°	8904	2442	3386	2442
30°	8966	2405	2887	2405
35°	8939	2299	2429	2299
40°	8929	2113	1996	2113
45°	9015	1850	1612	1850
50°	9195	1575	1317	1575
55°	9551	1294	1055	1294
60°	10092	1022	827	1022
65°	10764	778	623	778
70°	11548	587	463	587
75°	12478	435	301	435
80°	13637	397	155	397
85°	15073	367	6	367



TEST NUMBER: 20430A
 CATALOG NUMBER: 635-LS-14-CFL/2/13

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	6.8	0.6	0.4
10°-20°	33.6	2.8	1.9
20°-30°	67.6	5.7	3.8
30°-40°	90.3	7.7	5.0
40°-50°	97.5	8.3	5.4
50°-60°	95.2	8.1	5.3
60°-70°	90.9	7.7	5.1
70°-80°	88.0	7.5	4.9
80°-90°	86.4	7.3	4.8
90°-100°	88.0	7.5	4.9
100°-110°	85.4	7.2	4.7
110°-120°	79.7	6.8	4.4
120°-130°	73.4	6.2	4.1
130°-140°	68.0	5.8	3.8
140°-150°	59.8	5.1	3.3
150°-160°	44.2	3.7	2.5
160°-170°	21.1	1.8	1.2
170°-180°	3.4	0.3	0.2
0°-30°	108.0	9.2	6.0
0°-40°	198.3	16.8	11.0
0°-60°	391.0	33.2	21.7
0°-90°	656.2	55.6	36.5
90°-120°	253.1	21.5	14.1
90°-150°	454.4	38.5	25.2
90°-180°	523.0	44.3	29.1
0°-180°	1179.3	100.0	65.5

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	49	49	49	49	49	
5°	62	55	74	55	62	8
15°	178	94	97	94	178	50
25°	225	124	86	124	225	104
35°	229	139	62	139	229	144
45°	228	126	41	126	228	176
55°	230	95	25	95	230	207
65°	239	60	14	60	239	237
75°	244	34	6	34	244	258
85°	247	28	0	28	247	202
90°	247	27	0	27	247	135
95°	245	33	0	33	245	199
105°	236	35	4	35	236	250
115°	222	39	9	39	222	220
125°	203	50	16	50	203	182
135°	182	74	26	74	182	141
145°	163	86	40	86	163	102
155°	150	70	58	70	150	69
165°	114	44	69	44	114	33
175°	27	20	42	20	27	4
180°	14	14	14	14	14	



TEST NUMBER: 20430A

CATALOG NUMBER: 635-LS-14-CFL/2/13

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4
2.5°	44.0	41.4	39.3	40.4	49.8	60.4	63.4	64.5	62.9	64.5	63.4
5°	62.1	54.3	45.7	42.4	55.3	72.4	76.6	76.5	73.5	76.5	76.6
7.5°	91.5	79.2	64.0	51.2	64.3	82.6	86.2	85.0	81.8	85.0	86.2
10°	124.9	109.2	90.4	64.8	74.2	91.5	93.4	91.1	89.0	91.1	93.4
12.5°	153.6	139.3	116.5	80.4	84.2	98.6	97.2	96.3	94.2	96.3	97.2
15°	177.8	164.5	143.5	98.3	93.6	104.7	99.7	99.2	97.1	99.2	99.7
17.5°	196.2	185.0	166.7	117.1	102.5	108.2	101.4	99.7	97.2	99.7	101.4
20°	210.1	202.4	188.1	135.5	110.9	110.4	100.9	97.8	95.3	97.8	100.9
22.5°	219.4	214.9	203.3	152.1	117.9	110.3	99.9	94.1	90.8	94.1	99.9
25°	225.1	222.7	213.9	166.7	124.3	108.9	96.7	88.7	85.6	88.7	96.7
27.5°	228.4	227.3	219.8	179.7	129.9	106.5	92.7	83.2	79.4	83.2	92.7
30°	229.2	228.7	221.7	187.4	134.4	103.0	87.2	76.8	73.8	76.8	87.2
32.5°	229.8	228.2	220.5	192.3	137.9	99.5	81.5	71.2	68.1	71.2	81.5
35°	229.3	226.4	217.4	194.3	138.9	95.3	75.3	65.5	62.3	65.5	75.3
37.5°	228.7	224.2	212.2	192.4	139.0	89.7	68.9	59.1	56.5	59.1	68.9
40°	228.1	221.8	206.1	188.1	136.3	84.2	62.9	53.7	51.0	53.7	62.9
42.5°	227.9	219.4	199.3	181.5	131.6	78.3	56.5	48.1	45.3	48.1	56.5
45°	227.6	217.6	193.6	173.1	126.0	71.6	50.8	42.9	40.7	42.9	50.8
47.5°	227.3	215.9	188.5	163.9	119.3	64.6	45.2	38.1	36.3	38.1	45.2
50°	227.6	214.5	183.2	153.8	112.1	57.7	39.9	34.1	32.6	34.1	39.9
52.5°	228.3	213.8	178.6	144.4	104.3	51.2	35.0	30.0	28.8	30.0	35.0
55°	229.9	214.0	174.3	134.6	95.4	44.6	30.5	25.9	25.4	25.9	30.5
57.5°	231.7	214.8	171.6	125.4	86.6	38.9	26.3	23.0	22.2	23.0	26.3
60°	234.2	216.0	169.5	116.0	77.4	33.9	22.6	19.5	19.2	19.5	22.6
62.5°	236.2	217.3	168.3	109.2	68.7	28.8	18.9	16.9	16.6	16.9	18.9
65°	238.6	218.3	167.0	104.1	60.0	24.2	16.0	13.9	13.8	13.9	16.0
67.5°	240.5	219.6	166.9	100.6	52.8	20.5	12.9	11.6	11.7	11.6	12.9
70°	242.0	220.9	166.4	97.5	45.7	16.9	10.6	9.7	9.7	9.7	10.6
72.5°	243.3	221.8	166.0	95.3	38.4	13.4	8.1	7.3	7.6	7.3	8.1
75°	244.4	222.4	165.6	93.3	34.0	10.9	6.1	5.9	5.9	5.9	6.1
77.5°	245.3	222.9	164.7	91.6	32.3	8.4	4.3	3.8	3.8	3.8	4.3
80°	246.4	223.3	164.2	90.5	30.9	6.7	2.7	2.5	2.8	2.5	2.7
82.5°	247.1	223.5	164.0	89.3	29.4	4.8	1.1	0.9	1.0	0.9	1.1
85°	247.4	223.7	164.0	88.4	28.2	3.7	0.0	0.0	0.1	0.0	0.0
87.5°	247.5	223.9	163.7	87.9	27.3	2.5	0.0	0.0	0.0	0.0	0.0
90°	247.0	223.2	163.1	87.3	27.0	2.7	0.0	0.0	0.0	0.0	0.0
92.5°	245.2	224.6	167.7	92.0	32.3	5.5	1.4	0.0	0.0	0.0	1.4
95°	244.8	223.9	167.1	92.2	33.0	6.4	2.1	1.1	0.4	1.1	2.1
97.5°	243.3	222.8	166.2	92.0	33.5	7.5	2.8	1.5	1.5	1.5	2.8
100°	241.7	220.6	164.5	91.5	33.8	8.1	3.9	2.7	2.3	2.7	3.9
102.5°	239.7	218.8	163.3	91.1	34.7	9.7	4.5	3.3	3.3	3.3	4.5
105°	236.4	216.5	162.1	90.3	35.2	11.0	5.9	4.4	4.3	4.4	5.9
107.5°	233.3	213.4	160.5	90.0	36.0	13.1	7.2	5.9	5.4	5.9	7.2
110°	230.3	211.0	158.7	89.5	37.1	15.4	8.3	6.8	6.6	6.8	8.3



TEST NUMBER: 20430A

CATALOG NUMBER: 635-LS-14-CFL/2/13

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	226.5	207.6	156.4	88.9	37.7	17.8	10.4	8.4	7.8	8.4	10.4
115°	222.0	203.3	153.8	87.9	38.7	20.3	12.0	9.8	8.7	9.8	12.0
117.5°	217.4	199.4	151.1	87.5	40.0	23.6	14.0	11.2	10.4	11.2	14.0
120°	212.9	195.2	148.9	87.5	42.2	27.7	16.1	12.6	11.6	12.6	16.1
122.5°	207.6	191.2	146.3	88.1	46.0	31.6	18.8	14.9	13.6	14.9	18.8
125°	202.7	186.1	143.8	89.4	50.3	35.5	22.3	16.7	15.6	16.7	22.3
127.5°	196.8	181.6	140.7	91.0	56.4	40.2	25.3	19.5	17.7	19.5	25.3
130°	191.7	177.0	138.4	94.2	62.0	44.3	29.3	22.0	20.2	22.0	29.3
132.5°	186.3	172.4	136.2	98.8	68.7	49.1	33.0	25.0	23.2	25.0	33.0
135°	181.6	168.4	135.2	103.5	73.7	52.6	37.4	28.5	25.9	28.5	37.4
137.5°	176.7	164.7	134.6	108.8	78.2	56.4	41.8	32.0	29.1	32.0	41.8
140°	171.7	160.5	134.3	115.2	81.9	60.1	46.0	35.5	32.7	35.5	46.0
142.5°	167.2	157.6	135.7	119.2	84.7	63.4	50.5	40.0	36.3	40.0	50.5
145°	162.6	154.2	137.9	121.0	86.5	65.9	54.9	44.3	40.2	44.3	54.9
147.5°	158.3	152.0	140.5	120.8	85.1	68.4	58.5	48.2	44.4	48.2	58.5
150°	153.8	149.8	142.3	118.2	81.2	70.4	62.7	53.0	48.8	53.0	62.7
152.5°	151.6	149.6	142.3	114.4	75.8	72.2	65.1	57.4	53.5	57.4	65.1
155°	150.3	147.7	140.5	107.2	69.5	73.4	67.3	61.5	57.9	61.5	67.3
157.5°	146.3	142.6	134.8	97.3	63.0	72.8	69.0	65.6	62.5	65.6	69.0
160°	139.9	133.8	125.6	85.8	56.9	71.0	69.0	69.0	66.1	69.0	69.0
162.5°	129.1	120.9	111.4	72.6	50.1	66.7	68.3	71.0	67.9	71.0	68.3
165°	114.3	104.9	93.2	59.8	43.9	61.4	66.5	71.1	68.9	71.1	66.5
167.5°	95.9	84.0	71.0	46.5	37.8	54.1	63.8	68.7	66.8	68.7	63.8
170°	71.7	61.4	49.9	34.8	32.3	46.3	57.6	63.4	62.1	63.4	57.6
172.5°	47.4	40.5	30.6	22.5	25.6	36.6	47.5	54.7	53.4	54.7	47.5
175°	27.2	23.4	17.7	13.9	19.5	29.1	37.9	42.0	41.8	42.0	37.9
177.5°	11.7	10.3	9.2	10.8	15.9	22.2	25.5	26.6	27.0	26.6	25.5
180°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2



TEST NUMBER: 20430A

CATALOG NUMBER: 635-LS-14-CFL/2/13

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	49.4	49.4	49.4	49.4	49.4	49.4
2.5°	60.4	49.8	40.4	39.3	41.4	44.0
5°	72.4	55.3	42.4	45.7	54.3	62.1
7.5°	82.6	64.3	51.2	64.0	79.2	91.5
10°	91.5	74.2	64.8	90.4	109.2	124.9
12.5°	98.6	84.2	80.4	116.5	139.3	153.6
15°	104.7	93.6	98.3	143.5	164.5	177.8
17.5°	108.2	102.5	117.1	166.7	185.0	196.2
20°	110.4	110.9	135.5	188.1	202.4	210.1
22.5°	110.3	117.9	152.1	203.3	214.9	219.4
25°	108.9	124.3	166.7	213.9	222.7	225.1
27.5°	106.5	129.9	179.7	219.8	227.3	228.4
30°	103.0	134.4	187.4	221.7	228.7	229.2
32.5°	99.5	137.9	192.3	220.5	228.2	229.8
35°	95.3	138.9	194.3	217.4	226.4	229.3
37.5°	89.7	139.0	192.4	212.2	224.2	228.7
40°	84.2	136.3	188.1	206.1	221.8	228.1
42.5°	78.3	131.6	181.5	199.3	219.4	227.9
45°	71.6	126.0	173.1	193.6	217.6	227.6
47.5°	64.6	119.3	163.9	188.5	215.9	227.3
50°	57.7	112.1	153.8	183.2	214.5	227.6
52.5°	51.2	104.3	144.4	178.6	213.8	228.3
55°	44.6	95.4	134.6	174.3	214.0	229.9
57.5°	38.9	86.6	125.4	171.6	214.8	231.7
60°	33.9	77.4	116.0	169.5	216.0	234.2
62.5°	28.8	68.7	109.2	168.3	217.3	236.2
65°	24.2	60.0	104.1	167.0	218.3	238.6
67.5°	20.5	52.8	100.6	166.9	219.6	240.5
70°	16.9	45.7	97.5	166.4	220.9	242.0
72.5°	13.4	38.4	95.3	166.0	221.8	243.3
75°	10.9	34.0	93.3	165.6	222.4	244.4
77.5°	8.4	32.3	91.6	164.7	222.9	245.3
80°	6.7	30.9	90.5	164.2	223.3	246.4
82.5°	4.8	29.4	89.3	164.0	223.5	247.1
85°	3.7	28.2	88.4	164.0	223.7	247.4
87.5°	2.5	27.3	87.9	163.7	223.9	247.5
90°	2.7	27.0	87.3	163.1	223.2	247.0
92.5°	5.5	32.3	92.0	167.7	224.6	245.2
95°	6.4	33.0	92.2	167.1	223.9	244.8
97.5°	7.5	33.5	92.0	166.2	222.8	243.3
100°	8.1	33.8	91.5	164.5	220.6	241.7
102.5°	9.7	34.7	91.1	163.3	218.8	239.7
105°	11.0	35.2	90.3	162.1	216.5	236.4
107.5°	13.1	36.0	90.0	160.5	213.4	233.3
110°	15.4	37.1	89.5	158.7	211.0	230.3



TEST NUMBER: 20430A

CATALOG NUMBER: 635-LS-14-CFL/2/13

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	17.8	37.7	88.9	156.4	207.6	226.5
115°	20.3	38.7	87.9	153.8	203.3	222.0
117.5°	23.6	40.0	87.5	151.1	199.4	217.4
120°	27.7	42.2	87.5	148.9	195.2	212.9
122.5°	31.6	46.0	88.1	146.3	191.2	207.6
125°	35.5	50.3	89.4	143.8	186.1	202.7
127.5°	40.2	56.4	91.0	140.7	181.6	196.8
130°	44.3	62.0	94.2	138.4	177.0	191.7
132.5°	49.1	68.7	98.8	136.2	172.4	186.3
135°	52.6	73.7	103.5	135.2	168.4	181.6
137.5°	56.4	78.2	108.8	134.6	164.7	176.7
140°	60.1	81.9	115.2	134.3	160.5	171.7
142.5°	63.4	84.7	119.2	135.7	157.6	167.2
145°	65.9	86.5	121.0	137.9	154.2	162.6
147.5°	68.4	85.1	120.8	140.5	152.0	158.3
150°	70.4	81.2	118.2	142.3	149.8	153.8
152.5°	72.2	75.8	114.4	142.3	149.6	151.6
155°	73.4	69.5	107.2	140.5	147.7	150.3
157.5°	72.8	63.0	97.3	134.8	142.6	146.3
160°	71.0	56.9	85.8	125.6	133.8	139.9
162.5°	66.7	50.1	72.6	111.4	120.9	129.1
165°	61.4	43.9	59.8	93.2	104.9	114.3
167.5°	54.1	37.8	46.5	71.0	84.0	95.9
170°	46.3	32.3	34.8	49.9	61.4	71.7
172.5°	36.6	25.6	22.5	30.6	40.5	47.4
175°	29.1	19.5	13.9	17.7	23.4	27.2
177.5°	22.2	15.9	10.8	9.2	10.3	11.7
180°	14.2	14.2	14.2	14.2	14.2	14.2

(END OF REPORT)