

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: FAIL-SAFE

Report Number: P392465

Luminaire Tested: **MWL-2-00-23-UNV-L840-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392465
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-27)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-2-00-23-UNV-L840-EDD
Description: MWL 2FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

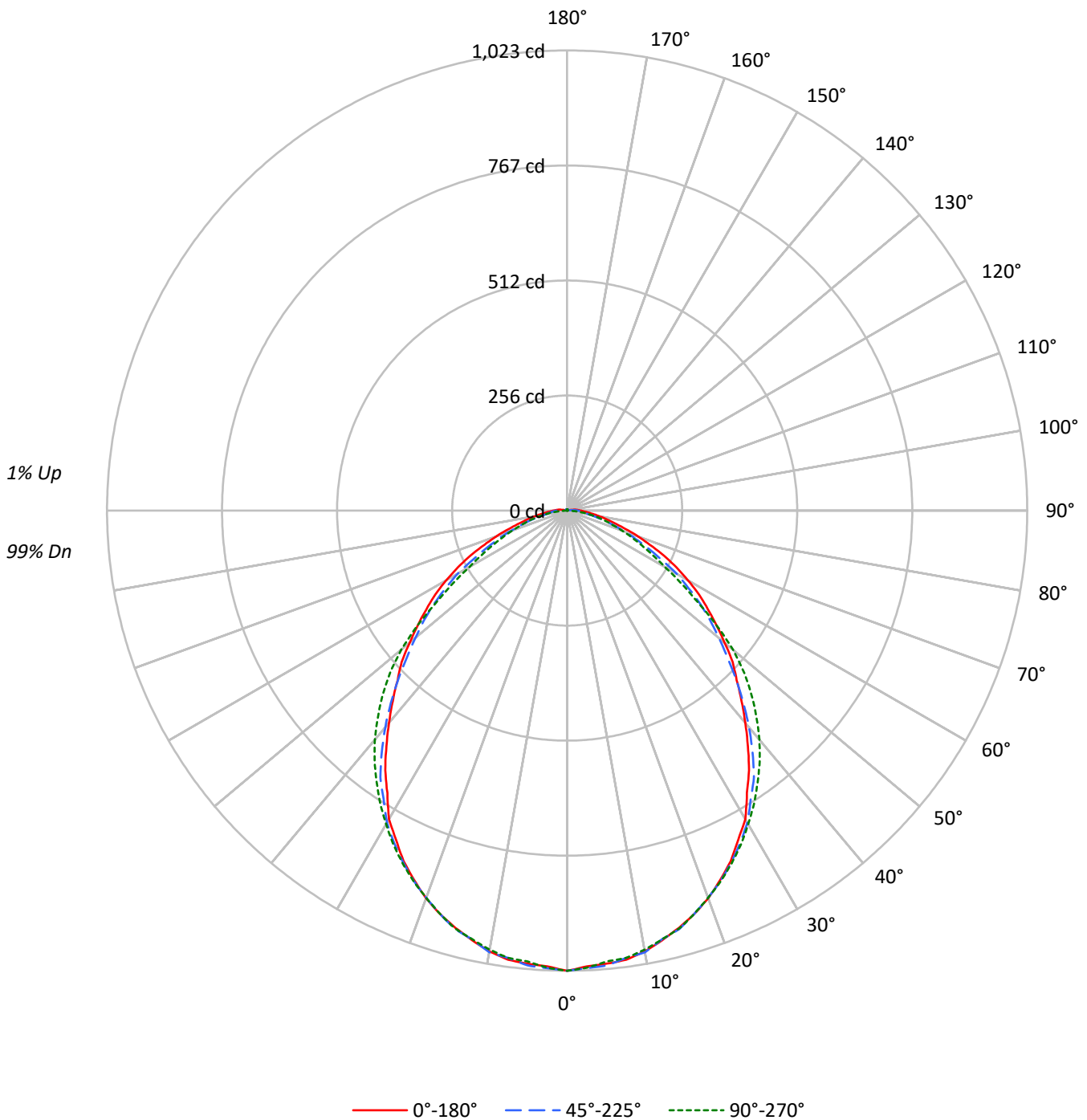
Lumens per Lamp: N/A
Luminaire Lumens: 2323.9 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.42')
CIE Type: Direct

Input Watts (W): 22.7
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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99				
1	110	105	101	98	107	103	99	96	98	96	93	94	92	90	91	89	87	85				
2	101	93	87	82	98	91	85	80	87	83	78	84	80	77	81	78	75	73				
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63				
4	85	74	66	60	83	73	65	59	70	63	58	68	62	57	65	61	56	54				
5	79	67	58	52	77	65	58	52	63	56	51	61	55	50	59	54	50	48				
6	73	60	52	46	71	59	51	46	58	50	45	56	49	45	54	49	44	42				
7	68	55	47	41	66	54	46	41	53	45	40	51	45	40	50	44	40	38				
8	63	50	42	37	62	50	42	37	48	41	36	47	41	36	46	40	36	34				
9	59	46	39	33	58	46	38	33	45	38	33	44	37	33	42	37	33	31				
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	39	34	30	28				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13215	13215	13215
5°	12875	12246	11996
10°	12589	11366	11051
15°	12160	10480	10147
20°	11718	9605	9232
25°	11173	8796	8408
30°	10544	8000	7612
35°	9701	7143	6844
40°	8841	6177	6097
45°	8058	5231	5297
50°	7357	4381	4410
55°	6630	3662	3274
60°	5885	2927	2373
65°	5028	2147	1779
70°	4035	1523	1310
75°	3060	1013	928
80°	2455	624	569
85°	2016	468	238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.2	4.1
10°-20°	270.8	11.7
20°-30°	397.2	17.1
30°-40°	450.2	19.4
40°-50°	419.7	18.1
50°-60°	327.9	14.1
60°-70°	203.1	8.7
70°-80°	97.5	4.2
80°-90°	39.0	1.7
90°-100°	12.7	0.5
100°-110°	1.5	0.1
110°-120°	1.2	0.1
120°-130°	1.8	0.1
130°-140°	1.5	0.1
140°-150°	1.5	0.1
150°-160°	1.2	0.1
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	764.2	32.9
0°-40°	1214.4	52.3
0°-60°	1962.0	84.4
0°-90°	2301.6	99.0
90°-120°	15.5	0.7
90°-150°	20.3	0.9
90°-180°	22.0	0.9
0°-180°	2323.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1023	1023	1023	1023	1023	
5°	1011	1018	1015	1014	1006	96
15°	960	966	963	960	962	271
25°	860	863	863	868	865	395
35°	705	709	724	737	738	440
45°	533	528	531	561	580	413
55°	382	377	361	359	353	342
65°	238	223	199	179	183	235
75°	109	96	85	78	88	120
85°	46	46	34	24	20	43
90°	30	34	24	12	0	17
95°	21	21	12	1	0	15
105°	1	1	1	1	1	3
115°	2	1	1	1	1	2
125°	2	2	2	2	2	2
135°	2	2	2	2	2	2
145°	3	3	3	2	2	2
155°	3	3	3	2	2	1
165°	3	2	2	2	2	1
175°	1	2	2	3	3	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1023.1	1023.1	1023.1	1023.1	1023.1
2.5°	1014.1	1024.1	1018.1	1017.1	1017.1
5°	1011.1	1018.1	1015.1	1014.1	1006.1
7.5°	1007.1	1010.1	1003.1	1005.1	1003.1
10°	995.1	996.1	997.1	992.1	991.1
12.5°	978.1	980.1	976.1	979.1	976.1
15°	960.1	966.1	963.1	960.1	962.1
17.5°	940.1	943.1	940.1	940.1	940.1
20°	917.1	918.1	916.1	915.1	916.1
22.5°	889.1	894.1	891.1	894.1	892.1
25°	860.1	863.1	863.1	868.1	865.1
27.5°	824.0	828.0	833.0	837.0	837.0
30°	792.0	790.0	801.0	804.0	805.0
32.5°	744.0	750.0	760.0	772.0	773.0
35°	705.0	709.0	724.0	737.0	738.0
37.5°	660.0	661.0	677.0	699.0	703.0
40°	616.0	615.0	629.0	655.0	665.0
42.5°	574.0	570.0	580.0	613.0	623.0
45°	533.0	528.0	531.0	561.0	580.0
47.5°	499.0	486.0	483.0	509.0	534.0
50°	457.0	450.0	440.0	459.0	481.0
52.5°	418.0	415.0	401.0	409.0	419.0
55°	382.0	377.0	361.0	359.0	353.0
57.5°	348.0	341.0	319.0	311.0	300.0
60°	310.0	304.0	281.0	260.0	251.0
62.5°	274.0	264.0	236.0	216.0	214.0
65°	238.0	223.0	199.0	179.0	183.0
67.5°	199.0	186.0	165.0	147.0	155.0
70°	168.0	152.0	135.0	121.0	130.0
72.5°	136.0	122.0	108.0	99.0	106.0
75°	109.0	96.0	85.0	78.0	88.0
77.5°	90.0	77.0	64.0	62.0	70.0
80°	72.0	64.0	49.0	46.0	51.0
82.5°	58.0	54.0	41.0	33.0	36.0
85°	46.0	46.0	34.0	24.0	20.0
87.5°	37.0	40.0	29.0	18.0	5.0
90°	30.0	34.0	24.0	12.0	0.0
92.5°	25.0	28.0	19.0	5.0	0.0
95°	21.0	21.0	12.0	1.0	0.0
97.5°	16.0	14.0	5.0	1.0	1.0
100°	9.0	6.0	1.0	1.0	1.0
102.5°	3.0	2.0	1.0	1.0	1.0
105°	1.0	1.0	1.0	1.0	1.0
107.5°	1.0	1.0	1.0	1.0	1.0
110°	1.0	1.0	1.0	1.0	1.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	1.0	1.0	1.0	1.0
115°	2.0	1.0	1.0	1.0	1.0
117.5°	2.0	2.0	1.0	1.0	1.0
120°	2.0	2.0	2.0	2.0	2.0
122.5°	2.0	2.0	2.0	2.0	2.0
125°	2.0	2.0	2.0	2.0	2.0
127.5°	2.0	2.0	2.0	2.0	2.0
130°	2.0	2.0	2.0	2.0	2.0
132.5°	2.0	2.0	2.0	2.0	2.0
135°	2.0	2.0	2.0	2.0	2.0
137.5°	2.0	2.0	2.0	2.0	2.0
140°	2.0	2.0	2.0	2.0	2.0
142.5°	2.0	2.0	2.0	2.0	2.0
145°	3.0	3.0	3.0	2.0	2.0
147.5°	3.0	3.0	3.0	3.0	2.0
150°	3.0	3.0	3.0	2.0	2.0
152.5°	3.0	3.0	3.0	2.0	2.0
155°	3.0	3.0	3.0	2.0	2.0
157.5°	3.0	3.0	2.0	2.0	2.0
160°	3.0	3.0	2.0	2.0	2.0
162.5°	3.0	3.0	2.0	2.0	2.0
165°	3.0	2.0	2.0	2.0	2.0
167.5°	3.0	2.0	2.0	2.0	2.0
170°	2.0	2.0	2.0	2.0	2.0
172.5°	2.0	2.0	2.0	2.0	2.0
175°	1.0	2.0	2.0	3.0	3.0
177.5°	1.0	2.0	2.0	3.0	3.0
180°	2.0	2.0	2.0	2.0	2.0

(END OF REPORT)