

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: P412004

Luminaire Tested: **MRI-14ATR-20-L850-OPL**

Issue Date: 10/5/2020

Test Information

Test Method: LM-79-08
Report Number: P412004
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2008-915-1)
Test Lab: INNOVATION CENTER
Issue Date: 10/5/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MRI-14ATR-20-L850-OPL
Description: 1X4 TROFFER, 2000LM, OPAL LENS
Light Source: (376) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2142.0 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.38
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

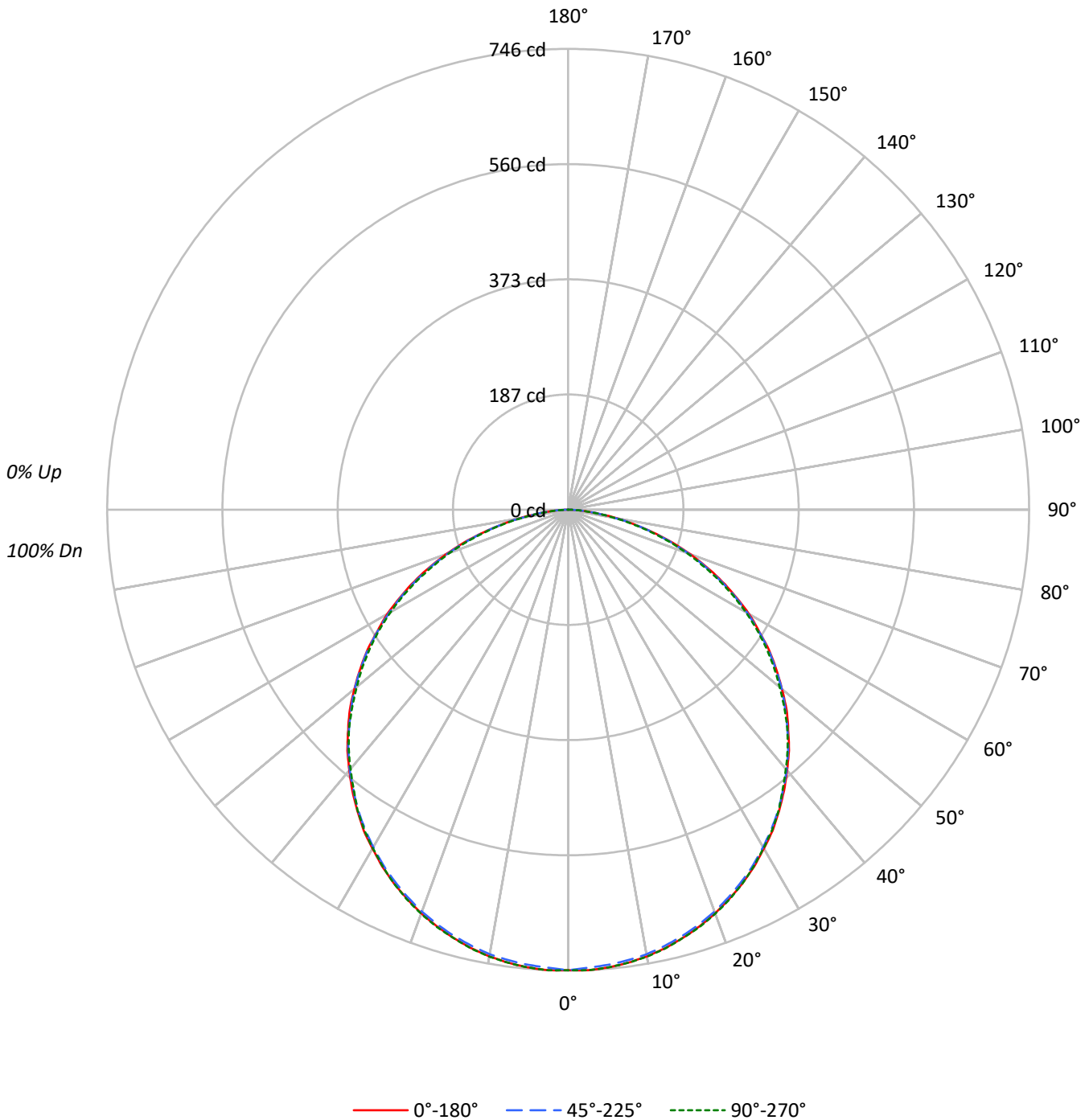
Input Watts (W): 28.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P412004

CATALOG NUMBER: MRI-14ATR-20-L850-OPL

Luminous Intensity Polar Plot





TEST NUMBER: P412004

CATALOG NUMBER: MRI-14ATR-20-L850-OPL

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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59
4	82	70	61	55	80	69	61	54	66	59	54	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	34	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2006	2006	2006
5°	2009	1998	2009
10°	2006	1997	2007
15°	1999	1990	1999
20°	1991	1983	1993
25°	1982	1972	1982
30°	1968	1960	1965
35°	1954	1948	1951
40°	1935	1932	1925
45°	1917	1909	1909
50°	1889	1888	1870
55°	1862	1856	1838
60°	1820	1804	1788
65°	1750	1731	1707
70°	1651	1624	1601
75°	1474	1470	1422
80°	1237	1210	1178
85°	809	821	797



TEST NUMBER: P412004

CATALOG NUMBER: MRI-14ATR-20-L850-OPL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.6	3.3
10°-20°	202.3	9.4
20°-30°	307.0	14.3
30°-40°	371.3	17.3
40°-50°	387.2	18.1
50°-60°	352.4	16.5
60°-70°	268.3	12.5
70°-80°	148.6	6.9
80°-90°	34.2	1.6
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°	579.9	27.1
0°-40°	951.3	44.4
0°-60°	1690.8	78.9
0°-90°	2142.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2142.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	744	743	740	743	744	71
15°	718	717	714	717	718	203
25°	667	667	664	667	667	308
35°	595	594	593	593	594	372
45°	504	504	502	502	502	389
55°	397	398	396	392	392	354
65°	275	274	272	269	268	271
75°	142	143	141	137	137	151
85°	26	27	27	26	26	34
90°	0	0	0	0	0	



TEST NUMBER: P412004

CATALOG NUMBER: MRI-14ATR-20-L850-OPL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	745.5	745.5	745.5	745.5	745.5
2.5°	746.4	745.9	742.1	745.5	746.4
5°	743.8	743.4	739.6	743.4	743.8
7.5°	740.0	739.6	735.8	739.6	740.0
10°	734.1	733.7	730.7	733.7	734.5
12.5°	726.9	726.5	723.1	726.5	727.4
15°	717.7	716.8	714.3	717.2	717.7
17.5°	707.1	707.1	704.1	707.1	707.9
20°	695.3	694.9	692.3	695.3	696.1
22.5°	681.8	680.9	678.8	681.8	682.6
25°	667.4	666.6	664.0	667.0	667.4
27.5°	651.4	650.1	648.4	650.5	650.5
30°	633.2	632.8	630.7	632.4	632.4
32.5°	615.9	614.7	612.5	614.2	614.2
35°	594.8	594.4	593.1	592.7	594.0
37.5°	573.7	572.9	571.2	572.4	570.3
40°	550.9	550.9	550.1	549.2	548.0
42.5°	529.0	526.8	526.8	525.2	525.6
45°	503.6	503.6	501.5	501.5	501.5
47.5°	479.6	477.9	476.2	475.3	474.1
50°	451.3	452.1	450.9	447.9	446.6
52.5°	424.7	424.7	423.4	422.6	420.0
55°	396.8	397.7	395.6	391.8	391.8
57.5°	366.4	367.7	365.2	362.2	362.2
60°	338.1	337.3	335.2	332.7	332.2
62.5°	306.1	305.6	303.9	300.6	300.6
65°	274.8	273.6	271.9	268.9	268.1
67.5°	242.3	241.0	239.4	237.2	234.7
70°	209.8	208.5	206.4	203.5	203.5
72.5°	176.9	175.6	173.5	170.5	170.5
75°	141.8	142.7	141.4	137.2	136.8
77.5°	109.8	110.2	108.9	106.8	106.0
80°	79.8	78.5	78.1	76.4	76.0
82.5°	50.2	51.1	50.7	49.4	48.5
85°	26.2	26.6	26.6	26.2	25.8
87.5°	9.7	10.6	10.6	10.6	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)