

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: P412006

Luminaire Tested: **MRI-14ATR-20-L940-OPL**

Issue Date: 10/5/2020

Test Information

Test Method: LM-79-08
Report Number: P412006
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-L940-OPL
Description: 1X4 TROFFER, 2000LM, OPAL LENS
Light Source: (376) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1701.0 lumens
Efficiency: N/A
Efficacy: 60.1 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

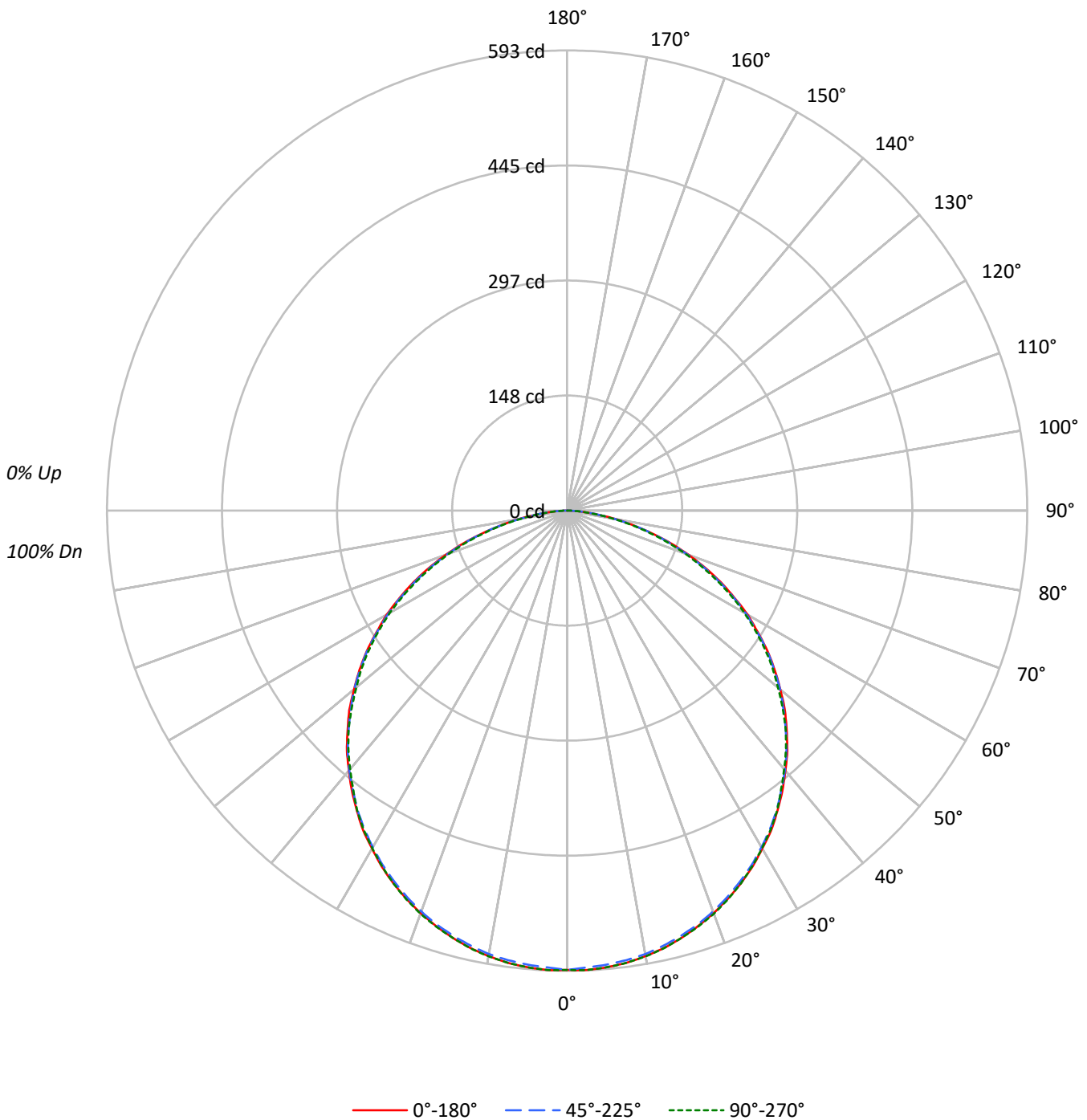
Input Watts (W): 28.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P412006

CATALOG NUMBER: MRI-14ATR-20-L940-OPL

Luminous Intensity Polar Plot





TEST NUMBER: P412006

CATALOG NUMBER: MRI-14ATR-20-L940-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°	1593	1593	1593
5°	1596	1586	1596
10°	1593	1586	1594
15°	1588	1580	1588
20°	1581	1574	1583
25°	1574	1566	1574
30°	1563	1556	1560
35°	1552	1547	1550
40°	1537	1534	1528
45°	1522	1516	1516
50°	1500	1499	1485
55°	1478	1474	1460
60°	1445	1433	1420
65°	1389	1375	1356
70°	1311	1290	1271
75°	1171	1168	1129
80°	982	961	934
85°	642	651	630



TEST NUMBER: P412006

CATALOG NUMBER: MRI-14ATR-20-L940-OPL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.1	3.3
10°-20°	160.7	9.4
20°-30°	243.8	14.3
30°-40°	294.9	17.3
40°-50°	307.5	18.1
50°-60°	279.8	16.5
60°-70°	213.1	12.5
70°-80°	118.0	6.9
80°-90°	27.2	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°	460.5	27.1
0°-40°	755.4	44.4
0°-60°	1342.7	78.9
0°-90°	1701.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1701.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	592	592	592	592	592	
5°	591	590	587	590	591	56
15°	570	569	567	570	570	161
25°	530	529	527	530	530	244
35°	472	472	471	471	472	296
45°	400	400	398	398	398	309
55°	315	316	314	311	311	281
65°	218	217	216	214	213	216
75°	113	113	112	109	109	120
85°	21	21	21	21	20	27
90°	0	0	0	0	0	



TEST NUMBER: P412006

CATALOG NUMBER: MRI-14ATR-20-L940-OPL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	592.0	592.0	592.0	592.0	592.0
2.5°	592.7	592.4	589.3	592.0	592.7
5°	590.7	590.4	587.3	590.4	590.7
7.5°	587.7	587.3	584.3	587.3	587.7
10°	583.0	582.6	580.3	582.6	583.3
12.5°	577.3	576.9	574.3	576.9	577.6
15°	569.9	569.2	567.2	569.6	569.9
17.5°	561.5	561.5	559.2	561.5	562.2
20°	552.1	551.8	549.8	552.1	552.8
22.5°	541.4	540.7	539.1	541.4	542.1
25°	530.0	529.3	527.3	529.7	530.0
27.5°	517.3	516.3	514.9	516.6	516.6
30°	502.9	502.5	500.8	502.2	502.2
32.5°	489.1	488.1	486.4	487.8	487.8
35°	472.4	472.0	471.0	470.7	471.7
37.5°	455.6	454.9	453.6	454.6	452.9
40°	437.5	437.5	436.8	436.1	435.1
42.5°	420.1	418.4	418.4	417.0	417.4
45°	399.9	399.9	398.3	398.3	398.3
47.5°	380.8	379.5	378.1	377.5	376.5
50°	358.4	359.0	358.0	355.7	354.7
52.5°	337.2	337.2	336.2	335.6	333.6
55°	315.1	315.8	314.1	311.1	311.1
57.5°	291.0	292.0	290.0	287.6	287.6
60°	268.5	267.9	266.2	264.2	263.8
62.5°	243.0	242.7	241.4	238.7	238.7
65°	218.2	217.2	215.9	213.5	212.9
67.5°	192.4	191.4	190.1	188.4	186.4
70°	166.6	165.6	163.9	161.6	161.6
72.5°	140.5	139.5	137.8	135.4	135.4
75°	112.6	113.3	112.3	109.0	108.6
77.5°	87.2	87.5	86.5	84.8	84.1
80°	63.4	62.4	62.0	60.7	60.3
82.5°	39.9	40.6	40.2	39.2	38.6
85°	20.8	21.1	21.1	20.8	20.4
87.5°	7.7	8.4	8.4	8.4	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)