

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: P412005

Luminaire Tested: **MRI-14ATR-20-L935-OPL**

Issue Date: 10/5/2020

Test Information

Test Method: LM-79-08
Report Number: P412005
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-L935-OPL
Description: 1X4 TROFFER, 2000LM, OPAL LENS
Light Source: (376) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1683.0 lumens
Efficiency: N/A
Efficacy: 59.5 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

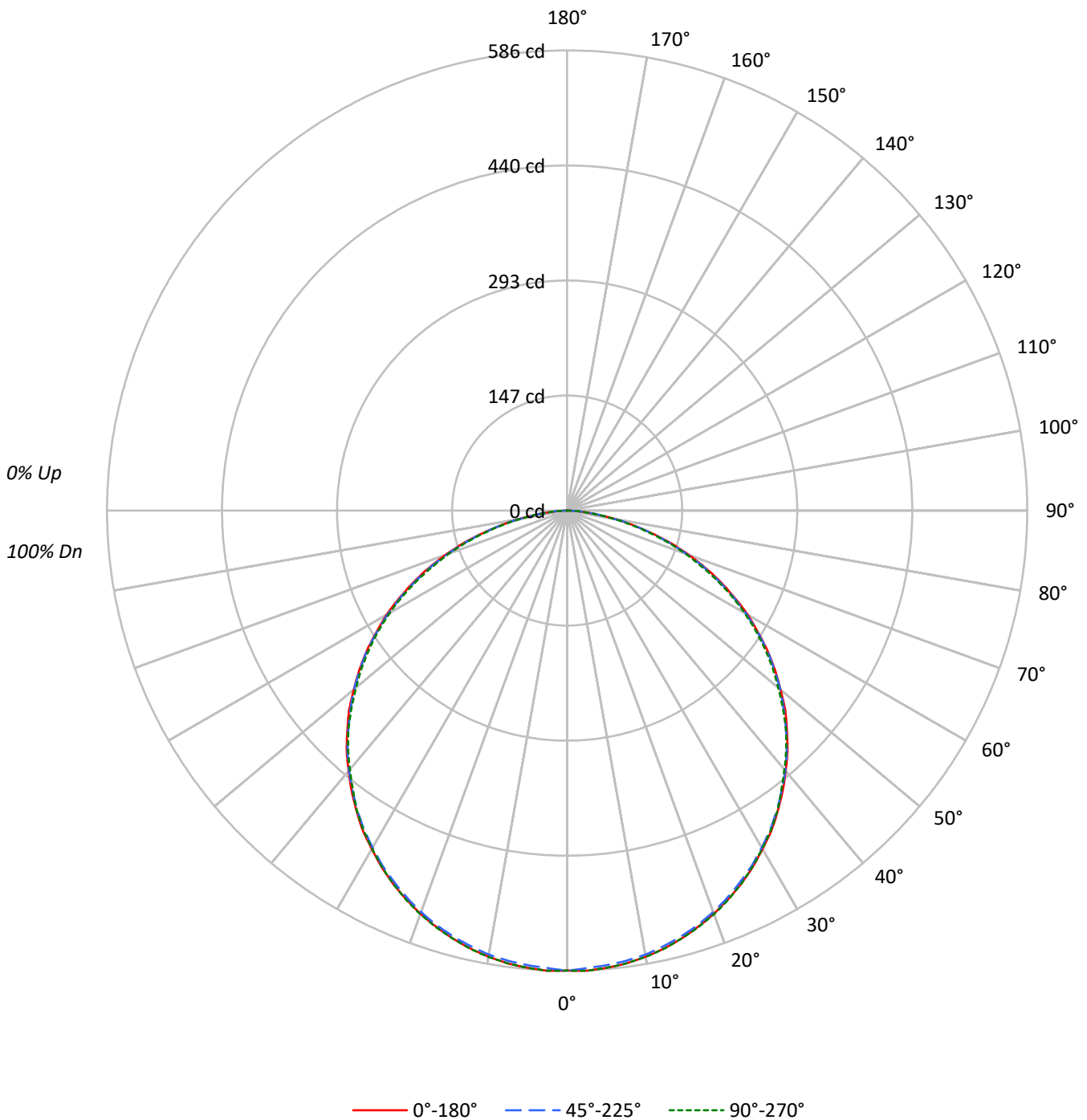
Input Watts (W): 28.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P412005

CATALOG NUMBER: MRI-14ATR-20-L935-OPL

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	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°	1576	1576	1576
5°	1579	1570	1579
10°	1576	1569	1577
15°	1571	1563	1571
20°	1564	1558	1566
25°	1557	1549	1557
30°	1546	1540	1544
35°	1535	1531	1533
40°	1521	1518	1512
45°	1506	1499	1499
50°	1485	1483	1469
55°	1463	1458	1444
60°	1430	1418	1405
65°	1375	1360	1341
70°	1297	1276	1258
75°	1158	1155	1118
80°	972	951	925
85°	636	645	624



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.5	3.3
10°-20°	159.0	9.4
20°-30°	241.2	14.3
30°-40°	291.8	17.3
40°-50°	304.2	18.1
50°-60°	276.9	16.5
60°-70°	210.8	12.5
70°-80°	116.8	6.9
80°-90°	26.9	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°	455.7	27.1
0°-40°	747.4	44.4
0°-60°	1328.5	78.9
0°-90°	1683.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1683.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	586	586	586	586	586	
5°	584	584	581	584	584	56
15°	564	563	561	564	564	159
25°	524	524	522	524	524	242
35°	467	467	466	466	467	292
45°	396	396	394	394	394	305
55°	312	312	311	308	308	278
65°	216	215	214	211	211	213
75°	111	112	111	108	108	119
85°	21	21	21	21	20	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	585.8	585.8	585.8	585.8	585.8
2.5°	586.4	586.1	583.1	585.8	586.4
5°	584.4	584.1	581.1	584.1	584.4
7.5°	581.5	581.1	578.1	581.1	581.5
10°	576.8	576.5	574.2	576.5	577.1
12.5°	571.2	570.8	568.2	570.8	571.5
15°	563.9	563.2	561.2	563.5	563.9
17.5°	555.6	555.6	553.3	555.6	556.2
20°	546.3	546.0	544.0	546.3	547.0
22.5°	535.7	535.0	533.4	535.7	536.3
25°	524.4	523.7	521.7	524.1	524.4
27.5°	511.8	510.8	509.5	511.1	511.1
30°	497.5	497.2	495.5	496.9	496.9
32.5°	483.9	482.9	481.3	482.6	482.6
35°	467.4	467.0	466.0	465.7	466.7
37.5°	450.8	450.1	448.8	449.8	448.1
40°	432.9	432.9	432.2	431.5	430.5
42.5°	415.6	414.0	414.0	412.6	413.0
45°	395.7	395.7	394.0	394.0	394.0
47.5°	376.8	375.5	374.1	373.5	372.5
50°	354.6	355.2	354.2	351.9	350.9
52.5°	333.7	333.7	332.7	332.0	330.0
55°	311.8	312.5	310.8	307.8	307.8
57.5°	287.9	288.9	286.9	284.6	284.6
60°	265.7	265.0	263.4	261.4	261.0
62.5°	240.5	240.1	238.8	236.2	236.2
65°	215.9	214.9	213.6	211.3	210.6
67.5°	190.4	189.4	188.1	186.4	184.4
70°	164.9	163.9	162.2	159.9	159.9
72.5°	139.0	138.0	136.3	134.0	134.0
75°	111.4	112.1	111.1	107.8	107.5
77.5°	86.2	86.6	85.6	83.9	83.3
80°	62.7	61.7	61.4	60.0	59.7
82.5°	39.5	40.1	39.8	38.8	38.1
85°	20.6	20.9	20.9	20.6	20.2
87.5°	7.6	8.3	8.3	8.3	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)