

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: P311887

Luminaire Tested: **14FCZ2-25-UNV-L83050-HRP-CP250-W2A-U-4000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P311887
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-25-UNV-L83050-HRP-CP250-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1733.0 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

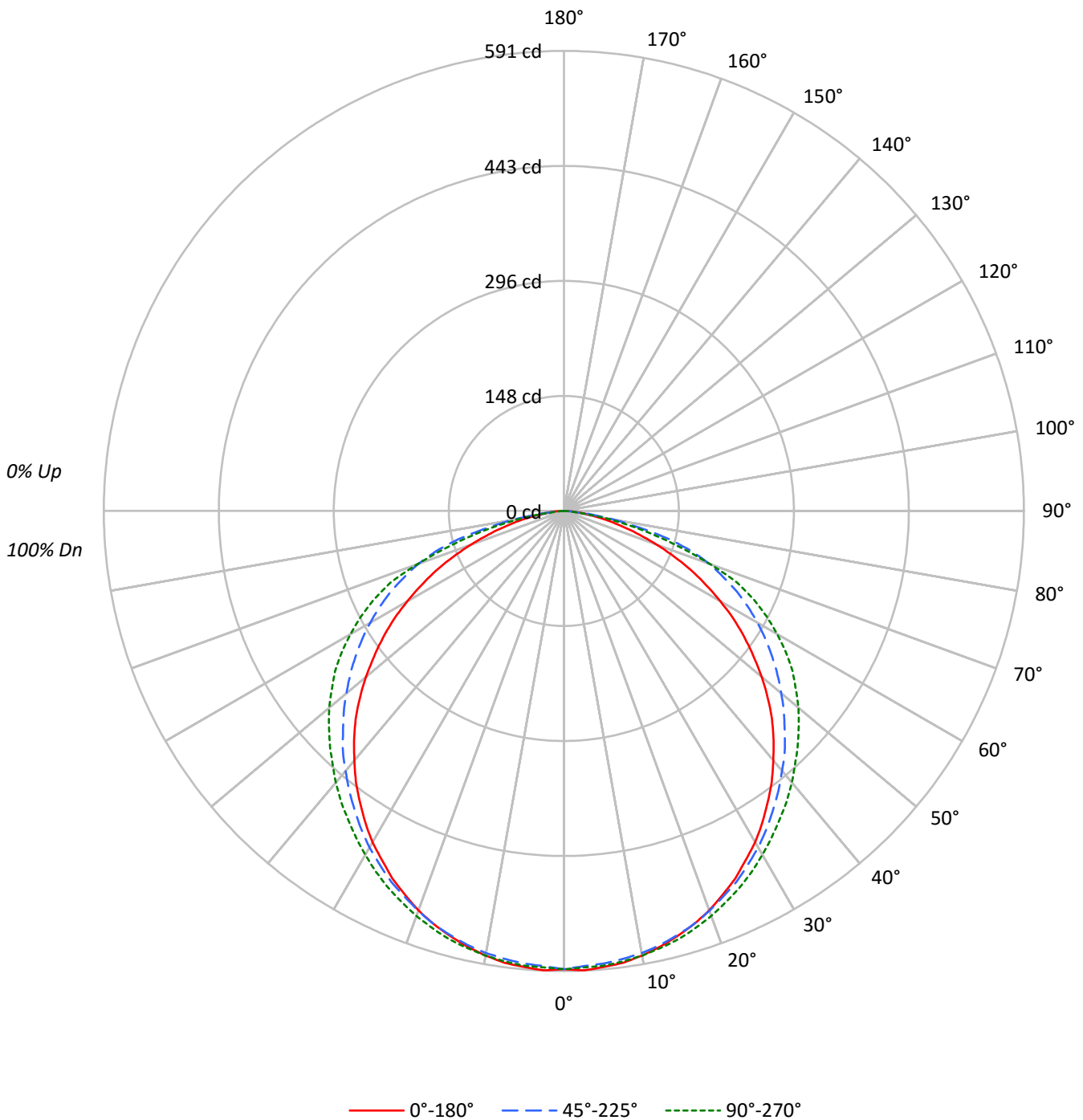
Input Watts (W): 20.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1584	1584	1584
5°	1588	1576	1584
10°	1584	1575	1584
15°	1574	1571	1587
20°	1564	1565	1586
25°	1547	1560	1586
30°	1527	1551	1585
35°	1500	1539	1588
40°	1470	1532	1600
45°	1439	1526	1618
50°	1389	1526	1647
55°	1330	1534	1682
60°	1249	1546	1704
65°	1152	1561	1714
70°	1003	1565	1578
75°	828	1456	1275
80°	651	1048	852
85°	503	404	201



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.7	3.2
10°-20°	159.9	9.2
20°-30°	242.8	14.0
30°-40°	294.2	17.0
40°-50°	310.0	17.9
50°-60°	289.4	16.7
60°-70°	231.3	13.3
70°-80°	127.3	7.3
80°-90°	22.5	1.3
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°	458.4	26.5
0°-40°	752.6	43.4
0°-60°	1352.0	78.0
0°-90°	1733.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1733.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	588	588	588	588	588	
5°	588	586	584	587	586	56
15°	565	565	564	570	570	160
25°	521	522	525	533	534	240
35°	457	461	469	481	483	286
45°	378	385	401	419	425	291
55°	283	298	327	350	359	253
65°	181	204	245	265	269	178
75°	80	114	140	126	123	86
85°	16	21	13	8	6	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	588.5	588.5	588.5	588.5	588.5
2.5°	590.7	589.1	585.3	588.5	586.9
5°	588.0	586.4	583.6	587.4	586.4
7.5°	585.3	583.1	580.4	584.7	583.6
10°	579.8	578.2	576.5	580.4	579.8
12.5°	573.3	572.7	571.1	575.5	574.9
15°	565.1	565.1	564.0	569.5	569.5
17.5°	556.4	555.8	556.4	562.4	561.8
20°	546.0	546.0	546.6	553.7	553.7
22.5°	533.5	534.0	535.7	544.4	543.9
25°	521.0	522.1	525.3	533.0	534.0
27.5°	505.7	508.4	512.2	521.5	522.6
30°	491.5	493.2	499.2	507.9	510.1
32.5°	474.6	477.9	484.5	494.3	497.0
35°	456.7	461.0	468.6	480.6	483.4
37.5°	438.7	442.5	452.8	465.4	470.3
40°	418.5	425.1	436.0	450.1	455.6
42.5°	398.9	405.4	420.1	434.9	439.8
45°	378.2	385.3	401.1	419.1	425.1
47.5°	355.3	363.5	383.6	402.7	409.3
50°	331.9	342.2	364.6	385.8	393.4
52.5°	307.3	320.4	346.0	368.4	375.5
55°	283.4	297.5	327.0	349.9	358.6
57.5°	258.8	274.1	307.3	333.5	338.4
60°	232.1	250.7	287.2	310.1	316.6
62.5°	206.0	227.2	266.5	288.3	293.7
65°	180.9	203.8	245.2	265.4	269.2
67.5°	153.7	180.9	221.8	240.3	241.4
70°	127.5	159.1	198.9	207.6	200.5
72.5°	101.9	135.7	172.2	165.1	159.1
75°	79.6	113.9	140.0	125.9	122.6
77.5°	58.9	93.2	100.3	92.6	86.6
80°	42.0	73.6	67.6	57.8	55.0
82.5°	28.9	46.3	37.1	28.9	25.1
85°	16.3	20.7	13.1	8.2	6.5
87.5°	7.1	4.9	2.7	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)