

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: P312760

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-CP250-W2A-U-3000K**

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: P312760
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L83050-CP250-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3000K 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: 1706.0 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

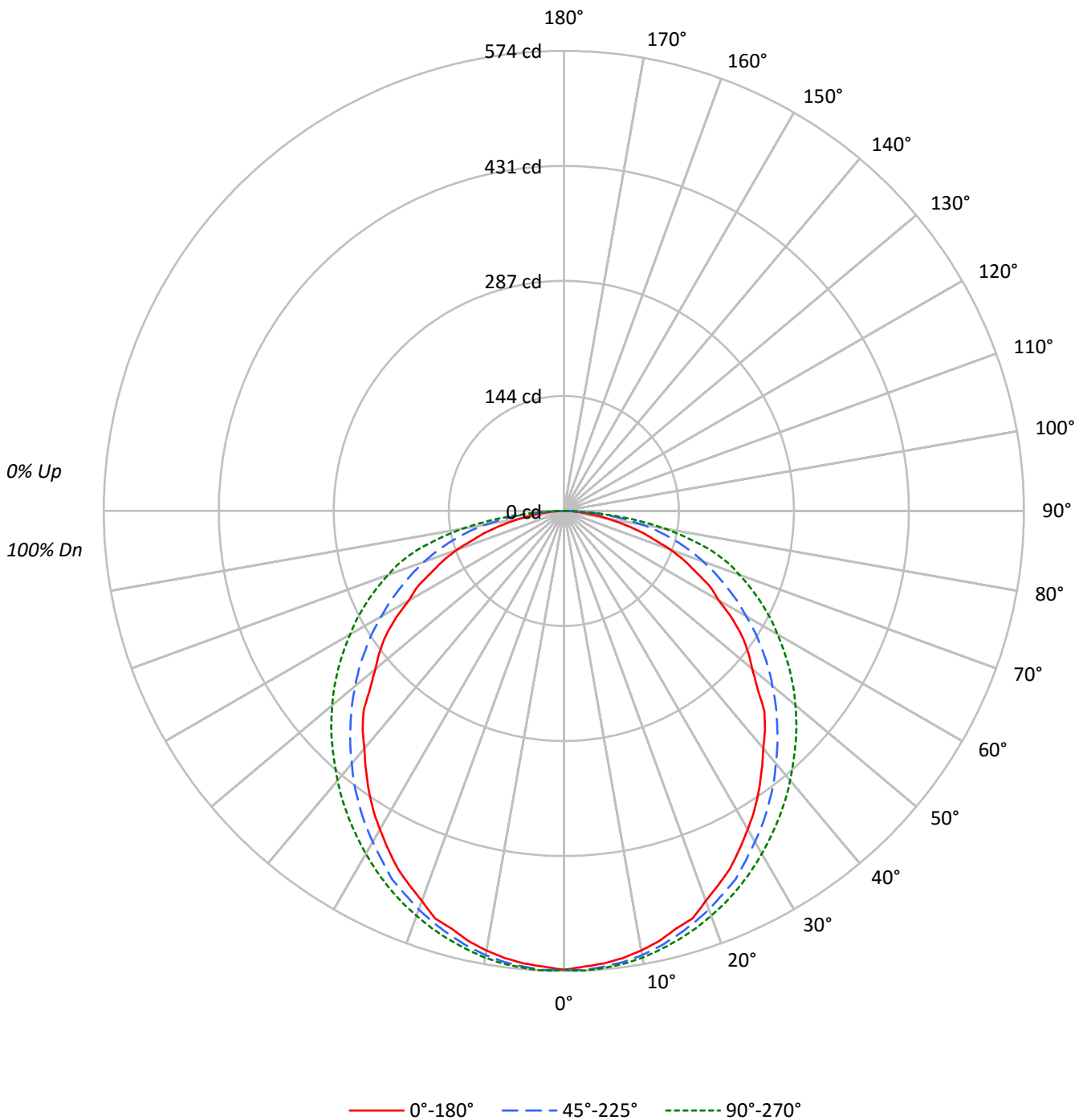
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1540	1540	1540
5°	1531	1542	1546
10°	1522	1537	1546
15°	1504	1526	1542
20°	1483	1515	1539
25°	1459	1506	1537
30°	1426	1482	1535
35°	1395	1464	1537
40°	1359	1446	1543
45°	1346	1432	1557
50°	1285	1422	1579
55°	1272	1417	1613
60°	1200	1415	1657
65°	1165	1424	1731
70°	1118	1458	1837
75°	1019	1502	1978
80°	872	1556	1999
85°	707	1488	1714



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.2	3.2
10°-20°	154.5	9.1
20°-30°	232.5	13.6
30°-40°	279.1	16.4
40°-50°	291.7	17.1
50°-60°	271.9	15.9
60°-70°	223.0	13.1
70°-80°	150.2	8.8
80°-90°	48.9	2.9
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°	441.2	25.9
0°-40°	720.3	42.2
0°-60°	1283.9	75.3
0°-90°	1706.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1706.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	572	572	572	572	572	
5°	567	568	571	572	572	54
15°	540	543	548	553	554	153
25°	492	495	507	514	518	226
35°	425	430	446	461	468	265
45°	354	356	376	399	409	270
55°	271	276	302	331	344	240
65°	183	191	224	256	272	182
75°	98	109	144	177	190	103
85°	23	33	48	56	56	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	572.4	572.4	572.4	572.4	572.4
2.5°	569.1	570.7	573.2	574.0	574.0
5°	566.7	568.3	570.7	571.6	572.4
7.5°	562.6	564.2	567.5	569.1	569.9
10°	556.9	558.5	562.6	565.0	565.8
12.5°	549.5	551.1	556.0	559.3	560.1
15°	539.7	543.0	547.9	552.8	553.6
17.5°	533.2	532.4	538.9	544.6	546.2
20°	517.7	521.8	529.1	535.6	537.3
22.5°	504.6	507.9	517.7	525.0	528.3
25°	491.5	494.8	507.1	514.4	517.7
27.5°	475.2	480.1	491.5	502.2	506.2
30°	458.9	463.8	476.8	489.1	494.0
32.5°	442.6	448.3	462.1	475.2	480.9
35°	424.6	430.3	445.8	461.3	467.9
37.5°	405.8	413.2	429.5	446.6	454.0
40°	387.0	394.4	411.5	431.1	439.3
42.5°	371.5	374.8	394.4	415.6	423.8
45°	353.6	356.0	376.4	399.3	409.1
47.5°	327.4	336.4	358.5	383.8	393.6
50°	307.0	316.8	339.7	366.6	377.2
52.5°	289.9	296.4	321.7	348.7	360.9
55°	271.1	276.0	302.1	330.7	343.8
57.5°	248.2	257.2	283.3	312.7	325.8
60°	222.9	234.3	262.9	294.8	307.8
62.5°	206.6	213.1	244.1	276.0	290.7
65°	182.9	191.1	223.7	256.4	271.9
67.5°	163.3	171.5	204.9	237.6	253.1
70°	142.1	150.2	185.3	218.0	233.5
72.5°	117.6	129.0	165.8	198.4	214.7
75°	98.0	108.6	144.5	177.2	190.2
77.5°	75.9	89.8	123.3	150.2	160.0
80°	56.3	70.2	100.4	120.0	129.0
82.5°	38.4	52.3	75.1	89.8	94.7
85°	22.9	32.7	48.2	56.3	55.5
87.5°	10.6	13.9	19.6	19.6	18.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)