

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: P309535

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CP187-W2A-U-6500K**

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: P309535
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50HE-UNV-L82765-HRP-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" POLYCARB SHEET
Light Source: (336) 6500K 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: 3410.0 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

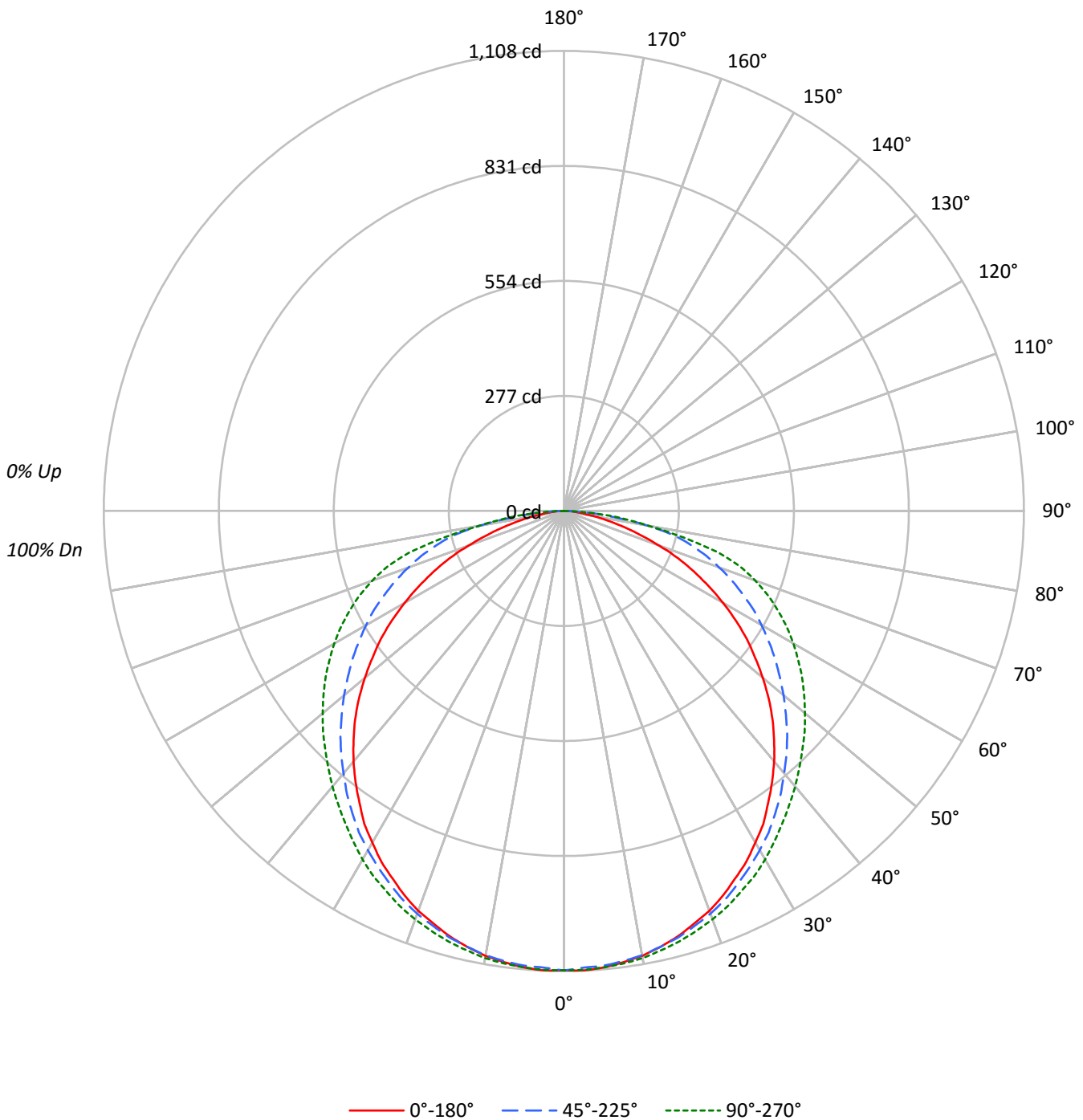
Input Watts (W): 40.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	101	96	93	96	93	90	92	90	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	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1489	1489	1489
5°	1490	1485	1490
10°	1486	1484	1494
15°	1478	1481	1495
20°	1468	1478	1498
25°	1450	1471	1500
30°	1433	1466	1506
35°	1409	1459	1508
40°	1384	1449	1522
45°	1353	1448	1546
50°	1309	1446	1587
55°	1263	1457	1644
60°	1191	1479	1717
65°	1100	1514	1813
70°	960	1567	1932
75°	779	1647	1996
80°	575	1615	1615
85°	442	1190	1345



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.8	3.1
10°-20°	301.0	8.8
20°-30°	458.2	13.4
30°-40°	556.3	16.3
40°-50°	587.8	17.2
50°-60°	554.6	16.3
60°-70°	461.2	13.5
70°-80°	303.4	8.9
80°-90°	82.7	2.4
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°	864.0	25.3
0°-40°	1420.3	41.7
0°-60°	2562.7	75.2
0°-90°	3410.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3410.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1106	1106	1106	1106	1106	
5°	1104	1104	1099	1104	1104	105
15°	1061	1062	1064	1074	1074	299
25°	976	982	991	1008	1011	450
35°	858	868	888	911	918	537
45°	711	725	761	798	812	547
55°	538	561	621	680	701	479
65°	346	385	475	545	570	342
75°	150	218	317	376	384	162
85°	29	63	77	86	87	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1106.4	1106.4	1106.4	1106.4	1106.4
2.5°	1107.8	1106.4	1100.7	1106.4	1106.4
5°	1103.5	1103.5	1099.2	1103.5	1103.5
7.5°	1096.4	1096.4	1093.5	1099.2	1099.2
10°	1087.8	1087.8	1086.4	1093.5	1093.5
12.5°	1075.0	1076.4	1075.0	1083.5	1083.5
15°	1060.7	1062.1	1063.5	1073.5	1073.5
17.5°	1042.1	1045.0	1047.8	1059.3	1060.7
20°	1025.0	1026.4	1032.1	1045.0	1046.4
22.5°	1002.2	1006.4	1013.6	1026.4	1030.7
25°	976.5	982.2	990.7	1007.9	1010.7
27.5°	952.2	956.5	967.9	986.5	992.2
30°	922.2	929.4	943.6	962.2	969.3
32.5°	893.7	900.8	917.9	937.9	943.6
35°	858.0	868.0	888.0	910.8	917.9
37.5°	823.7	833.7	858.0	883.7	892.2
40°	788.0	799.4	825.1	855.1	866.5
42.5°	749.5	765.2	793.7	826.6	839.4
45°	710.9	725.2	760.9	798.0	812.3
47.5°	669.5	686.7	725.2	769.5	786.6
50°	625.3	646.7	691.0	739.5	758.0
52.5°	581.0	605.3	655.3	709.5	729.5
55°	538.2	561.0	621.0	679.5	700.9
57.5°	491.1	519.6	585.3	648.1	669.5
60°	442.6	474.0	549.6	615.3	638.1
62.5°	394.0	429.7	515.4	581.0	605.3
65°	345.5	385.4	475.4	545.3	569.6
67.5°	298.4	342.6	438.3	508.2	532.5
70°	244.1	299.8	398.3	466.8	491.1
72.5°	194.2	258.4	359.8	424.0	445.4
75°	149.9	218.4	316.9	375.5	384.0
77.5°	109.9	178.4	272.7	292.7	294.1
80°	74.2	142.8	208.4	205.6	208.4
82.5°	48.5	107.1	131.3	147.0	148.5
85°	28.6	62.8	77.1	85.7	87.1
87.5°	14.3	21.4	27.1	28.6	31.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)