

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: P310204

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CP187-W2A-U-3500K**

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: P310204
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 3500K 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: 2825.0 lumens
Efficiency: N/A
Efficacy: 73.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

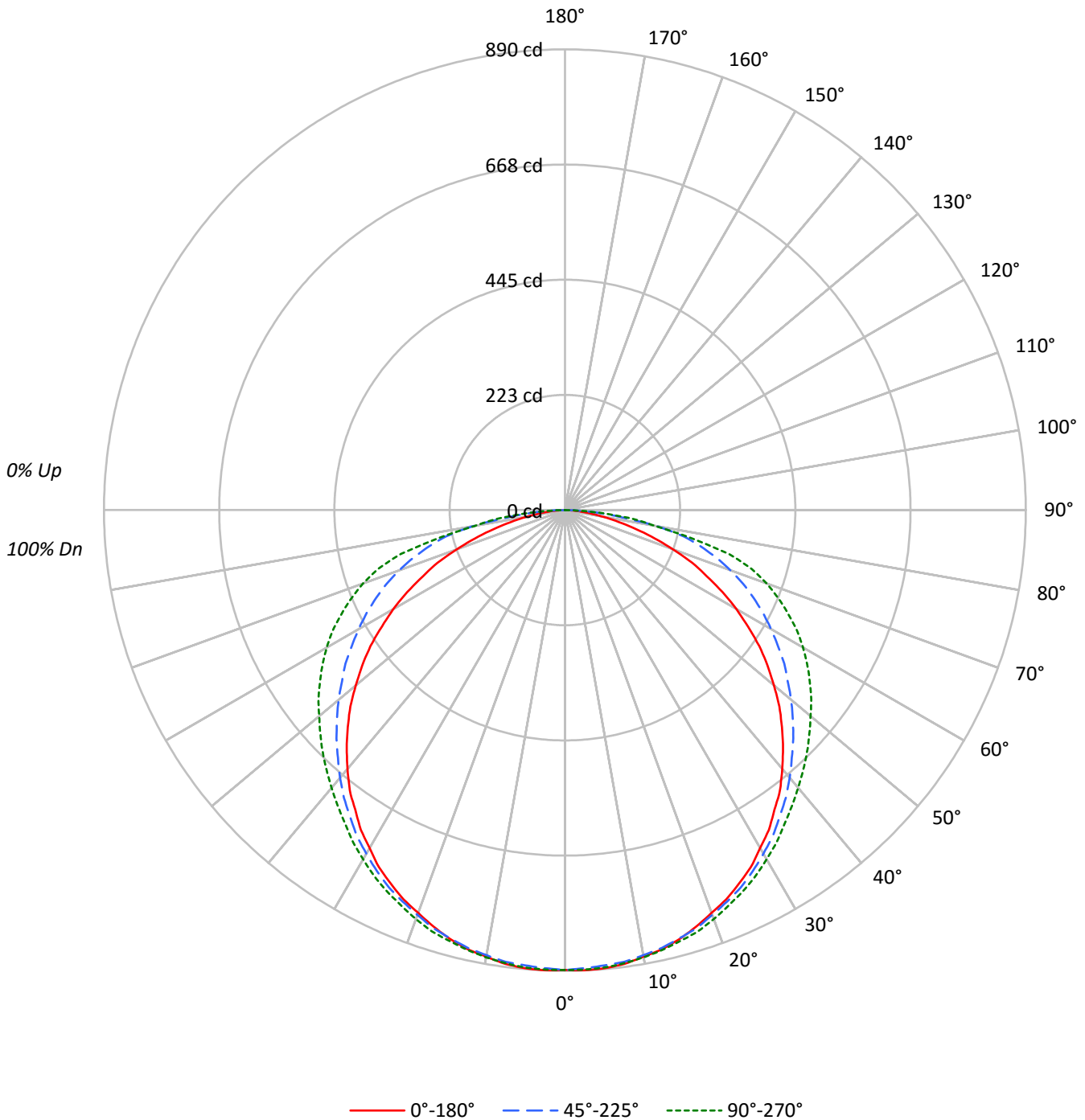
Input Watts (W): 38.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1195	1195	1195
5°	1200	1192	1198
10°	1197	1193	1198
15°	1195	1193	1200
20°	1186	1192	1204
25°	1182	1194	1207
30°	1171	1191	1210
35°	1160	1188	1215
40°	1147	1186	1231
45°	1128	1186	1259
50°	1103	1194	1296
55°	1075	1213	1354
60°	1029	1237	1429
65°	964	1280	1517
70°	876	1340	1632
75°	743	1413	1705
80°	587	1423	1379
85°	432	1082	1212



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.3	3.0
10°-20°	242.5	8.6
20°-30°	370.9	13.1
30°-40°	453.4	16.0
40°-50°	483.2	17.1
50°-60°	462.0	16.4
60°-70°	391.4	13.9
70°-80°	263.1	9.3
80°-90°	74.2	2.6
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°	697.7	24.7
0°-40°	1151.1	40.7
0°-60°	2096.3	74.2
0°-90°	2825.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2825.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	888	888	888	888	888	
5°	888	887	883	887	887	84
15°	858	858	856	863	862	242
25°	796	799	804	811	813	367
35°	706	712	723	737	740	442
45°	593	602	624	650	661	457
55°	458	475	517	558	577	408
65°	303	334	402	455	476	300
75°	143	195	272	318	328	153
85°	28	58	70	76	78	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	888.4	888.4	888.4	888.4	888.4
2.5°	889.8	889.8	885.6	888.4	888.4
5°	888.4	887.0	882.8	887.0	887.0
7.5°	884.2	882.8	880.0	884.2	882.8
10°	875.8	875.8	873.0	877.2	877.2
12.5°	868.8	867.4	866.0	871.6	870.2
15°	857.6	857.6	856.2	863.2	861.8
17.5°	843.5	844.9	846.3	851.9	853.4
20°	828.1	830.9	832.3	840.7	840.7
22.5°	814.1	815.5	818.3	826.7	826.7
25°	795.9	798.7	804.3	811.3	812.7
27.5°	777.7	779.1	786.1	795.9	797.3
30°	753.9	758.1	766.5	777.7	779.1
32.5°	732.8	737.0	746.9	758.1	760.9
35°	706.2	711.8	723.0	737.0	739.9
37.5°	682.4	686.6	700.6	716.0	720.2
40°	653.0	661.4	675.4	693.6	700.6
42.5°	623.5	632.0	648.8	672.6	681.0
45°	592.7	602.5	623.5	650.2	661.4
47.5°	561.9	573.1	596.9	627.8	640.4
50°	526.9	540.9	570.3	605.3	619.3
52.5°	493.2	510.0	542.3	581.5	599.7
55°	458.2	475.0	517.1	557.7	577.3
57.5°	419.0	441.4	487.6	533.9	554.9
60°	382.5	403.6	459.6	510.0	531.1
62.5°	343.3	371.3	431.6	484.8	505.8
65°	302.7	333.5	402.2	455.4	476.4
67.5°	266.2	299.9	372.7	426.0	447.0
70°	222.8	264.8	340.5	393.7	414.8
72.5°	182.2	228.4	306.9	358.7	378.3
75°	142.9	194.8	271.8	318.1	327.9
77.5°	106.5	161.1	235.4	255.0	248.0
80°	75.7	128.9	183.6	173.8	178.0
82.5°	49.0	98.1	113.5	128.9	133.1
85°	28.0	57.5	70.1	75.7	78.5
87.5°	12.6	21.0	28.0	28.0	26.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)