

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: P309587

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP250-W2A-U-5500K**

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: P309587
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: 24FCZ2-50-UNV-L82765-HRP-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 5500K 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: 3348.0 lumens
Efficiency: N/A
Efficacy: 76.3 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

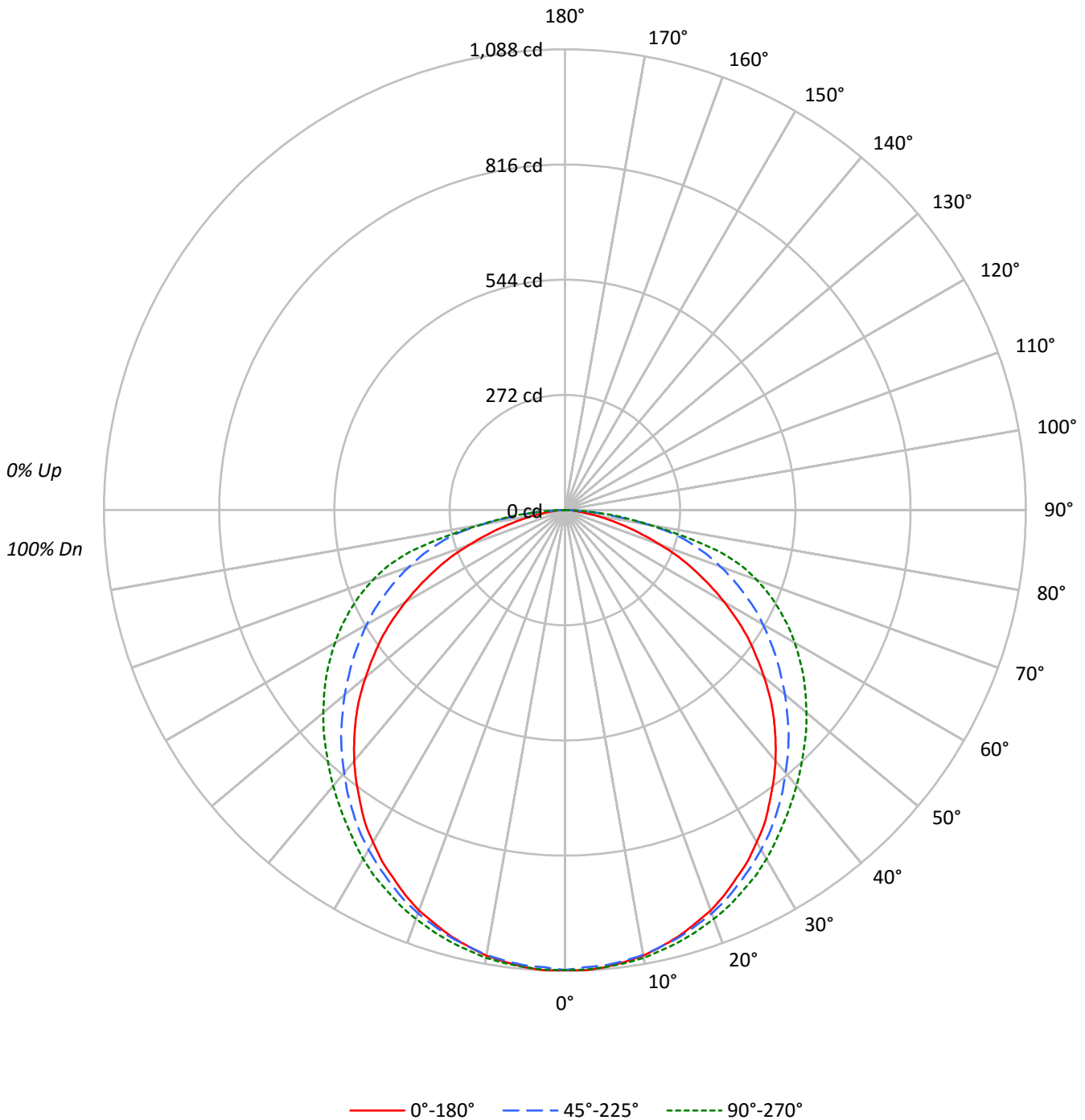
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1462	1462	1462
5°	1463	1458	1463
10°	1459	1457	1467
15°	1451	1455	1468
20°	1441	1451	1471
25°	1423	1444	1473
30°	1407	1439	1479
35°	1384	1432	1480
40°	1359	1423	1494
45°	1328	1422	1517
50°	1285	1420	1558
55°	1240	1430	1614
60°	1169	1452	1686
65°	1080	1486	1780
70°	943	1539	1897
75°	765	1618	1960
80°	565	1585	1585
85°	432	1169	1320



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.9	3.1
10°-20°	295.5	8.8
20°-30°	449.9	13.4
30°-40°	546.2	16.3
40°-50°	577.1	17.2
50°-60°	544.5	16.3
60°-70°	452.8	13.5
70°-80°	297.9	8.9
80°-90°	81.2	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°	848.3	25.3
0°-40°	1394.5	41.7
0°-60°	2516.1	75.2
0°-90°	3348.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3348.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1084	1084	1079	1084	1084	103
15°	1041	1043	1044	1054	1054	294
25°	959	964	973	990	992	442
35°	842	852	872	894	901	527
45°	698	712	747	784	798	538
55°	528	551	610	667	688	471
65°	339	378	467	535	559	335
75°	147	214	311	369	377	159
85°	28	62	76	84	86	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1086.3	1086.3	1086.3	1086.3	1086.3
2.5°	1087.7	1086.3	1080.7	1086.3	1086.3
5°	1083.5	1083.5	1079.3	1083.5	1083.5
7.5°	1076.4	1076.4	1073.6	1079.3	1079.3
10°	1068.0	1068.0	1066.6	1073.6	1073.6
12.5°	1055.4	1056.8	1055.4	1063.8	1063.8
15°	1041.4	1042.8	1044.2	1054.0	1054.0
17.5°	1023.2	1026.0	1028.8	1040.0	1041.4
20°	1006.4	1007.8	1013.4	1026.0	1027.4
22.5°	983.9	988.1	995.2	1007.8	1012.0
25°	958.7	964.3	972.7	989.5	992.4
27.5°	934.9	939.1	950.3	968.5	974.1
30°	905.5	912.5	926.5	944.7	951.7
32.5°	877.4	884.4	901.2	920.9	926.5
35°	842.4	852.2	871.8	894.2	901.2
37.5°	808.7	818.6	842.4	867.6	876.0
40°	773.7	784.9	810.1	839.6	850.8
42.5°	735.9	751.3	779.3	811.5	824.2
45°	698.0	712.0	747.1	783.5	797.5
47.5°	657.4	674.2	712.0	755.5	772.3
50°	613.9	634.9	678.4	726.0	744.3
52.5°	570.5	594.3	643.3	696.6	716.2
55°	528.4	550.8	609.7	667.2	688.2
57.5°	482.2	510.2	574.7	636.3	657.4
60°	434.5	465.3	539.6	604.1	626.5
62.5°	386.8	421.9	506.0	570.5	594.3
65°	339.2	378.4	466.7	535.4	559.2
67.5°	292.9	336.4	430.3	499.0	522.8
70°	239.7	294.3	391.1	458.3	482.2
72.5°	190.6	253.7	353.2	416.3	437.3
75°	147.2	214.4	311.2	368.6	377.0
77.5°	107.9	175.2	267.7	287.3	288.7
80°	72.9	140.2	204.6	201.8	204.6
82.5°	47.7	105.1	128.9	144.4	145.8
85°	28.0	61.7	75.7	84.1	85.5
87.5°	14.0	21.0	26.6	28.0	30.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)