

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: P309546

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CA08-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: P309546
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-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 3275.0 lumens
Efficiency: N/A
Efficacy: 77.2 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

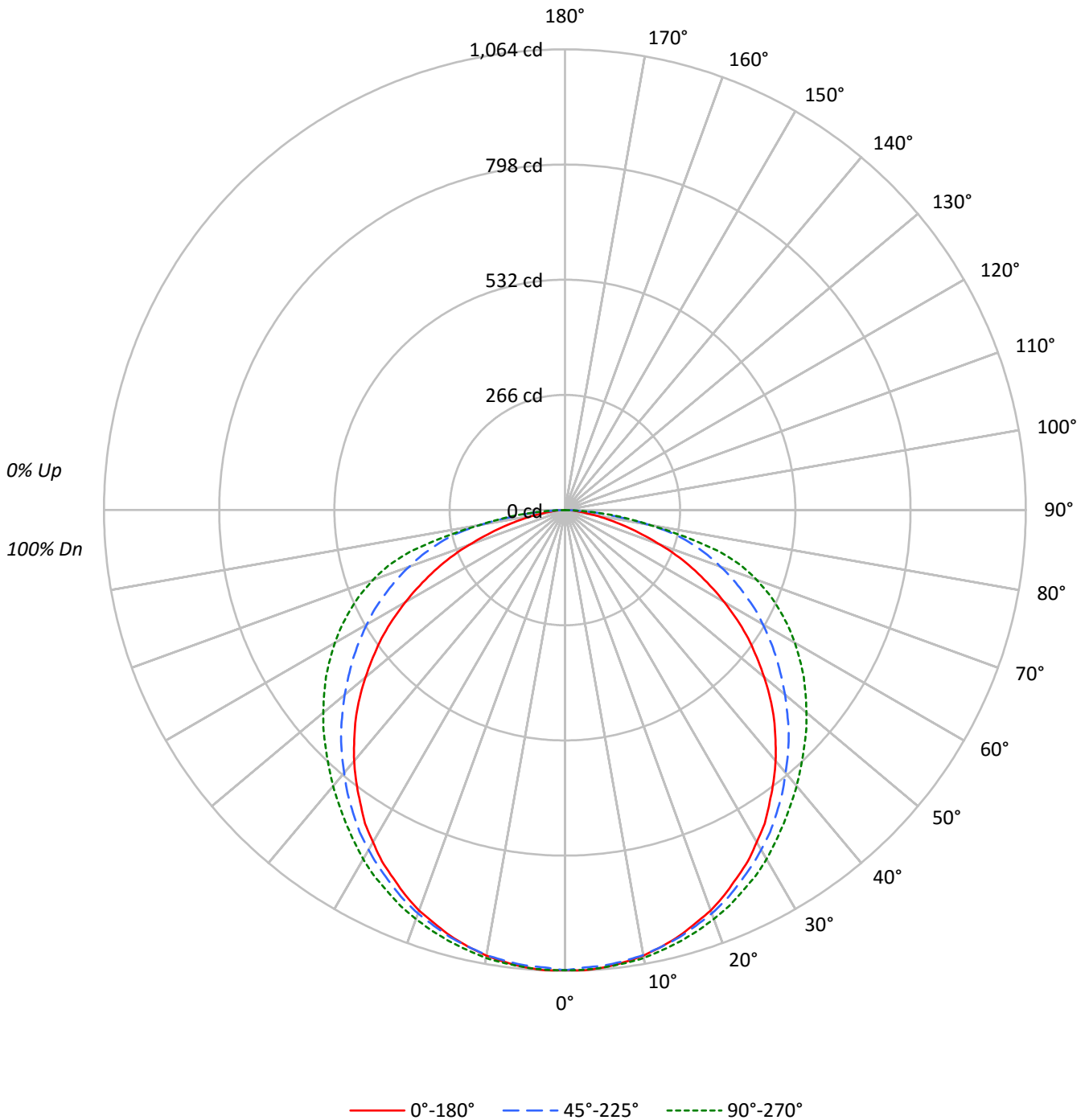
Input Watts (W): 42.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1430	1430	1430
5°	1431	1426	1431
10°	1427	1426	1435
15°	1419	1423	1436
20°	1410	1419	1439
25°	1392	1413	1441
30°	1376	1408	1446
35°	1353	1401	1448
40°	1329	1392	1462
45°	1299	1391	1484
50°	1257	1389	1524
55°	1213	1399	1579
60°	1144	1421	1649
65°	1056	1454	1742
70°	923	1505	1855
75°	749	1582	1917
80°	552	1551	1551
85°	423	1142	1291



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.7	3.1
10°-20°	289.1	8.8
20°-30°	440.1	13.4
30°-40°	534.3	16.3
40°-50°	564.5	17.2
50°-60°	532.7	16.3
60°-70°	442.9	13.5
70°-80°	291.4	8.9
80°-90°	79.4	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°	829.8	25.3
0°-40°	1364.1	41.7
0°-60°	2461.3	75.2
0°-90°	3275.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3275.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1063	1063	1063	1063	1063	
5°	1060	1060	1056	1060	1060	101
15°	1019	1020	1021	1031	1031	287
25°	938	943	952	968	971	433
35°	824	834	853	875	882	516
45°	683	696	731	766	780	526
55°	517	539	596	653	673	460
65°	332	370	457	524	547	328
75°	144	210	304	361	369	155
85°	27	60	74	82	84	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1062.6	1062.6	1062.6	1062.6	1062.6
2.5°	1063.9	1062.6	1057.1	1062.6	1062.6
5°	1059.8	1059.8	1055.7	1059.8	1059.8
7.5°	1053.0	1053.0	1050.2	1055.7	1055.7
10°	1044.8	1044.8	1043.4	1050.2	1050.2
12.5°	1032.4	1033.8	1032.4	1040.6	1040.6
15°	1018.7	1020.1	1021.4	1031.0	1031.0
17.5°	1000.9	1003.6	1006.4	1017.3	1018.7
20°	984.4	985.8	991.3	1003.6	1005.0
22.5°	962.5	966.6	973.5	985.8	989.9
25°	937.8	943.3	951.5	968.0	970.7
27.5°	914.5	918.6	929.6	947.4	952.9
30°	885.7	892.6	906.3	924.1	931.0
32.5°	858.3	865.1	881.6	900.8	906.3
35°	824.0	833.6	852.8	874.7	881.6
37.5°	791.1	800.7	824.0	848.7	856.9
40°	756.8	767.8	792.5	821.3	832.2
42.5°	719.8	734.9	762.3	793.8	806.2
45°	682.8	696.5	730.8	766.4	780.1
47.5°	643.0	659.5	696.5	739.0	755.5
50°	600.5	621.1	663.6	710.2	728.0
52.5°	558.0	581.3	629.3	681.4	700.6
55°	516.9	538.8	596.4	652.6	673.2
57.5°	471.6	499.1	562.1	622.5	643.0
60°	425.0	455.2	527.9	590.9	612.9
62.5°	378.4	412.7	495.0	558.0	581.3
65°	331.8	370.2	456.6	523.7	547.1
67.5°	286.6	329.1	420.9	488.1	511.4
70°	234.5	287.9	382.5	448.3	471.6
72.5°	186.5	248.2	345.5	407.2	427.8
75°	144.0	209.8	304.4	360.6	368.8
77.5°	105.6	171.4	261.9	281.1	282.4
80°	71.3	137.1	200.2	197.4	200.2
82.5°	46.6	102.8	126.1	141.2	142.6
85°	27.4	60.3	74.0	82.3	83.6
87.5°	13.7	20.6	26.1	27.4	30.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)