

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: P313285

Luminaire Tested: **24FCZ2-50-UNV-L83050-HRP-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: P313285
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-L83050-HRP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 3116.0 lumens
Efficiency: N/A
Efficacy: 73.1 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

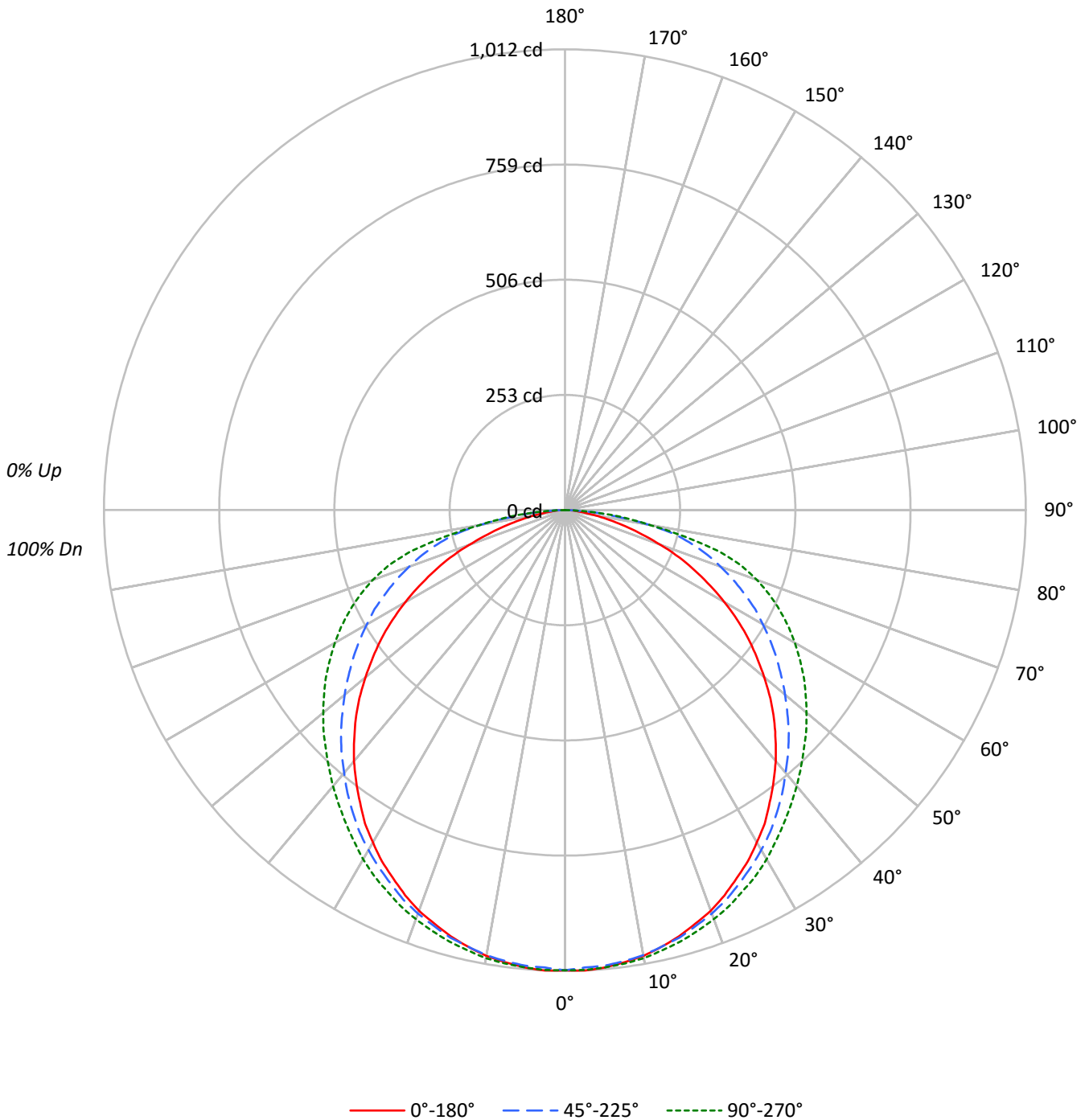
Input Watts (W): 42.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1360	1360	1360
5°	1362	1357	1362
10°	1358	1356	1365
15°	1350	1354	1366
20°	1341	1351	1369
25°	1325	1344	1371
30°	1309	1340	1376
35°	1288	1333	1378
40°	1265	1324	1391
45°	1236	1323	1412
50°	1196	1322	1450
55°	1154	1331	1502
60°	1088	1351	1569
65°	1005	1383	1657
70°	878	1432	1765
75°	712	1506	1824
80°	525	1476	1476
85°	403	1087	1229



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.8	3.1
10°-20°	275.0	8.8
20°-30°	418.7	13.4
30°-40°	508.4	16.3
40°-50°	537.1	17.2
50°-60°	506.8	16.3
60°-70°	421.4	13.5
70°-80°	277.2	8.9
80°-90°	75.6	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°	789.5	25.3
0°-40°	1297.9	41.7
0°-60°	2341.8	75.2
0°-90°	3116.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3116.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1011	1011	1011	1011	1011	
5°	1008	1008	1004	1008	1008	96
15°	969	970	972	981	981	273
25°	892	898	905	921	924	412
35°	784	793	811	832	839	491
45°	650	663	695	729	742	500
55°	492	513	568	621	640	438
65°	316	352	434	498	520	312
75°	137	200	290	343	351	148
85°	26	57	70	78	80	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1011.0	1011.0	1011.0	1011.0	1011.0
2.5°	1012.3	1011.0	1005.8	1011.0	1011.0
5°	1008.4	1008.4	1004.5	1008.4	1008.4
7.5°	1001.9	1001.9	999.2	1004.5	1004.5
10°	994.0	994.0	992.7	999.2	999.2
12.5°	982.3	983.6	982.3	990.1	990.1
15°	969.2	970.5	971.9	981.0	981.0
17.5°	952.3	954.9	957.5	967.9	969.2
20°	936.6	937.9	943.2	954.9	956.2
22.5°	915.8	919.7	926.2	937.9	941.9
25°	892.3	897.5	905.3	921.0	923.6
27.5°	870.1	874.0	884.5	901.4	906.6
30°	842.7	849.2	862.3	879.2	885.8
32.5°	816.6	823.1	838.8	857.1	862.3
35°	784.0	793.1	811.4	832.3	838.8
37.5°	752.7	761.8	784.0	807.5	815.3
40°	720.1	730.5	754.0	781.4	791.8
42.5°	684.9	699.2	725.3	755.3	767.0
45°	649.6	662.7	695.3	729.2	742.3
47.5°	611.8	627.5	662.7	703.1	718.8
50°	571.4	590.9	631.4	675.7	692.7
52.5°	530.9	553.1	598.8	648.3	666.6
55°	491.8	512.7	567.5	620.9	640.5
57.5°	448.7	474.8	534.8	592.2	611.8
60°	404.4	433.1	502.2	562.2	583.1
62.5°	360.0	392.7	470.9	530.9	553.1
65°	315.7	352.2	434.4	498.3	520.5
67.5°	272.6	313.1	400.5	464.4	486.6
70°	223.1	273.9	364.0	426.6	448.7
72.5°	177.4	236.1	328.7	387.4	407.0
75°	137.0	199.6	289.6	343.1	350.9
77.5°	100.4	163.1	249.2	267.4	268.7
80°	67.8	130.5	190.5	187.8	190.5
82.5°	44.4	97.8	120.0	134.4	135.7
85°	26.1	57.4	70.4	78.3	79.6
87.5°	13.0	19.6	24.8	26.1	28.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)