

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: P313642

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-CA08-W2A-U-4000K**

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: P313642
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: 24FCZ2-50-UNV-L83050-RDP-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3230.0 lumens
Efficiency: N/A
Efficacy: 73.9 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

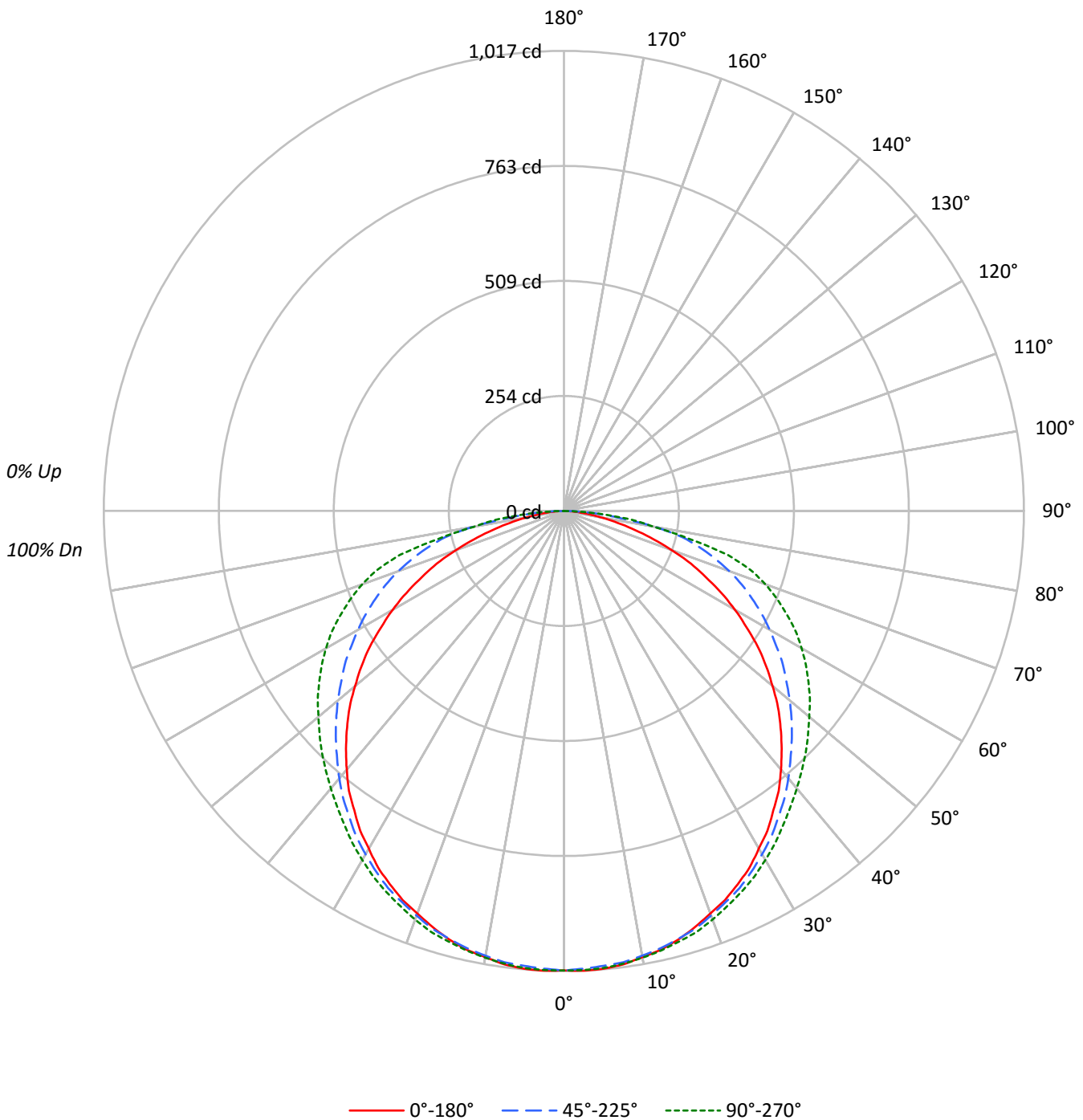
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1367	1367	1367
5°	1372	1363	1370
10°	1368	1364	1370
15°	1366	1364	1372
20°	1356	1363	1376
25°	1351	1365	1379
30°	1339	1362	1384
35°	1326	1358	1389
40°	1311	1356	1407
45°	1290	1357	1439
50°	1261	1365	1482
55°	1229	1387	1548
60°	1177	1414	1634
65°	1102	1464	1734
70°	1002	1531	1865
75°	849	1616	1949
80°	670	1626	1577
85°	494	1237	1385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.3	3.0
10°-20°	277.3	8.6
20°-30°	424.1	13.1
30°-40°	518.4	16.0
40°-50°	552.5	17.1
50°-60°	528.3	16.4
60°-70°	447.5	13.9
70°-80°	300.8	9.3
80°-90°	84.8	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°	797.7	24.7
0°-40°	1316.1	40.7
0°-60°	2396.9	74.2
0°-90°	3230.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3230.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	1016	1014	1009	1014	1014	97
15°	980	980	979	987	985	276
25°	910	913	920	928	929	419
35°	808	814	827	843	846	506
45°	678	689	713	743	756	523
55°	524	543	591	638	660	467
65°	346	381	460	521	545	344
75°	163	223	311	364	375	175
85°	32	66	80	86	90	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1015.7	1015.7	1015.7	1015.7	1015.7
2.5°	1017.3	1017.3	1012.5	1015.7	1015.7
5°	1015.7	1014.1	1009.3	1014.1	1014.1
7.5°	1010.9	1009.3	1006.1	1010.9	1009.3
10°	1001.3	1001.3	998.1	1002.9	1002.9
12.5°	993.3	991.7	990.1	996.5	994.9
15°	980.5	980.5	978.9	986.9	985.3
17.5°	964.5	966.1	967.7	974.1	975.7
20°	946.9	950.1	951.7	961.3	961.3
22.5°	930.8	932.4	935.6	945.2	945.2
25°	910.0	913.2	919.6	927.6	929.2
27.5°	889.2	890.8	898.8	910.0	911.6
30°	861.9	866.7	876.4	889.2	890.8
32.5°	837.9	842.7	853.9	866.7	870.0
35°	807.5	813.9	826.7	842.7	845.9
37.5°	780.2	785.0	801.1	818.7	823.5
40°	746.6	756.2	772.2	793.0	801.1
42.5°	712.9	722.6	741.8	769.0	778.6
45°	677.7	688.9	712.9	743.4	756.2
47.5°	642.4	655.3	682.5	717.7	732.2
50°	602.4	618.4	652.1	692.1	708.1
52.5°	563.9	583.2	620.0	664.9	685.7
55°	523.9	543.1	591.2	637.6	660.1
57.5°	479.0	504.7	557.5	610.4	634.4
60°	437.4	461.4	525.5	583.2	607.2
62.5°	392.5	424.6	493.5	554.3	578.4
65°	346.1	381.3	459.8	520.7	544.7
67.5°	304.4	342.9	426.2	487.0	511.1
70°	254.7	302.8	389.3	450.2	474.2
72.5°	208.3	261.1	350.9	410.1	432.6
75°	163.4	222.7	310.8	363.7	374.9
77.5°	121.8	184.2	269.2	291.6	283.6
80°	86.5	147.4	209.9	198.7	203.5
82.5°	56.1	112.1	129.8	147.4	152.2
85°	32.0	65.7	80.1	86.5	89.7
87.5°	14.4	24.0	32.0	32.0	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)