

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: P313666

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-RDP-CA08-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: P313666
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: 24FCZ2-55HE-UNV-L83050-RDP-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 3413.0 lumens
Efficiency: N/A
Efficacy: 79.2 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

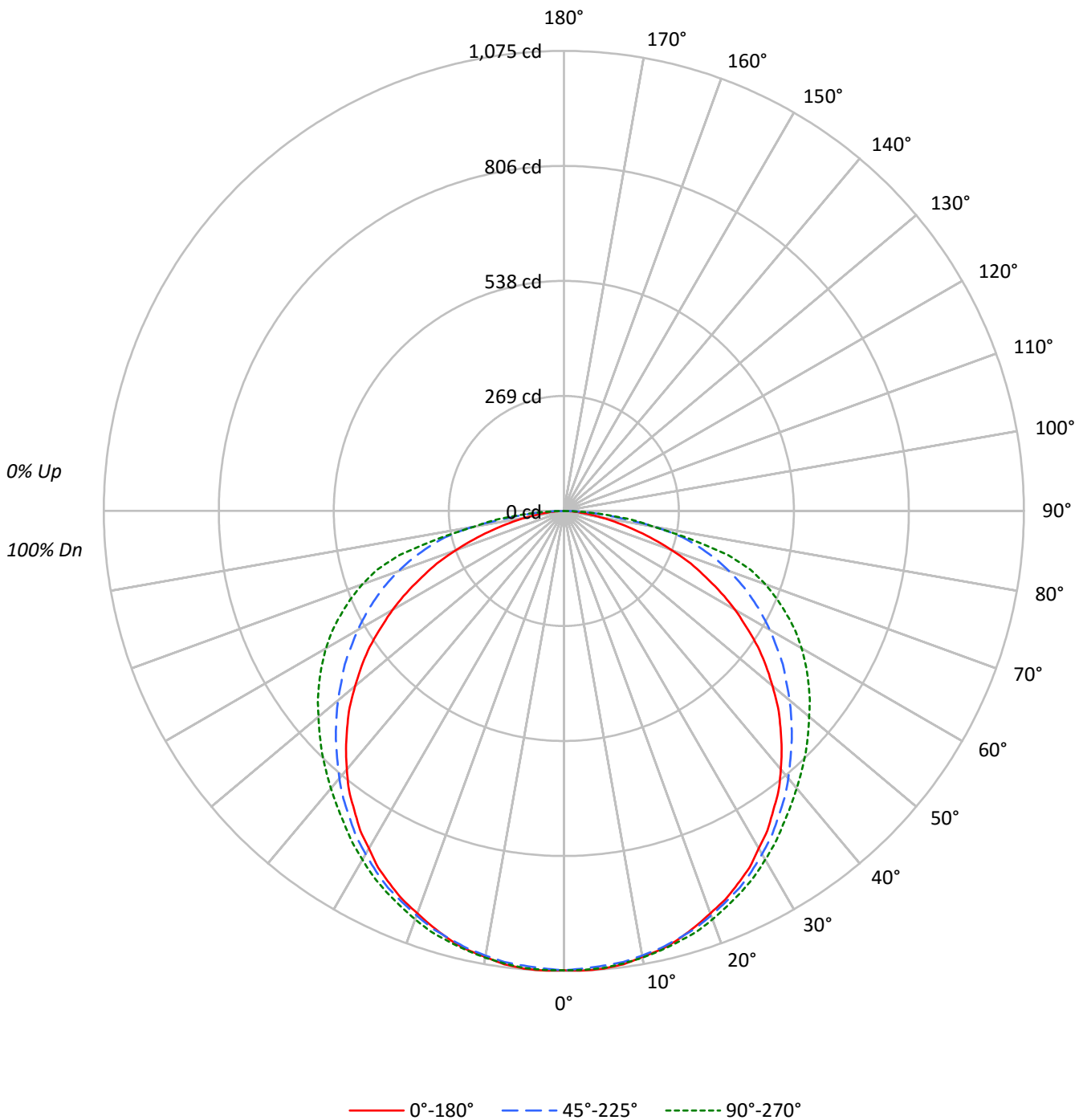
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1444	1444	1444
5°	1450	1440	1447
10°	1446	1441	1448
15°	1443	1441	1450
20°	1433	1440	1454
25°	1428	1443	1458
30°	1415	1439	1462
35°	1401	1435	1468
40°	1386	1433	1487
45°	1363	1433	1520
50°	1332	1442	1566
55°	1299	1465	1636
60°	1244	1494	1727
65°	1164	1547	1833
70°	1059	1618	1971
75°	898	1707	2059
80°	708	1719	1666
85°	523	1306	1463



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.8	3.0
10°-20°	293.0	8.6
20°-30°	448.1	13.1
30°-40°	547.8	16.0
40°-50°	583.8	17.1
50°-60°	558.2	16.4
60°-70°	472.9	13.9
70°-80°	317.8	9.3
80°-90°	89.6	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°	842.9	24.7
0°-40°	1390.7	40.7
0°-60°	2532.7	74.2
0°-90°	3413.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3413.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1073	1073	1073	1073	1073	
5°	1073	1072	1066	1072	1072	102
15°	1036	1036	1034	1043	1041	292
25°	962	965	972	980	982	443
35°	853	860	874	890	894	534
45°	716	728	753	786	799	552
55°	554	574	625	674	698	493
65°	366	403	486	550	576	363
75°	173	235	328	384	396	185
85°	34	69	85	91	95	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1073.3	1073.3	1073.3	1073.3	1073.3
2.5°	1075.0	1075.0	1069.9	1073.3	1073.3
5°	1073.3	1071.6	1066.5	1071.6	1071.6
7.5°	1068.2	1066.5	1063.1	1068.2	1066.5
10°	1058.1	1058.1	1054.7	1059.7	1059.7
12.5°	1049.6	1047.9	1046.2	1053.0	1051.3
15°	1036.0	1036.0	1034.4	1042.8	1041.1
17.5°	1019.1	1020.8	1022.5	1029.3	1031.0
20°	1000.5	1003.9	1005.6	1015.7	1015.7
22.5°	983.6	985.3	988.6	998.8	998.8
25°	961.6	964.9	971.7	980.2	981.9
27.5°	939.6	941.2	949.7	961.6	963.3
30°	910.8	915.9	926.0	939.6	941.2
32.5°	885.4	890.5	902.3	915.9	919.2
35°	853.2	860.0	873.5	890.5	893.8
37.5°	824.4	829.5	846.4	865.1	870.1
40°	788.9	799.0	816.0	838.0	846.4
42.5°	753.3	763.5	783.8	812.6	822.7
45°	716.1	727.9	753.3	785.5	799.0
47.5°	678.8	692.4	721.2	758.4	773.6
50°	636.5	653.5	689.0	731.3	748.3
52.5°	595.9	616.2	655.1	702.5	724.6
55°	553.6	573.9	624.7	673.8	697.5
57.5°	506.2	533.3	589.1	645.0	670.4
60°	462.2	487.6	555.3	616.2	641.6
62.5°	414.8	448.6	521.4	585.7	611.1
65°	365.7	402.9	485.9	550.2	575.6
67.5°	321.6	362.3	450.3	514.6	540.0
70°	269.2	320.0	411.4	475.7	501.1
72.5°	220.1	275.9	370.7	433.4	457.1
75°	172.7	235.3	328.4	384.3	396.1
77.5°	128.7	194.7	284.4	308.1	299.6
80°	91.4	155.7	221.8	209.9	215.0
82.5°	59.3	118.5	137.1	155.7	160.8
85°	33.9	69.4	84.6	91.4	94.8
87.5°	15.2	25.4	33.9	33.9	32.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)