

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: P308829

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-CA08-W2A-U-4500K**

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: P308829  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-44HE-UNV-L82765-CA08-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, RIBBED 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**

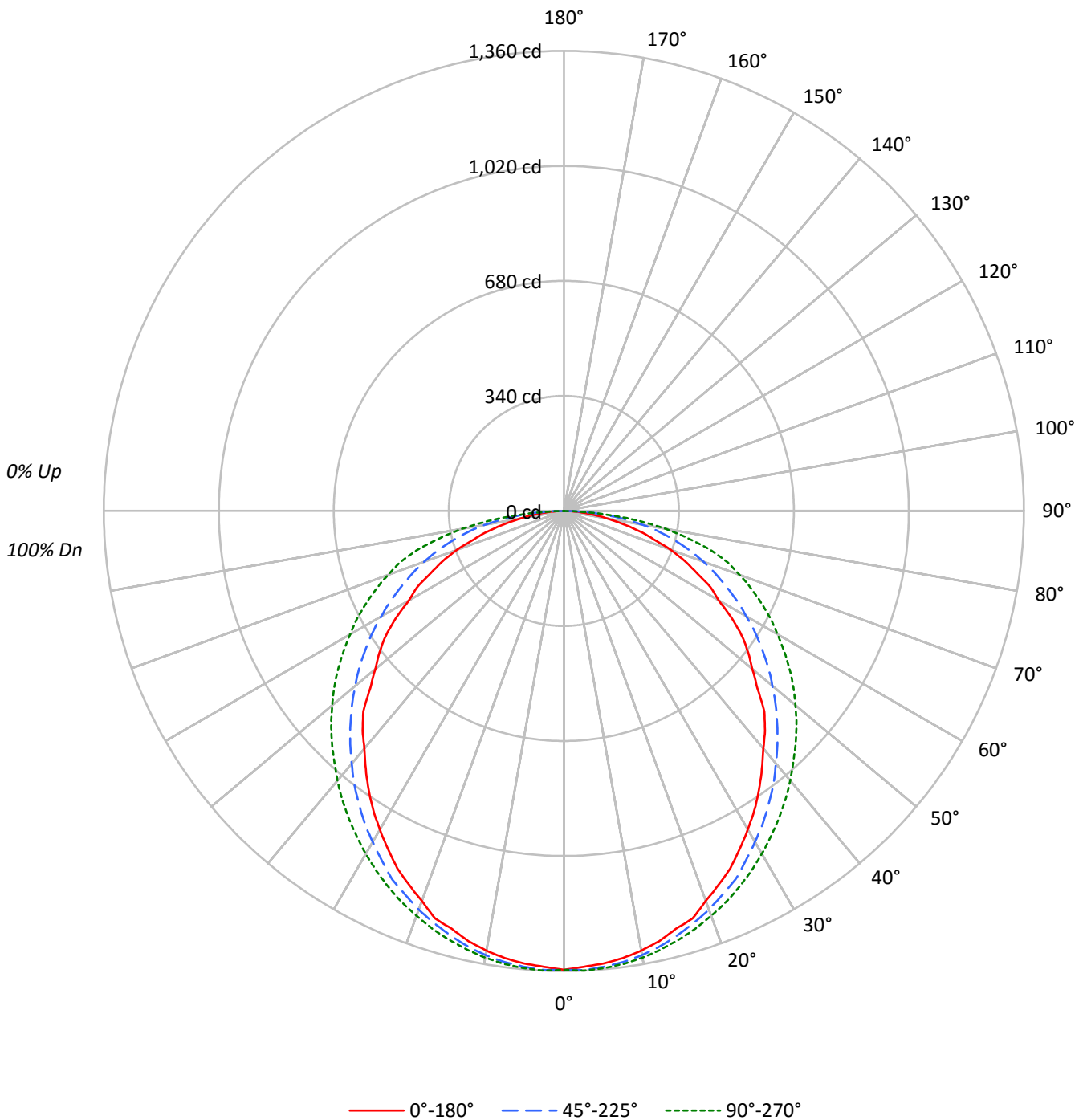
Lumens per Lamp: N/A  
Luminaire Lumens: 4043.0 lumens  
Efficiency: N/A  
Efficacy: 106.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 37.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	90	92	89	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	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	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	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3650	3650	3650
5°	3628	3654	3664
10°	3606	3643	3664
15°	3563	3617	3655
20°	3513	3591	3646
25°	3459	3568	3643
30°	3379	3512	3638
35°	3305	3471	3642
40°	3222	3426	3657
45°	3189	3395	3690
50°	3046	3370	3743
55°	3014	3359	3822
60°	2843	3353	3926
65°	2760	3376	4103
70°	2649	3456	4354
75°	2414	3561	4688
80°	2069	3688	4737
85°	1673	3526	4063



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.4	3.2
10°-20°	366.2	9.1
20°-30°	551.1	13.6
30°-40°	661.4	16.4
40°-50°	691.3	17.1
50°-60°	644.3	15.9
60°-70°	528.4	13.1
70°-80°	356.1	8.8
80°-90°	116.0	2.9
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°	1045.6	25.9
0°-40°	1707.0	42.2
0°-60°	3042.6	75.3
0°-90°	4043.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4043.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1356	1356	1356	1356	1356	
5°	1343	1347	1353	1354	1356	127
15°	1279	1287	1298	1310	1312	361
25°	1165	1173	1202	1219	1227	536
35°	1006	1020	1056	1093	1109	629
45°	838	844	892	946	970	640
55°	642	654	716	784	815	569
65°	433	453	530	608	644	431
75°	232	257	342	420	451	244
85°	54	77	114	134	132	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1356.5	1356.5	1356.5	1356.5	1356.5
2.5°	1348.7	1352.6	1358.4	1360.3	1360.3
5°	1342.9	1346.8	1352.6	1354.5	1356.5
7.5°	1333.2	1337.1	1344.9	1348.7	1350.7
10°	1319.7	1323.6	1333.2	1339.0	1341.0
12.5°	1302.3	1306.1	1317.8	1325.5	1327.4
15°	1279.1	1286.8	1298.4	1310.0	1312.0
17.5°	1263.6	1261.6	1277.1	1290.7	1294.5
20°	1226.8	1236.5	1253.9	1269.4	1273.3
22.5°	1195.9	1203.6	1226.8	1244.2	1252.0
25°	1164.9	1172.6	1201.7	1219.1	1226.8
27.5°	1126.2	1137.8	1164.9	1190.0	1199.7
30°	1087.5	1099.1	1130.1	1159.1	1170.7
32.5°	1048.8	1062.3	1095.2	1126.2	1139.7
35°	1006.2	1019.8	1056.5	1093.3	1108.8
37.5°	961.7	979.1	1017.8	1058.5	1075.9
40°	917.2	934.6	975.3	1021.7	1041.0
42.5°	880.4	888.2	934.6	984.9	1004.3
45°	837.9	843.7	892.1	946.2	969.5
47.5°	775.9	797.2	849.5	909.5	932.7
50°	727.6	750.8	805.0	868.8	894.0
52.5°	686.9	702.4	762.4	826.3	855.3
55°	642.4	654.0	716.0	783.7	814.7
57.5°	588.3	609.5	671.5	741.1	772.1
60°	528.3	555.4	623.1	698.5	729.5
62.5°	489.6	505.0	578.6	654.0	688.9
65°	433.4	452.8	530.2	607.6	644.4
67.5°	387.0	406.4	485.7	563.1	599.9
70°	336.7	356.0	439.3	516.7	553.4
72.5°	278.6	305.7	392.8	470.2	508.9
75°	232.2	257.4	342.5	419.9	450.9
77.5°	180.0	212.9	292.2	356.0	379.3
80°	133.5	166.4	238.0	284.5	305.7
82.5°	90.9	123.8	178.0	212.9	224.5
85°	54.2	77.4	114.2	133.5	131.6
87.5°	25.2	32.9	46.4	46.4	44.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)