

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: P313117

Luminaire Tested: **24FCZ2-35-UNV-L83050-HRP-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: P313117  
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: 24FCZ2-35-UNV-L83050-HRP-CA08-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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

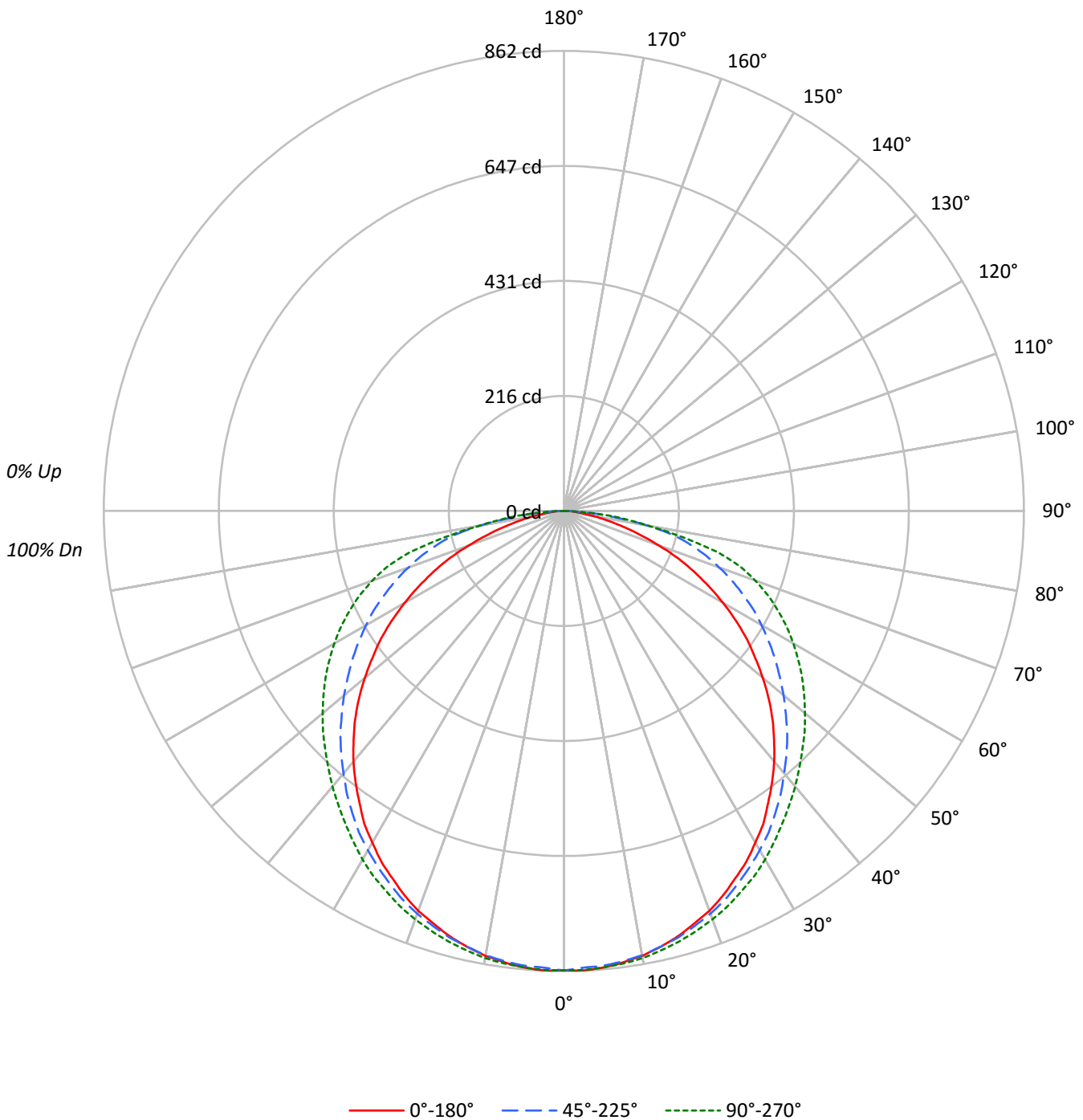
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2653.0 lumens  
Efficiency: N/A  
Efficacy: 92.8 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): 28.6  
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°	1158	1158	1158
5°	1160	1155	1160
10°	1156	1155	1162
15°	1149	1153	1163
20°	1142	1150	1166
25°	1128	1144	1167
30°	1115	1141	1172
35°	1096	1135	1173
40°	1077	1128	1184
45°	1052	1126	1203
50°	1018	1125	1235
55°	982	1133	1279
60°	927	1151	1336
65°	856	1178	1411
70°	747	1219	1503
75°	606	1282	1553
80°	448	1257	1257
85°	343	926	1047



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.5	3.1
10°-20°	234.2	8.8
20°-30°	356.5	13.4
30°-40°	432.8	16.3
40°-50°	457.3	17.2
50°-60°	431.5	16.3
60°-70°	358.8	13.5
70°-80°	236.0	8.9
80°-90°	64.3	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°	672.2	25.3
0°-40°	1105.0	41.7
0°-60°	1993.8	75.2
0°-90°	2653.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2653.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	861	861	861	861	861	
5°	858	858	855	858	858	82
15°	825	826	827	835	835	233
25°	760	764	771	784	786	350
35°	668	675	691	709	714	418
45°	553	564	592	621	632	426
55°	419	436	483	529	545	373
65°	269	300	370	424	443	266
75°	117	170	247	292	299	126
85°	22	49	60	67	68	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	860.8	860.8	860.8	860.8	860.8
2.5°	861.9	860.8	856.3	860.8	860.8
5°	858.5	858.5	855.2	858.5	858.5
7.5°	853.0	853.0	850.8	855.2	855.2
10°	846.3	846.3	845.2	850.8	850.8
12.5°	836.3	837.4	836.3	843.0	843.0
15°	825.2	826.3	827.4	835.2	835.2
17.5°	810.8	813.0	815.2	824.1	825.2
20°	797.5	798.6	803.0	813.0	814.1
22.5°	779.7	783.0	788.6	798.6	801.9
25°	759.7	764.1	770.8	784.1	786.4
27.5°	740.8	744.1	753.0	767.5	771.9
30°	717.5	723.0	734.2	748.6	754.1
32.5°	695.3	700.8	714.2	729.7	734.2
35°	667.5	675.3	690.8	708.6	714.2
37.5°	640.9	648.6	667.5	687.5	694.2
40°	613.1	622.0	642.0	665.3	674.2
42.5°	583.1	595.3	617.5	643.1	653.1
45°	553.1	564.2	592.0	620.9	632.0
47.5°	520.9	534.2	564.2	598.7	612.0
50°	486.5	503.1	537.6	575.3	589.8
52.5°	452.0	470.9	509.8	552.0	567.6
55°	418.7	436.5	483.1	528.7	545.3
57.5°	382.1	404.3	455.4	504.2	520.9
60°	344.3	368.7	427.6	478.7	496.5
62.5°	306.5	334.3	401.0	452.0	470.9
65°	268.8	299.9	369.9	424.3	443.2
67.5°	232.1	266.6	341.0	395.4	414.3
70°	189.9	233.2	309.9	363.2	382.1
72.5°	151.1	201.0	279.9	329.9	346.5
75°	116.6	169.9	246.6	292.1	298.8
77.5°	85.5	138.8	212.1	227.7	228.8
80°	57.8	111.1	162.2	159.9	162.2
82.5°	37.8	83.3	102.2	114.4	115.5
85°	22.2	48.9	60.0	66.6	67.8
87.5°	11.1	16.7	21.1	22.2	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)