

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: P309366

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CA08-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: P309366  
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: 24FCZ2-40-UNV-L82765-HRP-CA08-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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**

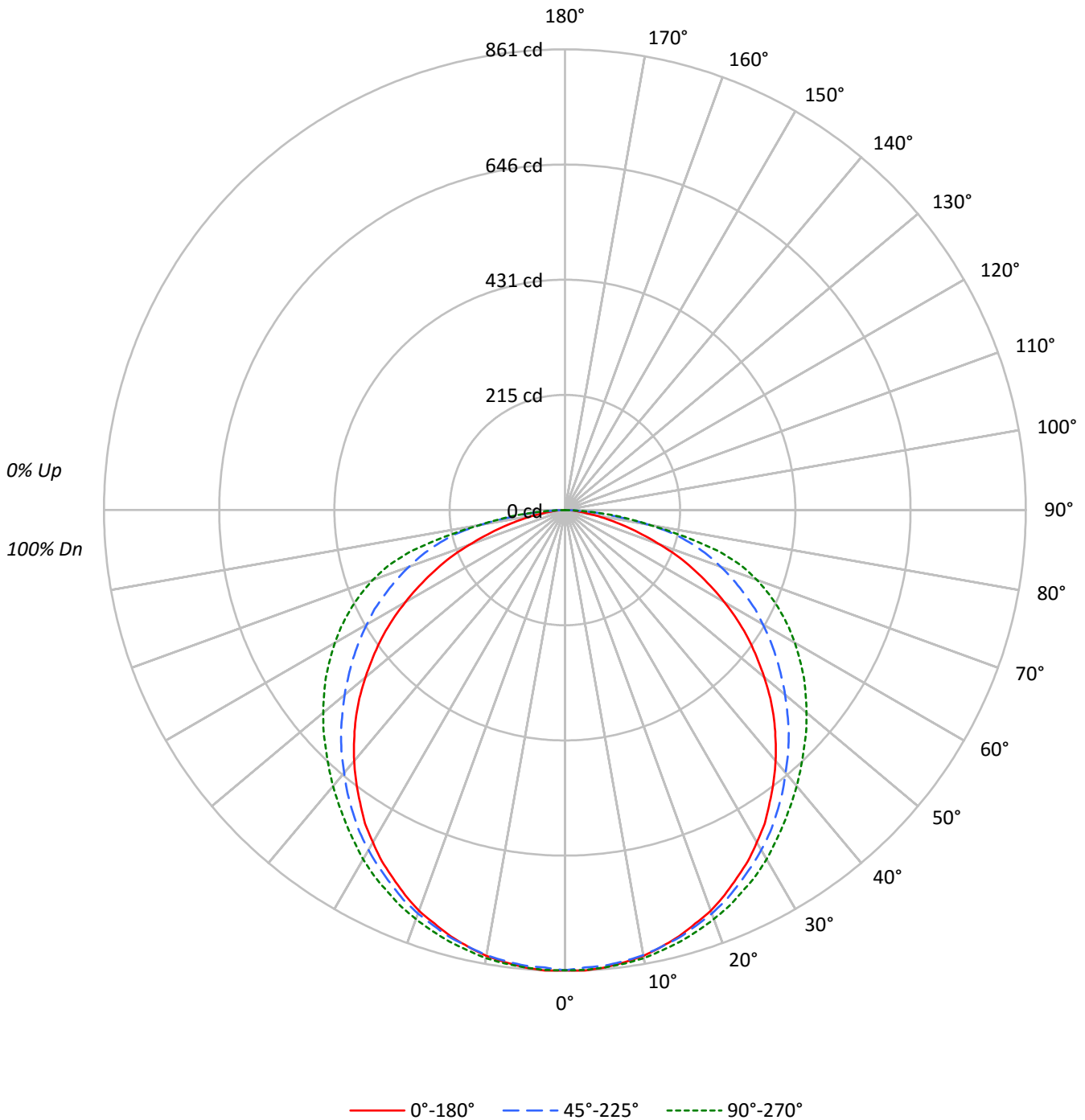
Lumens per Lamp: N/A  
Luminaire Lumens: 2651.0 lumens  
Efficiency: N/A  
Efficacy: 81.6 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 32.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1157	1157	1157
5°	1159	1154	1159
10°	1155	1154	1161
15°	1149	1152	1163
20°	1141	1149	1165
25°	1127	1143	1167
30°	1114	1140	1171
35°	1096	1134	1172
40°	1076	1127	1183
45°	1052	1126	1202
50°	1018	1124	1234
55°	981	1133	1278
60°	926	1150	1335
65°	855	1177	1410
70°	747	1218	1502
75°	606	1281	1552
80°	447	1255	1255
85°	343	925	1045



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.5	3.1
10°-20°	234.0	8.8
20°-30°	356.2	13.4
30°-40°	432.5	16.3
40°-50°	457.0	17.2
50°-60°	431.2	16.3
60°-70°	358.5	13.5
70°-80°	235.9	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°	671.7	25.3
0°-40°	1104.2	41.7
0°-60°	1992.3	75.2
0°-90°	2651.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2651.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	860	860	860	860	860	
5°	858	858	855	858	858	81
15°	825	826	827	835	835	233
25°	759	764	770	784	786	350
35°	667	675	690	708	714	418
45°	553	564	592	620	632	426
55°	418	436	483	528	545	373
65°	269	300	370	424	443	266
75°	116	170	246	292	298	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°	860.1	860.1	860.1	860.1	860.1
2.5°	861.2	860.1	855.7	860.1	860.1
5°	857.9	857.9	854.6	857.9	857.9
7.5°	852.4	852.4	850.1	854.6	854.6
10°	845.7	845.7	844.6	850.1	850.1
12.5°	835.7	836.8	835.7	842.4	842.4
15°	824.6	825.7	826.8	834.6	834.6
17.5°	810.2	812.4	814.6	823.5	824.6
20°	796.9	798.0	802.4	812.4	813.5
22.5°	779.1	782.4	788.0	798.0	801.3
25°	759.1	763.6	770.2	783.5	785.8
27.5°	740.3	743.6	752.5	766.9	771.3
30°	717.0	722.5	733.6	748.0	753.6
32.5°	694.8	700.3	713.6	729.2	733.6
35°	667.0	674.8	690.3	708.1	713.6
37.5°	640.4	648.1	667.0	687.0	693.6
40°	612.6	621.5	641.5	664.8	673.7
42.5°	582.7	594.9	617.1	642.6	652.6
45°	552.7	563.8	591.5	620.4	631.5
47.5°	520.5	533.8	563.8	598.2	611.5
50°	486.1	502.8	537.2	574.9	589.3
52.5°	451.7	470.6	509.4	551.6	567.1
55°	418.4	436.2	482.8	528.3	544.9
57.5°	381.8	404.0	455.0	503.9	520.5
60°	344.0	368.5	427.3	478.3	496.1
62.5°	306.3	334.1	400.6	451.7	470.6
65°	268.6	299.7	369.6	424.0	442.8
67.5°	232.0	266.4	340.7	395.1	414.0
70°	189.8	233.1	309.6	362.9	381.8
72.5°	150.9	200.9	279.7	329.6	346.3
75°	116.5	169.8	246.4	291.9	298.5
77.5°	85.5	138.7	212.0	227.5	228.6
80°	57.7	111.0	162.0	159.8	162.0
82.5°	37.7	83.2	102.1	114.3	115.4
85°	22.2	48.8	59.9	66.6	67.7
87.5°	11.1	16.6	21.1	22.2	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)