

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: P309322

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-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: P309322  
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: 24FCZ2-40HE-UNV-L82765-HRP-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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**

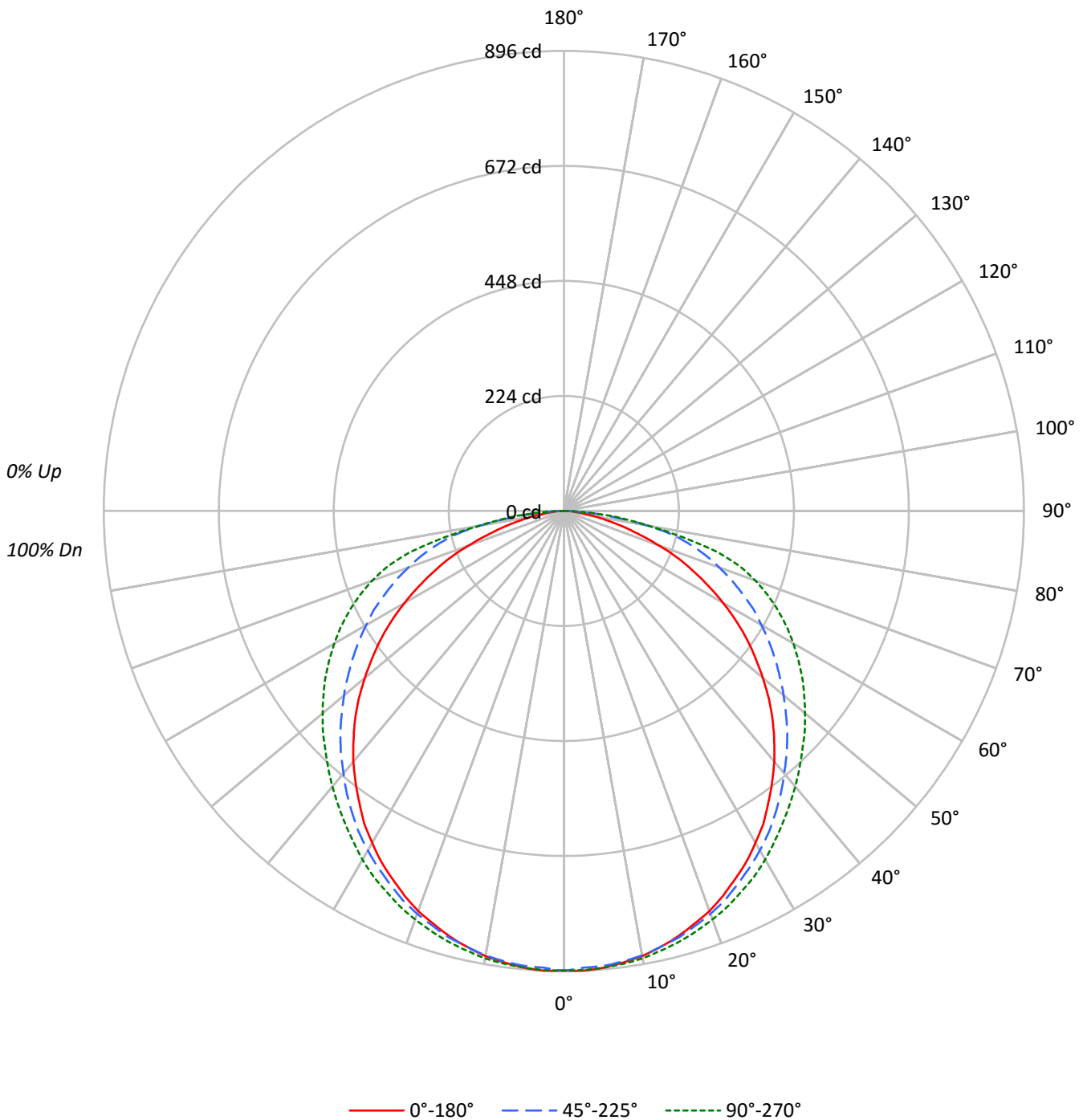
Lumens per Lamp: N/A  
Luminaire Lumens: 2759.0 lumens  
Efficiency: N/A  
Efficacy: 90.5 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1204	1204	1204
5°	1206	1201	1206
10°	1202	1201	1209
15°	1195	1199	1210
20°	1187	1196	1212
25°	1173	1190	1214
30°	1159	1186	1219
35°	1140	1180	1220
40°	1120	1173	1231
45°	1094	1171	1251
50°	1059	1170	1284
55°	1022	1179	1330
60°	964	1197	1389
65°	890	1224	1467
70°	777	1268	1563
75°	631	1333	1615
80°	466	1306	1306
85°	357	963	1088



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.8	3.1
10°-20°	243.5	8.8
20°-30°	370.7	13.4
30°-40°	450.1	16.3
40°-50°	475.6	17.2
50°-60°	448.7	16.3
60°-70°	373.1	13.5
70°-80°	245.5	8.9
80°-90°	66.9	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°	699.0	25.3
0°-40°	1149.2	41.7
0°-60°	2073.5	75.2
0°-90°	2759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2759.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	895	895	895	895	895	
5°	893	893	889	893	893	85
15°	858	859	860	869	869	242
25°	790	795	802	816	818	364
35°	694	702	718	737	743	435
45°	575	587	616	646	657	443
55°	436	454	502	550	567	388
65°	280	312	385	441	461	276
75°	121	177	256	304	311	131
85°	23	51	62	69	70	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	895.2	895.2	895.2	895.2	895.2
2.5°	896.3	895.2	890.5	895.2	895.2
5°	892.8	892.8	889.4	892.8	892.8
7.5°	887.1	887.1	884.8	889.4	889.4
10°	880.1	880.1	879.0	884.8	884.8
12.5°	869.7	870.9	869.7	876.7	876.7
15°	858.2	859.4	860.5	868.6	868.6
17.5°	843.2	845.5	847.8	857.0	858.2
20°	829.3	830.5	835.1	845.5	846.6
22.5°	810.8	814.3	820.1	830.5	833.9
25°	790.1	794.7	801.6	815.5	817.8
27.5°	770.4	773.9	783.1	798.1	802.8
30°	746.2	751.9	763.5	778.5	784.3
32.5°	723.1	728.8	742.7	758.9	763.5
35°	694.2	702.3	718.4	736.9	742.7
37.5°	666.5	674.5	694.2	715.0	721.9
40°	637.6	646.8	667.6	691.9	701.1
42.5°	606.4	619.1	642.2	668.8	679.2
45°	575.2	586.8	615.6	645.7	657.2
47.5°	541.7	555.6	586.8	622.6	636.4
50°	505.9	523.2	559.0	598.3	613.3
52.5°	470.1	489.7	530.2	574.1	590.2
55°	435.5	453.9	502.4	549.8	567.1
57.5°	397.3	420.4	473.6	524.4	541.7
60°	358.1	383.5	444.7	497.8	516.3
62.5°	318.8	347.7	417.0	470.1	489.7
65°	279.5	311.9	384.6	441.2	460.9
67.5°	241.4	277.2	354.6	411.2	430.8
70°	197.5	242.6	322.3	377.7	397.3
72.5°	157.1	209.1	291.1	343.0	360.4
75°	121.3	176.7	256.4	303.8	310.7
77.5°	88.9	144.4	220.6	236.8	237.9
80°	60.1	115.5	168.6	166.3	168.6
82.5°	39.3	86.6	106.3	119.0	120.1
85°	23.1	50.8	62.4	69.3	70.5
87.5°	11.6	17.3	21.9	23.1	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)