

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: P313140

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-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: P313140  
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-L83050-HRP-CA08-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 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**

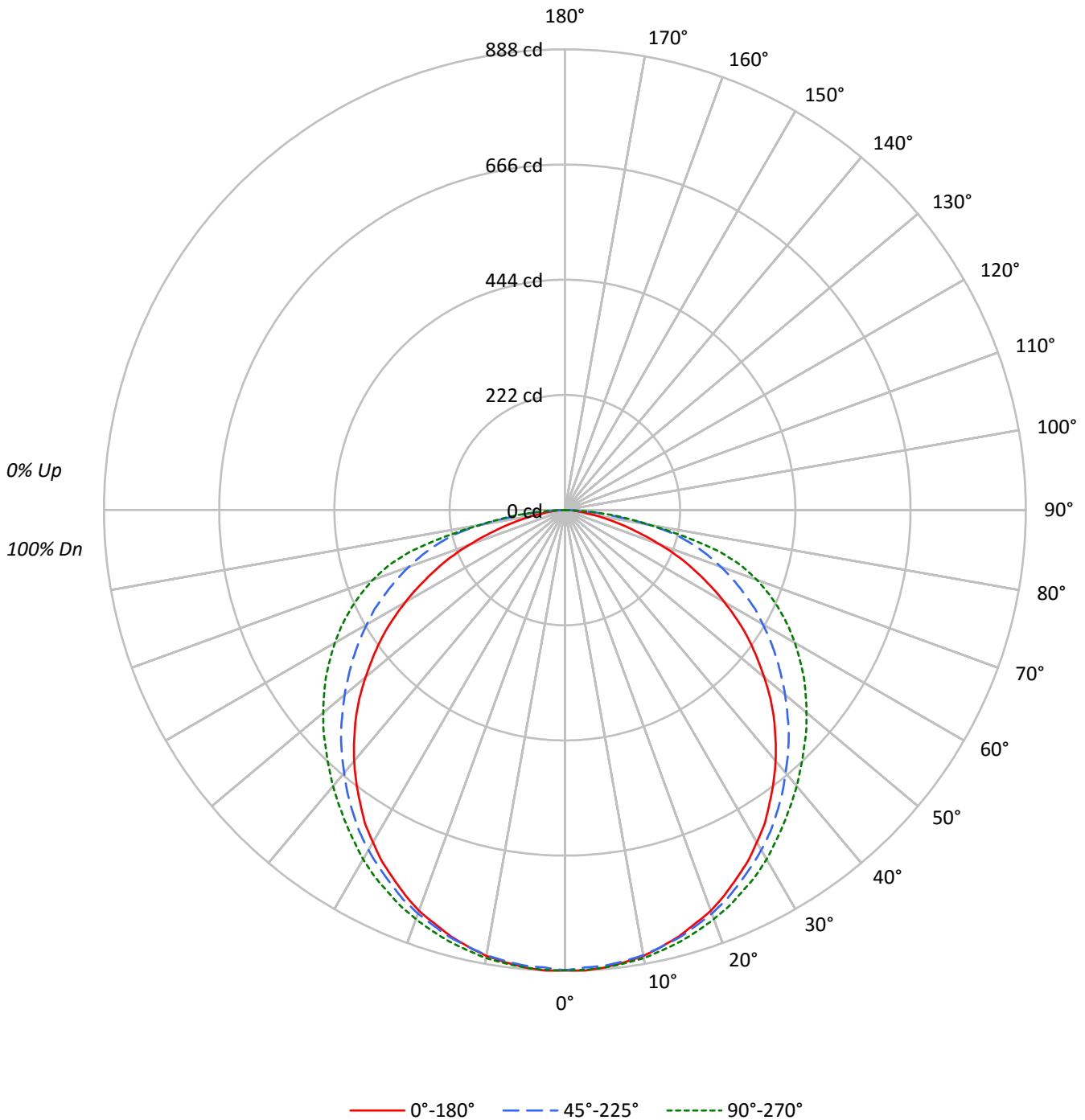
Lumens per Lamp: N/A  
Luminaire Lumens: 2734.0 lumens  
Efficiency: N/A  
Efficacy: 90.2 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1193	1193	1193
5°	1195	1190	1195
10°	1192	1190	1198
15°	1185	1188	1199
20°	1177	1185	1201
25°	1162	1179	1203
30°	1149	1175	1207
35°	1130	1169	1209
40°	1110	1162	1220
45°	1085	1161	1239
50°	1049	1160	1272
55°	1012	1168	1318
60°	955	1186	1377
65°	882	1213	1454
70°	770	1256	1549
75°	625	1321	1601
80°	461	1295	1295
85°	354	954	1078



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.0	3.1
10°-20°	241.3	8.8
20°-30°	367.4	13.4
30°-40°	446.1	16.3
40°-50°	471.3	17.2
50°-60°	444.7	16.3
60°-70°	369.7	13.5
70°-80°	243.2	8.9
80°-90°	66.3	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°	692.7	25.3
0°-40°	1138.8	41.7
0°-60°	2054.7	75.2
0°-90°	2734.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2734.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	887	887	887	887	887	
5°	885	885	881	885	885	84
15°	850	852	853	861	861	240
25°	783	788	794	808	810	361
35°	688	696	712	730	736	431
45°	570	581	610	640	651	439
55°	432	450	498	545	562	384
65°	277	309	381	437	457	274
75°	120	175	254	301	308	129
85°	23	50	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°	887.0	887.0	887.0	887.0	887.0
2.5°	888.2	887.0	882.5	887.0	887.0
5°	884.8	884.8	881.3	884.8	884.8
7.5°	879.0	879.0	876.7	881.3	881.3
10°	872.2	872.2	871.0	876.7	876.7
12.5°	861.9	863.0	861.9	868.7	868.7
15°	850.4	851.6	852.7	860.7	860.7
17.5°	835.5	837.8	840.1	849.3	850.4
20°	821.8	823.0	827.5	837.8	839.0
22.5°	803.5	806.9	812.7	823.0	826.4
25°	782.9	787.5	794.3	808.1	810.4
27.5°	763.4	766.9	776.0	790.9	795.5
30°	739.4	745.1	756.6	771.4	777.2
32.5°	716.5	722.2	736.0	752.0	756.6
35°	687.9	695.9	711.9	730.2	736.0
37.5°	660.4	668.4	687.9	708.5	715.4
40°	631.8	641.0	661.6	685.6	694.8
42.5°	600.9	613.5	636.4	662.7	673.0
45°	570.0	581.4	610.1	639.8	651.3
47.5°	536.8	550.5	581.4	616.9	630.7
50°	501.3	518.5	554.0	592.9	607.8
52.5°	465.8	485.3	525.4	568.9	584.9
55°	431.5	449.8	497.9	544.8	562.0
57.5°	393.7	416.6	469.3	519.6	536.8
60°	354.8	380.0	440.7	493.3	511.6
62.5°	315.9	344.5	413.2	465.8	485.3
65°	277.0	309.0	381.1	437.2	456.7
67.5°	239.2	274.7	351.4	407.5	426.9
70°	195.7	240.4	319.3	374.3	393.7
72.5°	155.7	207.2	288.4	339.9	357.1
75°	120.2	175.1	254.1	301.0	307.9
77.5°	88.1	143.1	218.6	234.6	235.8
80°	59.5	114.5	167.1	164.8	167.1
82.5°	38.9	85.8	105.3	117.9	119.0
85°	22.9	50.4	61.8	68.7	69.8
87.5°	11.4	17.2	21.7	22.9	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)