

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: P312694

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-RDP-CA08-W2A-U-5000K**

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: P312694  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-39HE-UNV-L83050-RDP-CA08-W2A-U-5000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (168) 5000K 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: 2517.0 lumens  
Efficiency: N/A  
Efficacy: 74.0 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

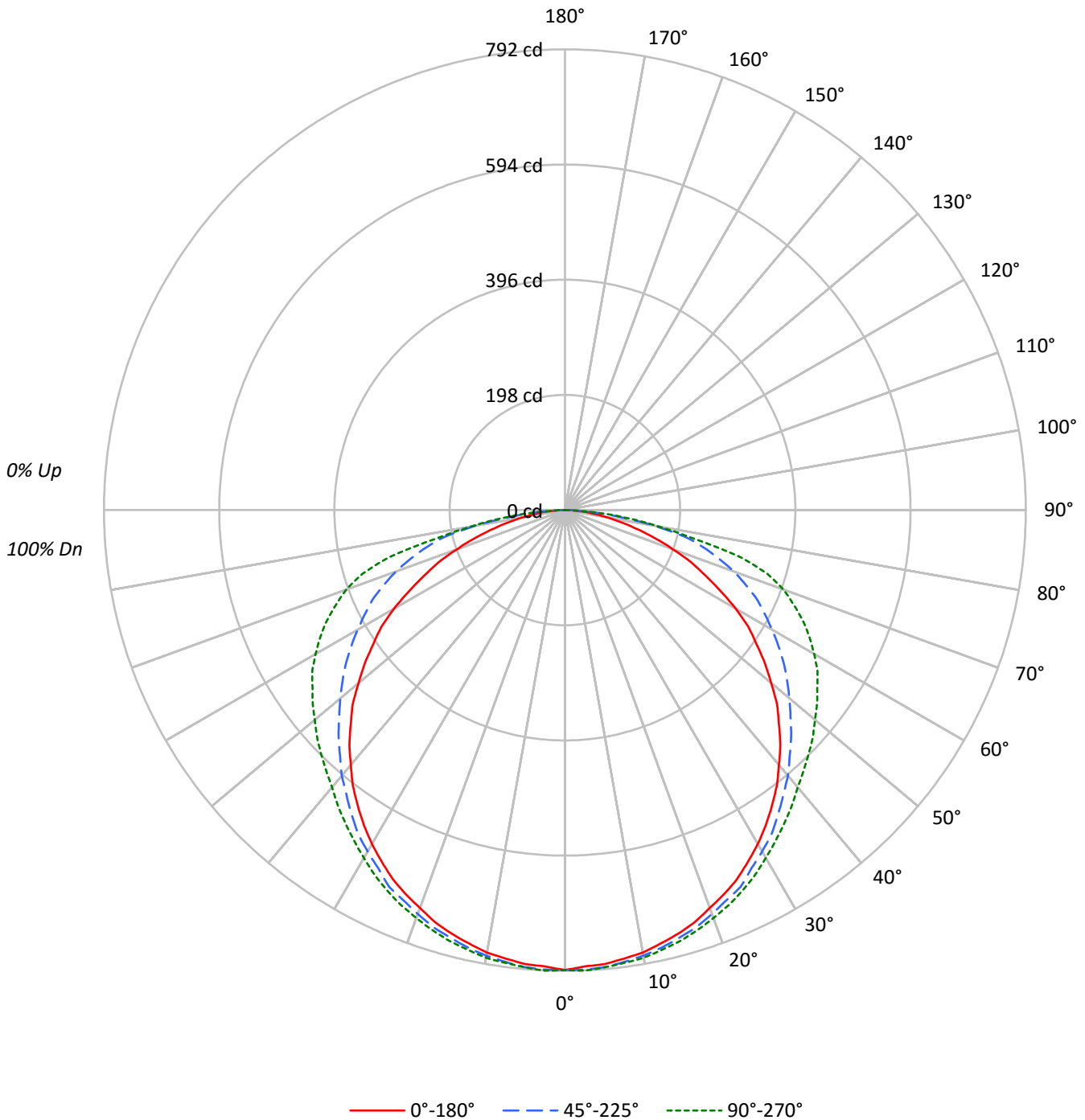
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	2127	2127	2127
5°	2116	2131	2131
10°	2110	2125	2135
15°	2099	2120	2136
20°	2084	2116	2137
25°	2078	2122	2144
30°	2060	2106	2146
35°	2038	2099	2159
40°	2010	2094	2185
45°	1980	2093	2255
50°	1938	2108	2349
55°	1885	2154	2485
60°	1823	2213	2661
65°	1698	2323	2877
70°	1559	2433	3146
75°	1367	2561	3253
80°	1176	2439	2554
85°	1028	1772	1945



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.8	3.0
10°-20°	214.7	8.5
20°-30°	327.6	13.0
30°-40°	400.0	15.9
40°-50°	427.7	17.0
50°-60°	412.8	16.4
60°-70°	355.4	14.1
70°-80°	240.5	9.6
80°-90°	63.4	2.5
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°	617.1	24.5
0°-40°	1017.2	40.4
0°-60°	1857.7	73.8
0°-90°	2517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2517.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	791	791	791	791	791	
5°	783	785	789	789	789	74
15°	754	756	761	765	767	213
25°	700	704	715	718	722	322
35°	620	626	639	652	657	388
45°	520	530	550	578	592	402
55°	402	415	459	506	530	360
65°	267	293	365	422	452	265
75°	132	174	246	296	313	141
85°	33	46	57	59	63	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	790.6	790.6	790.6	790.6	790.6
2.5°	785.1	786.9	790.6	790.6	792.5
5°	783.2	785.1	788.8	788.8	788.8
7.5°	777.7	779.5	783.2	785.1	785.1
10°	772.1	774.0	777.7	779.5	781.4
12.5°	762.9	764.7	770.3	774.0	774.0
15°	753.6	755.5	761.0	764.7	766.6
17.5°	742.5	746.2	751.7	755.5	757.3
20°	727.7	731.4	738.8	744.3	746.2
22.5°	714.7	718.4	725.8	731.4	735.1
25°	699.9	703.6	714.7	718.4	722.1
27.5°	681.4	685.1	694.4	701.8	707.3
30°	662.9	666.6	677.7	686.9	690.6
32.5°	642.5	648.1	661.0	668.4	674.0
35°	620.3	625.8	638.8	651.8	657.3
37.5°	598.1	603.6	616.6	633.2	640.7
40°	572.1	579.6	596.2	618.4	622.1
42.5°	548.1	557.3	572.1	598.1	607.3
45°	520.3	529.6	549.9	577.7	592.5
47.5°	494.4	503.6	525.9	559.2	577.7
50°	462.9	475.9	503.6	542.5	561.0
52.5°	433.3	444.4	481.4	524.0	546.2
55°	401.8	414.8	459.2	505.5	529.6
57.5°	374.0	385.1	435.1	487.0	514.7
60°	338.8	353.7	411.1	466.6	494.4
62.5°	301.8	324.0	387.0	444.4	474.0
65°	266.6	292.6	364.8	422.2	451.8
67.5°	235.2	262.9	337.0	398.1	425.9
70°	198.1	233.3	309.2	368.5	399.9
72.5°	164.8	203.7	277.7	337.0	364.8
75°	131.5	174.1	246.3	296.3	312.9
77.5°	101.8	142.6	211.1	225.9	227.7
80°	75.9	112.9	157.4	159.2	164.8
82.5°	51.8	79.6	101.8	111.1	112.9
85°	33.3	46.3	57.4	59.3	63.0
87.5°	14.8	16.7	20.4	18.5	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)