

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: P312732

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-RDP-CP187-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: P312732
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: 22FCZ2-44HE-UNV-L83050-RDP-CP187-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB 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: 2617.0 lumens
Efficiency: N/A
Efficacy: 68.7 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

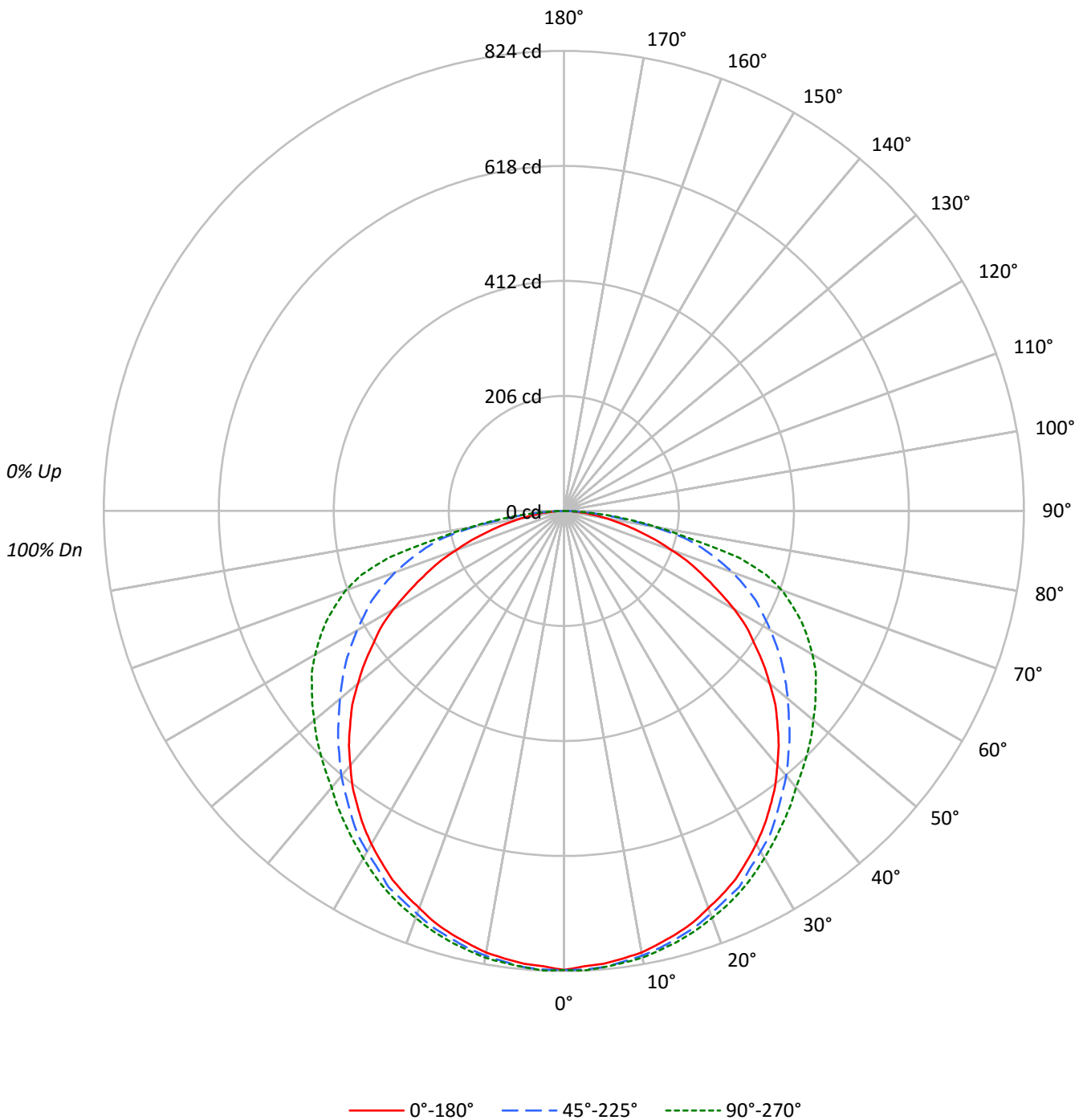
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2212	2212	2212
5°	2200	2215	2215
10°	2194	2209	2220
15°	2183	2204	2220
20°	2167	2200	2222
25°	2161	2206	2229
30°	2142	2189	2231
35°	2119	2182	2245
40°	2090	2178	2272
45°	2059	2176	2345
50°	2015	2192	2442
55°	1960	2240	2583
60°	1896	2300	2766
65°	1765	2415	2991
70°	1621	2530	3271
75°	1421	2662	3383
80°	1223	2535	2655
85°	1071	1843	2022



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	3.0
10°-20°	223.3	8.5
20°-30°	340.6	13.0
30°-40°	415.9	15.9
40°-50°	444.7	17.0
50°-60°	429.2	16.4
60°-70°	369.5	14.1
70°-80°	250.0	9.6
80°-90°	66.0	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°	641.7	24.5
0°-40°	1057.6	40.4
0°-60°	1931.5	73.8
0°-90°	2617.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2617.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	822	822	822	822	822	
5°	814	816	820	820	820	77
15°	784	786	791	795	797	221
25°	728	732	743	747	751	335
35°	645	651	664	678	683	404
45°	541	551	572	601	616	418
55°	418	431	477	526	551	374
65°	277	304	379	439	470	276
75°	137	181	256	308	325	147
85°	35	48	60	62	66	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	822.0	822.0	822.0	822.0	822.0
2.5°	816.3	818.2	822.0	822.0	824.0
5°	814.3	816.3	820.1	820.1	820.1
7.5°	808.6	810.5	814.3	816.3	816.3
10°	802.8	804.7	808.6	810.5	812.4
12.5°	793.2	795.1	800.9	804.7	804.7
15°	783.5	785.5	791.2	795.1	797.0
17.5°	772.0	775.8	781.6	785.5	787.4
20°	756.6	760.4	768.1	773.9	775.8
22.5°	743.1	747.0	754.7	760.4	764.3
25°	727.7	731.6	743.1	747.0	750.8
27.5°	708.5	712.3	721.9	729.6	735.4
30°	689.2	693.1	704.6	714.2	718.1
32.5°	668.0	673.8	687.3	695.0	700.8
35°	644.9	650.7	664.2	677.7	683.4
37.5°	621.8	627.6	641.1	658.4	666.1
40°	594.9	602.6	619.9	643.0	646.9
42.5°	569.8	579.5	594.9	621.8	631.5
45°	541.0	550.6	571.8	600.7	616.1
47.5°	514.0	523.6	546.7	581.4	600.7
50°	481.3	494.8	523.6	564.1	583.3
52.5°	450.5	462.0	500.5	544.8	567.9
55°	417.8	431.2	477.4	525.6	550.6
57.5°	388.9	400.4	452.4	506.3	535.2
60°	352.3	367.7	427.4	485.1	514.0
62.5°	313.8	336.9	402.4	462.0	492.8
65°	277.2	304.2	379.3	438.9	469.7
67.5°	244.5	273.4	350.4	413.9	442.8
70°	206.0	242.6	321.5	383.1	415.8
72.5°	171.3	211.8	288.8	350.4	379.3
75°	136.7	181.0	256.0	308.0	325.4
77.5°	105.9	148.2	219.5	234.9	236.8
80°	78.9	117.4	163.6	165.6	171.3
82.5°	53.9	82.8	105.9	115.5	117.4
85°	34.7	48.1	59.7	61.6	65.5
87.5°	15.4	17.3	21.2	19.3	19.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)