

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: P308589

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-RDP-CP187-W2A-U-5700K**

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: P308589
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-L82765-RDP-CP187-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB 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: 2598.0 lumens
Efficiency: N/A
Efficacy: 68.0 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

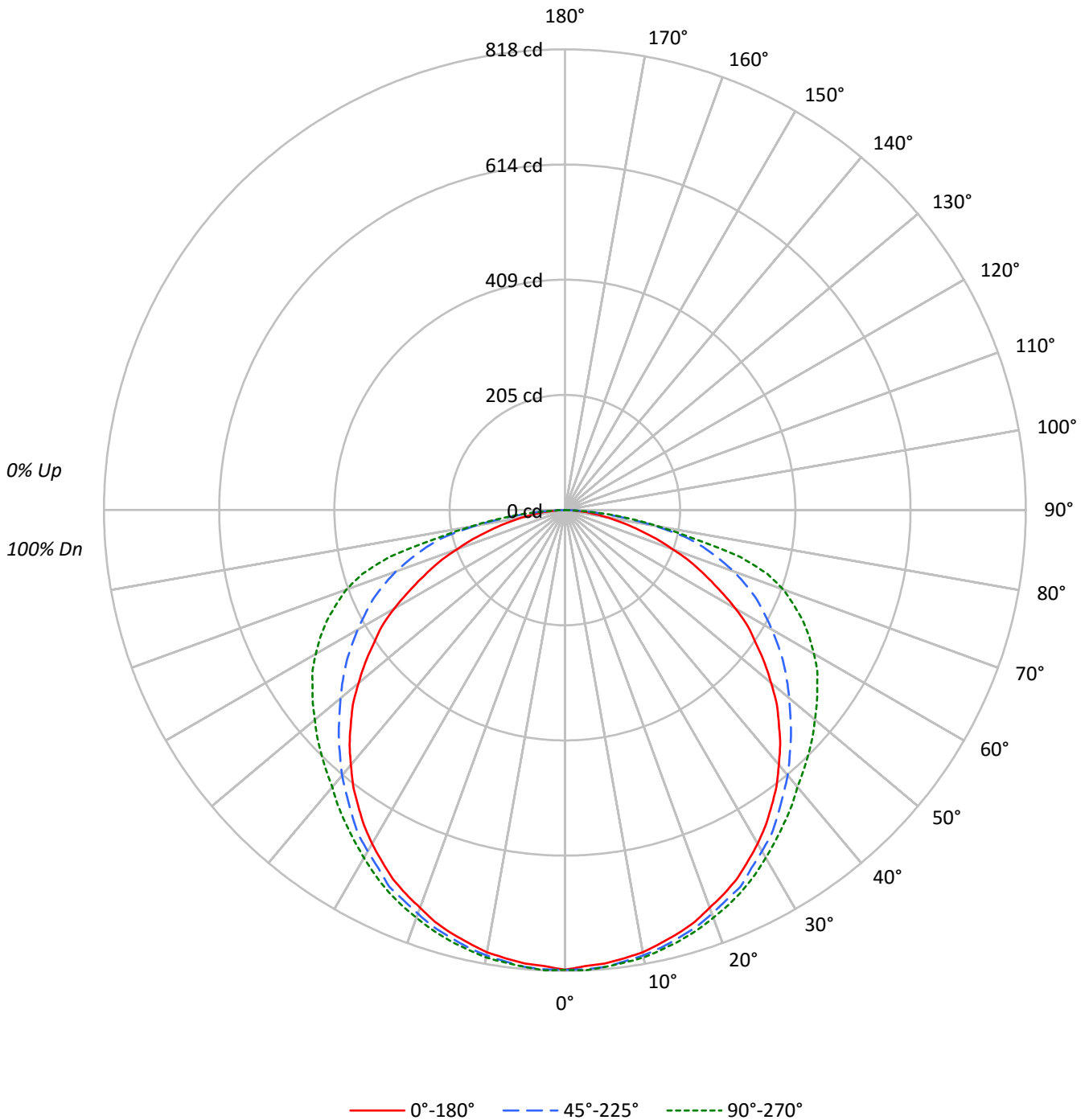
Input Watts (W): 38.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2196	2196	2196
5°	2184	2199	2199
10°	2178	2193	2204
15°	2167	2188	2204
20°	2151	2184	2206
25°	2145	2190	2213
30°	2126	2174	2215
35°	2103	2166	2229
40°	2075	2162	2256
45°	2044	2160	2328
50°	2000	2176	2424
55°	1946	2224	2564
60°	1882	2284	2746
65°	1752	2397	2969
70°	1609	2511	3248
75°	1411	2643	3358
80°	1215	2518	2636
85°	1062	1828	2007



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.2	3.0
10°-20°	221.6	8.5
20°-30°	338.2	13.0
30°-40°	412.9	15.9
40°-50°	441.5	17.0
50°-60°	426.1	16.4
60°-70°	366.8	14.1
70°-80°	248.2	9.6
80°-90°	65.5	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°	637.0	24.5
0°-40°	1049.9	40.4
0°-60°	1917.5	73.8
0°-90°	2598.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2598.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	808	810	814	814	814	77
15°	778	780	786	789	791	219
25°	722	726	738	742	745	332
35°	640	646	659	673	678	401
45°	537	547	568	596	612	415
55°	415	428	474	522	547	372
65°	275	302	376	436	466	274
75°	136	180	254	306	323	146
85°	34	48	59	61	65	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	816.1	816.1	816.1	816.1	816.1
2.5°	810.3	812.3	816.1	816.1	818.0
5°	808.4	810.3	814.2	814.2	814.2
7.5°	802.7	804.6	808.4	810.3	810.3
10°	797.0	798.9	802.7	804.6	806.5
12.5°	787.4	789.3	795.1	798.9	798.9
15°	777.9	779.8	785.5	789.3	791.2
17.5°	766.4	770.2	775.9	779.8	781.7
20°	751.1	754.9	762.6	768.3	770.2
22.5°	737.7	741.5	749.2	754.9	758.7
25°	722.4	726.3	737.7	741.5	745.4
27.5°	703.3	707.1	716.7	724.3	730.1
30°	684.2	688.0	699.5	709.1	712.9
32.5°	663.2	668.9	682.3	689.9	695.7
35°	640.2	646.0	659.4	672.7	678.5
37.5°	617.3	623.0	636.4	653.6	661.3
40°	590.6	598.2	615.4	638.3	642.2
42.5°	565.7	575.3	590.6	617.3	626.9
45°	537.0	546.6	567.6	596.3	611.6
47.5°	510.3	519.8	542.8	577.2	596.3
50°	477.8	491.2	519.8	560.0	579.1
52.5°	447.2	458.7	496.9	540.9	563.8
55°	414.7	428.1	474.0	521.8	546.6
57.5°	386.1	397.5	449.1	502.6	531.3
60°	349.7	365.0	424.3	481.6	510.3
62.5°	311.5	334.5	399.4	458.7	489.3
65°	275.2	302.0	376.5	435.8	466.3
67.5°	242.7	271.4	347.8	410.9	439.6
70°	204.5	240.8	319.2	380.3	412.8
72.5°	170.1	210.2	286.7	347.8	376.5
75°	135.7	179.7	254.2	305.8	323.0
77.5°	105.1	147.2	217.9	233.2	235.1
80°	78.4	116.6	162.5	164.4	170.1
82.5°	53.5	82.2	105.1	114.7	116.6
85°	34.4	47.8	59.2	61.2	65.0
87.5°	15.3	17.2	21.0	19.1	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)