

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: P307011

Luminaire Tested: **14FCZ2-20-UNV-L82765-HRP-CP187-W2A-U-4500K**

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: P307011
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L82765-HRP-CP187-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 4500K 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: 1448.0 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

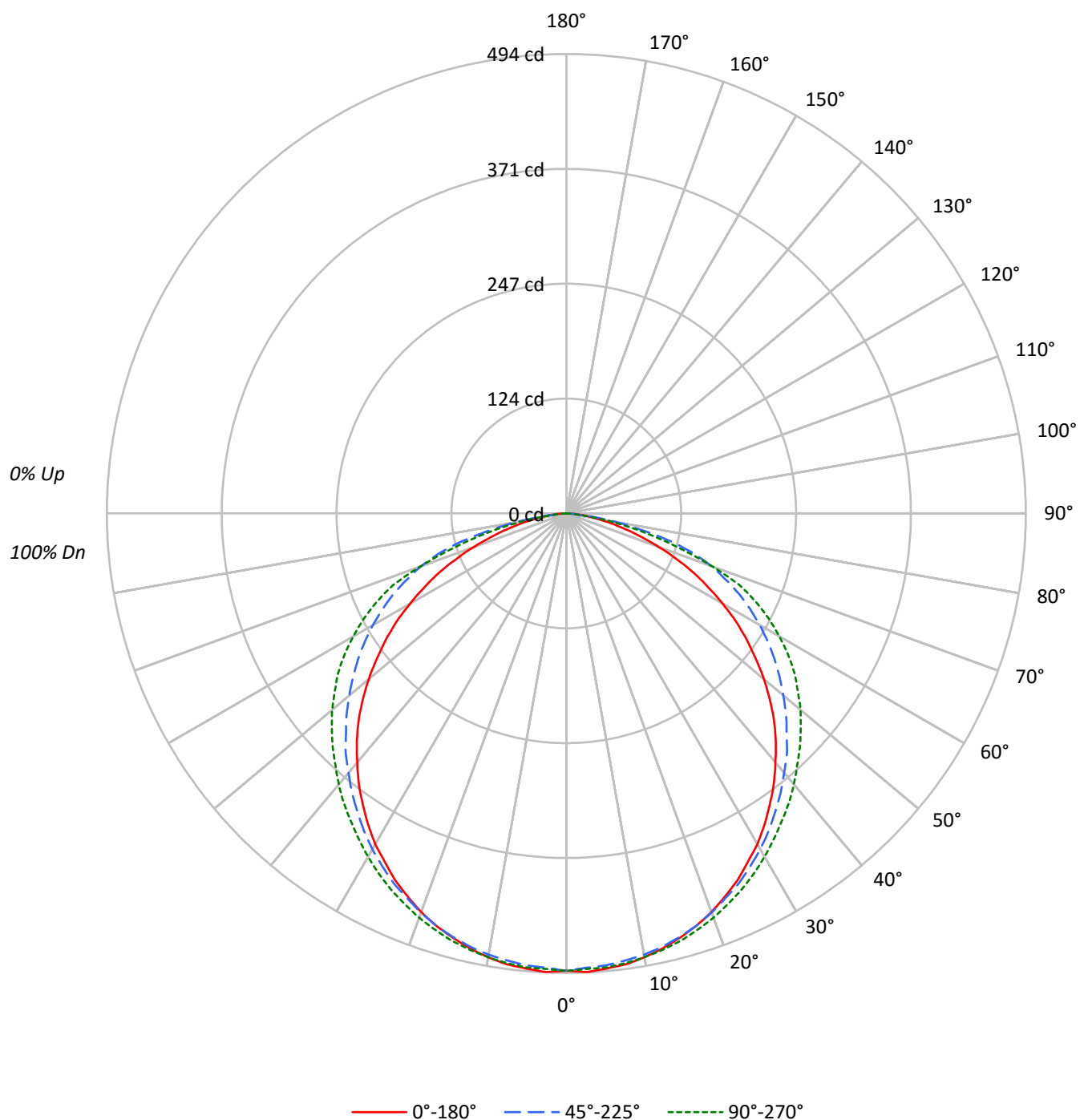
Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	109	104	100	96	106	102	98	94	97	94	91		93	91	88		84
2	99	90	83	78	96	88	82	77	85	79	75		82	77	73		69
3	90	79	71	64	87	77	70	64	74	68	62		72	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		64	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	69	56	47	40	68	55	46	40	53	45	40		51	45	39		37
7	64	51	42	36	63	50	41	35	48	41	35		47	40	35		33
8	60	46	38	32	58	45	37	32	44	37	31		43	36	31		29
9	56	42	34	28	54	42	34	28	41	33	28		39	33	28		26
10	52	39	31	26	51	38	31	26	37	30	26		37	30	25		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1323	1323	1323
5°	1327	1317	1323
10°	1324	1316	1324
15°	1316	1313	1326
20°	1306	1308	1325
25°	1292	1303	1325
30°	1276	1296	1324
35°	1254	1286	1327
40°	1228	1280	1337
45°	1203	1275	1352
50°	1161	1275	1376
55°	1111	1282	1406
60°	1044	1292	1424
65°	963	1305	1432
70°	838	1308	1319
75°	691	1216	1065
80°	544	876	713
85°	423	337	170



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.6	3.2
10°-20°	133.6	9.2
20°-30°	202.9	14.0
30°-40°	245.8	17.0
40°-50°	259.0	17.9
50°-60°	241.8	16.7
60°-70°	193.3	13.3
70°-80°	106.4	7.3
80°-90°	18.8	1.3
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°	383.0	26.5
0°-40°	628.8	43.4
0°-60°	1129.6	78.0
0°-90°	1448.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1448.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	492	492	492	492	492	
5°	491	490	488	491	490	47
15°	472	472	471	476	476	133
25°	435	436	439	445	446	200
35°	382	385	392	402	404	239
45°	316	322	335	350	355	243
55°	237	249	273	292	300	211
65°	151	170	205	222	225	149
75°	66	95	117	105	102	72
85°	14	17	11	7	6	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	491.7	491.7	491.7	491.7	491.7
2.5°	493.6	492.2	489.0	491.7	490.4
5°	491.3	489.9	487.7	490.8	489.9
7.5°	489.0	487.2	484.9	488.6	487.7
10°	484.5	483.1	481.7	484.9	484.5
12.5°	479.0	478.5	477.2	480.8	480.4
15°	472.2	472.2	471.3	475.8	475.8
17.5°	464.9	464.4	464.9	469.9	469.4
20°	456.2	456.2	456.7	462.6	462.6
22.5°	445.8	446.2	447.6	454.9	454.4
25°	435.3	436.2	438.9	445.3	446.2
27.5°	422.5	424.8	428.0	435.7	436.7
30°	410.7	412.1	417.1	424.4	426.2
32.5°	396.6	399.3	404.8	413.0	415.3
35°	381.6	385.2	391.6	401.6	403.9
37.5°	366.5	369.7	378.4	388.8	392.9
40°	349.7	355.2	364.3	376.1	380.6
42.5°	333.3	338.8	351.1	363.3	367.4
45°	316.0	321.9	335.1	350.1	355.2
47.5°	296.9	303.7	320.5	336.5	341.9
50°	277.3	285.9	304.6	322.4	328.7
52.5°	256.8	267.7	289.1	307.8	313.7
55°	236.8	248.6	273.2	292.3	299.6
57.5°	216.3	229.0	256.8	278.7	282.8
60°	194.0	209.4	240.0	259.1	264.5
62.5°	172.1	189.9	222.7	240.9	245.4
65°	151.2	170.3	204.9	221.7	224.9
67.5°	128.4	151.2	185.3	200.8	201.7
70°	106.5	133.0	166.2	173.5	167.6
72.5°	85.1	113.4	143.9	138.0	133.0
75°	66.5	95.2	117.0	105.2	102.4
77.5°	49.2	77.9	83.8	77.4	72.4
80°	35.1	61.5	56.5	48.3	46.0
82.5°	24.1	38.7	31.0	24.1	20.9
85°	13.7	17.3	10.9	6.8	5.5
87.5°	5.9	4.1	2.3	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)