

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: P307010

Luminaire Tested: **14FCZ2-20-UNV-L82765-HRP-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: P307010
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-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 1423.0 lumens
Efficiency: N/A
Efficacy: 85.2 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

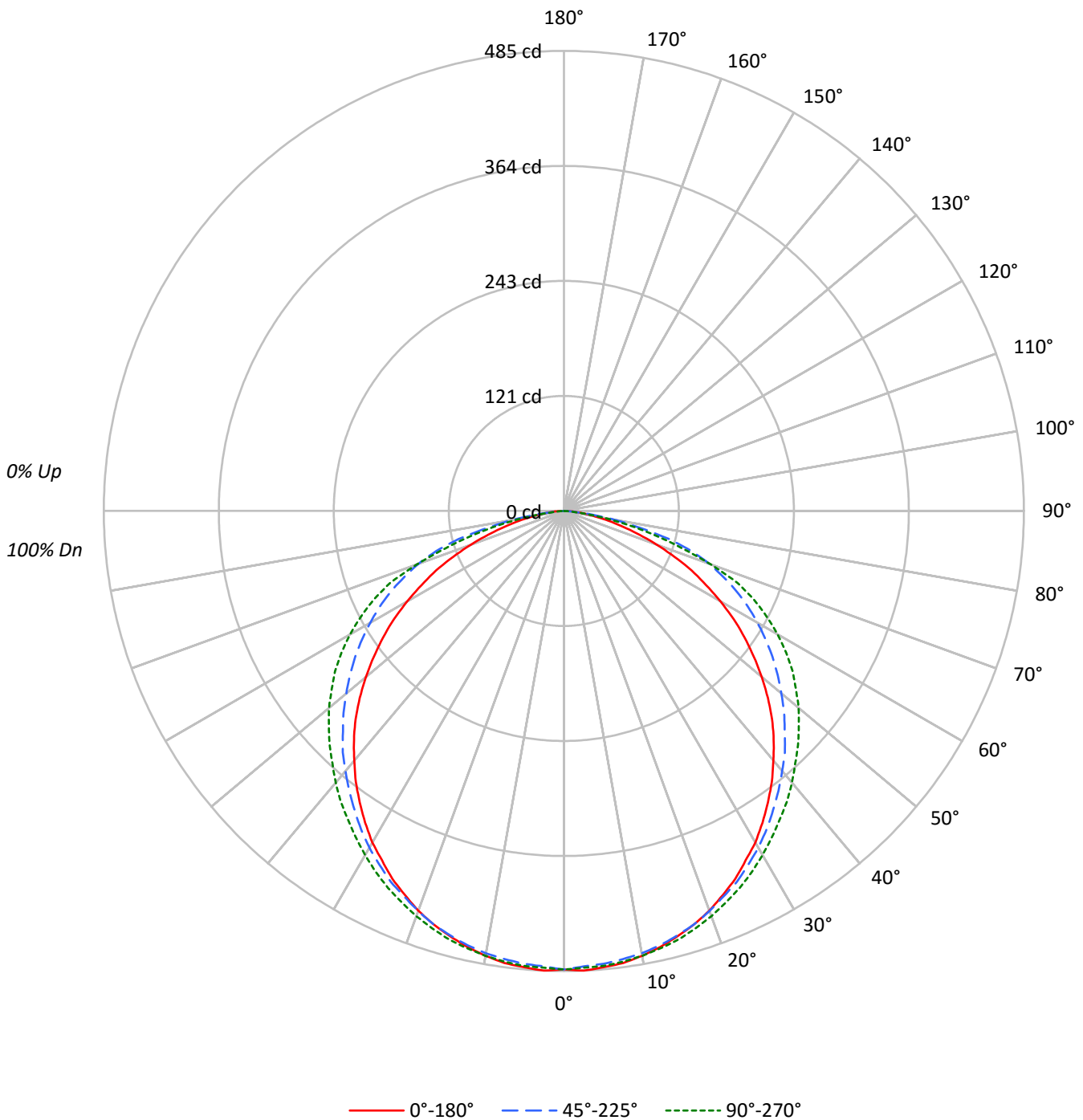
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 14FC22-20-UNV-L82765-HRP-CP187-W2A-U-4000K

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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1301	1301	1301
5°	1304	1294	1301
10°	1301	1294	1301
15°	1293	1290	1303
20°	1284	1285	1302
25°	1270	1281	1302
30°	1254	1274	1301
35°	1232	1264	1304
40°	1207	1258	1314
45°	1182	1253	1328
50°	1141	1253	1353
55°	1092	1260	1381
60°	1026	1269	1399
65°	946	1282	1407
70°	824	1285	1296
75°	679	1196	1047
80°	535	860	700
85°	414	330	167



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.8	3.2
10°-20°	131.3	9.2
20°-30°	199.4	14.0
30°-40°	241.6	17.0
40°-50°	254.5	17.9
50°-60°	237.6	16.7
60°-70°	189.9	13.3
70°-80°	104.5	7.3
80°-90°	18.4	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°	376.4	26.5
0°-40°	618.0	43.4
0°-60°	1110.1	78.0
0°-90°	1423.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1423.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	483	483	483	483	483	
5°	483	482	479	482	482	46
15°	464	464	463	468	468	131
25°	428	429	431	438	438	197
35°	375	379	385	395	397	235
45°	310	316	329	344	349	239
55°	233	244	268	287	294	208
65°	149	167	201	218	221	146
75°	65	94	115	103	101	70
85°	13	17	11	7	5	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	483.3	483.3	483.3	483.3	483.3
2.5°	485.0	483.7	480.6	483.3	481.9
5°	482.8	481.5	479.2	482.4	481.5
7.5°	480.6	478.8	476.5	480.1	479.2
10°	476.1	474.8	473.4	476.5	476.1
12.5°	470.7	470.3	468.9	472.5	472.1
15°	464.0	464.0	463.1	467.6	467.6
17.5°	456.9	456.4	456.9	461.8	461.3
20°	448.4	448.4	448.8	454.6	454.6
22.5°	438.1	438.5	439.9	447.0	446.6
25°	427.8	428.7	431.4	437.6	438.5
27.5°	415.2	417.5	420.6	428.2	429.1
30°	403.6	405.0	409.9	417.0	418.8
32.5°	389.7	392.4	397.8	405.8	408.1
35°	375.0	378.6	384.8	394.7	396.9
37.5°	360.2	363.3	371.8	382.1	386.2
40°	343.7	349.0	358.0	369.6	374.1
42.5°	327.5	332.9	345.0	357.1	361.1
45°	310.5	316.4	329.3	344.1	349.0
47.5°	291.7	298.5	315.0	330.7	336.0
50°	272.5	281.0	299.4	316.8	323.1
52.5°	252.4	263.1	284.1	302.5	308.3
55°	232.7	244.3	268.5	287.3	294.4
57.5°	212.5	225.1	252.4	273.8	277.9
60°	190.6	205.8	235.8	254.6	260.0
62.5°	169.1	186.6	218.8	236.7	241.2
65°	148.6	167.4	201.4	217.9	221.0
67.5°	126.2	148.6	182.1	197.3	198.2
70°	104.7	130.7	163.3	170.5	164.7
72.5°	83.7	111.4	141.4	135.6	130.7
75°	65.3	93.5	115.0	103.4	100.7
77.5°	48.3	76.5	82.3	76.1	71.1
80°	34.5	60.4	55.5	47.4	45.2
82.5°	23.7	38.0	30.4	23.7	20.6
85°	13.4	17.0	10.7	6.7	5.4
87.5°	5.8	4.0	2.2	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)