

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: P307009

Luminaire Tested: **14FCZ2-20-UNV-L82765-HRP-CP187-W2A-U-3500K**

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: P307009
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-3500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 3500K 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: 1393.0 lumens
Efficiency: N/A
Efficacy: 83.9 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

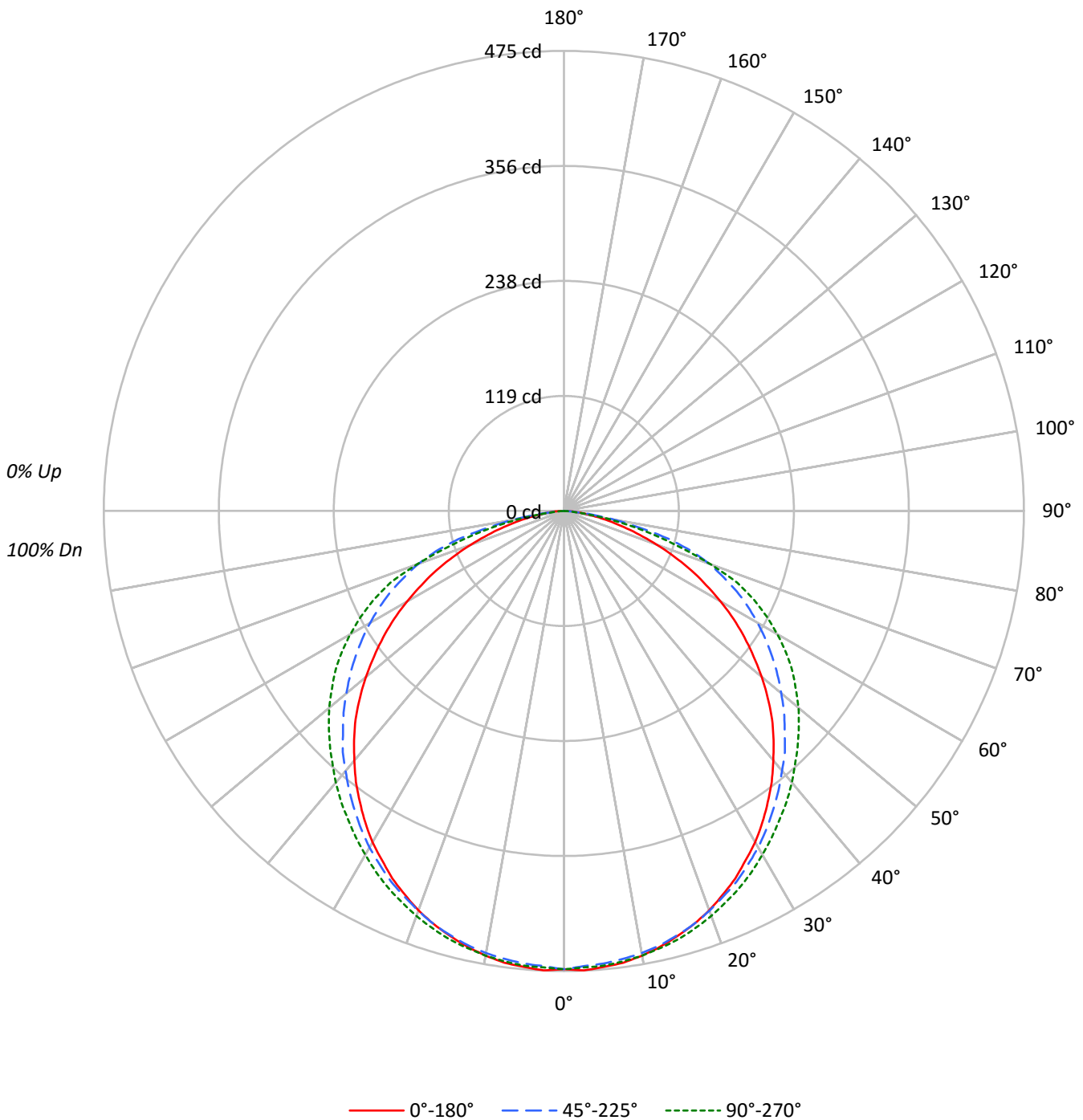
Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 14FC22-20-UNV-L82765-HRP-CP187-W2A-U-3500K

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°	1273	1273	1273
5°	1277	1267	1273
10°	1274	1266	1274
15°	1265	1263	1275
20°	1257	1258	1274
25°	1243	1254	1275
30°	1228	1247	1274
35°	1206	1237	1276
40°	1182	1231	1286
45°	1157	1227	1300
50°	1117	1227	1324
55°	1069	1233	1352
60°	1004	1242	1370
65°	926	1255	1378
70°	806	1258	1268
75°	665	1171	1025
80°	522	841	685
85°	404	324	164



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.8	3.2
10°-20°	128.5	9.2
20°-30°	195.2	14.0
30°-40°	236.5	17.0
40°-50°	249.2	17.9
50°-60°	232.6	16.7
60°-70°	185.9	13.3
70°-80°	102.3	7.3
80°-90°	18.1	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°	368.5	26.5
0°-40°	604.9	43.4
0°-60°	1086.7	78.0
0°-90°	1393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1393.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	473	473	473	473	473	
5°	473	471	469	472	471	45
15°	454	454	453	458	458	128
25°	419	420	422	428	429	193
35°	367	371	377	386	388	230
45°	304	310	322	337	342	234
55°	228	239	263	281	288	203
65°	145	164	197	213	216	143
75°	64	92	113	101	99	69
85°	13	17	10	7	5	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	473.1	473.1	473.1	473.1	473.1
2.5°	474.8	473.5	470.4	473.1	471.8
5°	472.6	471.3	469.1	472.2	471.3
7.5°	470.4	468.7	466.5	470.0	469.1
10°	466.1	464.7	463.4	466.5	466.1
12.5°	460.8	460.4	459.1	462.6	462.1
15°	454.2	454.2	453.4	457.7	457.7
17.5°	447.2	446.8	447.2	452.0	451.6
20°	438.9	438.9	439.3	445.0	445.0
22.5°	428.8	429.3	430.6	437.6	437.2
25°	418.8	419.6	422.3	428.4	429.3
27.5°	406.5	408.7	411.7	419.2	420.1
30°	395.1	396.4	401.2	408.2	410.0
32.5°	381.5	384.2	389.4	397.3	399.5
35°	367.1	370.6	376.7	386.3	388.5
37.5°	352.6	355.7	364.0	374.1	378.0
40°	336.4	341.7	350.4	361.8	366.2
42.5°	320.6	325.9	337.7	349.5	353.5
45°	304.0	309.7	322.4	336.8	341.7
47.5°	285.6	292.2	308.4	323.7	329.0
50°	266.8	275.1	293.0	310.1	316.3
52.5°	247.0	257.6	278.1	296.1	301.8
55°	227.8	239.2	262.8	281.2	288.2
57.5°	208.1	220.3	247.0	268.1	272.0
60°	186.6	201.5	230.8	249.2	254.5
62.5°	165.6	182.7	214.2	231.7	236.1
65°	145.4	163.8	197.1	213.3	216.4
67.5°	123.5	145.4	178.3	193.2	194.0
70°	102.5	127.9	159.9	166.9	161.2
72.5°	81.9	109.1	138.4	132.7	127.9
75°	64.0	91.5	112.6	101.2	98.6
77.5°	47.3	74.9	80.6	74.5	69.6
80°	33.7	59.1	54.3	46.4	44.2
82.5°	23.2	37.2	29.8	23.2	20.1
85°	13.1	16.6	10.5	6.6	5.3
87.5°	5.7	3.9	2.2	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)