

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: P308094

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-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: P308094
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L82765-HRP-CP187-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 1474.0 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

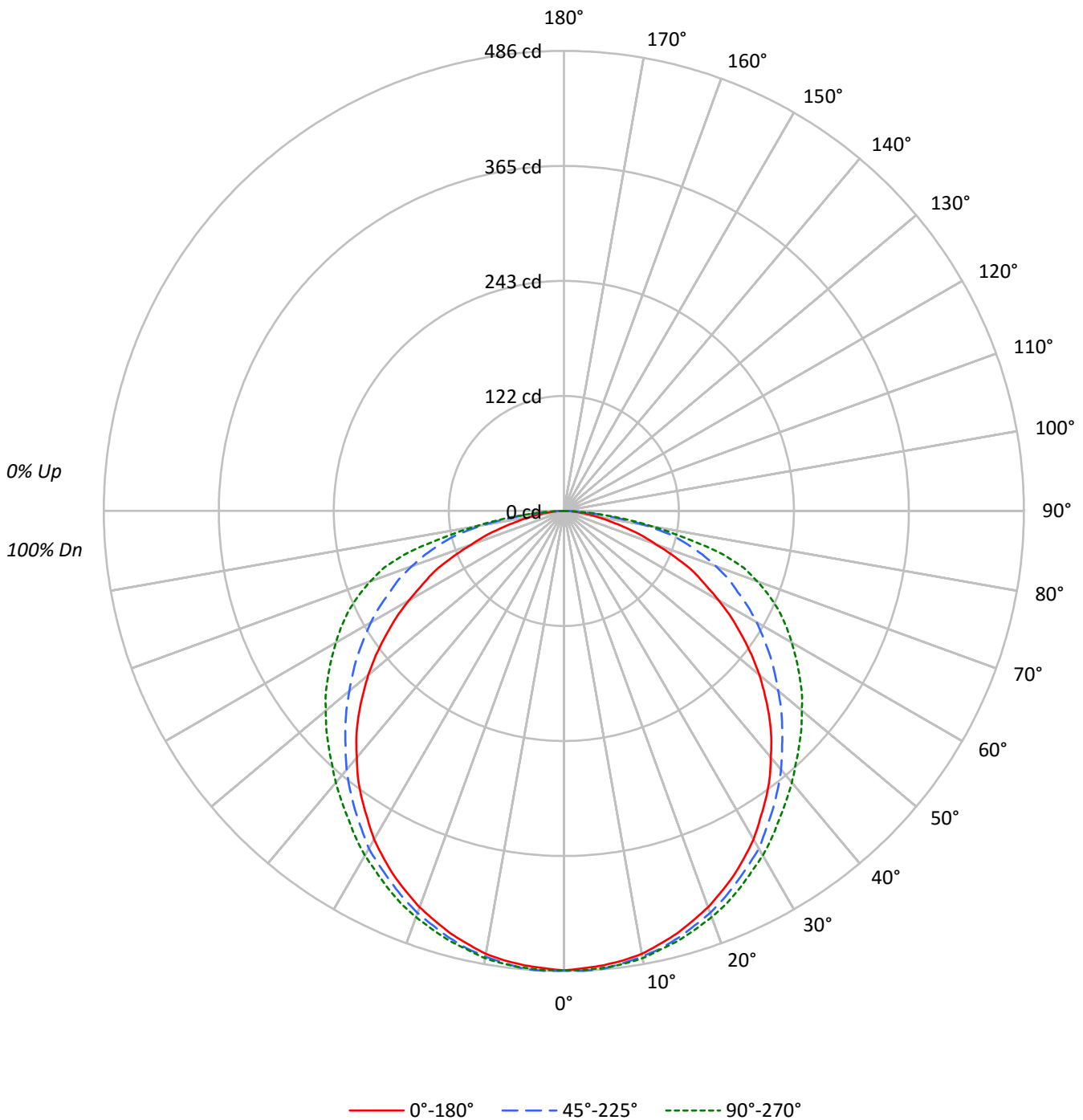
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1306	1306	1306
5°	1301	1311	1308
10°	1298	1306	1311
15°	1287	1300	1308
20°	1275	1294	1307
25°	1262	1284	1306
30°	1245	1280	1306
35°	1222	1264	1304
40°	1195	1254	1316
45°	1168	1242	1338
50°	1129	1238	1374
55°	1078	1247	1427
60°	1016	1266	1496
65°	959	1291	1599
70°	819	1346	1712
75°	686	1402	1779
80°	563	1354	1485
85°	488	1003	1090



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	3.1
10°-20°	131.6	8.9
20°-30°	199.4	13.5
30°-40°	240.8	16.3
40°-50°	253.0	17.2
50°-60°	238.1	16.2
60°-70°	198.5	13.5
70°-80°	131.5	8.9
80°-90°	35.1	2.4
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°	377.0	25.6
0°-40°	617.8	41.9
0°-60°	1108.9	75.2
0°-90°	1474.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1474.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	485	485	485	485	485	
5°	482	483	485	485	484	46
15°	462	464	467	469	470	130
25°	425	428	432	438	440	196
35°	372	376	385	393	397	233
45°	307	312	326	343	352	236
55°	230	240	266	293	304	205
65°	151	164	203	236	251	147
75°	66	92	135	163	171	72
85°	16	24	32	35	35	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	485.4	485.4	485.4	485.4	485.4
2.5°	483.5	484.4	486.3	486.3	485.4
5°	481.7	482.6	485.4	485.4	484.4
7.5°	478.9	479.8	481.7	483.5	482.6
10°	475.1	476.1	477.9	479.8	479.8
12.5°	468.6	469.6	473.3	474.2	474.2
15°	462.1	464.0	466.8	468.6	469.6
17.5°	453.8	455.6	459.3	463.1	463.1
20°	445.4	447.2	451.9	455.6	456.5
22.5°	435.2	438.0	442.6	447.2	449.1
25°	424.9	427.7	432.4	438.0	439.8
27.5°	412.8	415.6	422.1	428.7	429.6
30°	400.8	403.5	411.9	417.5	420.3
32.5°	385.9	389.6	398.0	406.3	409.1
35°	371.9	375.7	384.9	393.3	397.0
37.5°	357.1	360.8	371.0	381.2	385.9
40°	340.3	345.0	357.1	368.2	374.7
42.5°	324.5	329.2	341.2	356.1	362.6
45°	306.8	311.5	326.4	343.1	351.5
47.5°	288.2	293.8	311.5	331.9	340.3
50°	269.7	276.2	295.7	318.9	328.2
52.5°	250.1	258.5	280.8	305.9	317.1
55°	229.7	239.9	265.9	292.9	304.1
57.5°	210.1	219.4	250.1	278.9	291.0
60°	188.8	200.8	235.2	265.0	278.0
62.5°	168.3	181.3	219.4	251.1	265.0
65°	150.6	163.7	202.7	236.2	251.1
67.5°	127.4	145.1	188.8	220.4	235.2
70°	104.1	128.3	171.1	203.6	217.6
72.5°	86.5	109.7	153.4	186.0	199.0
75°	66.0	92.1	134.8	162.7	171.1
77.5°	49.3	76.2	115.3	129.2	130.2
80°	36.3	58.6	87.4	92.1	95.8
82.5°	25.1	40.9	56.7	62.3	64.2
85°	15.8	24.2	32.5	35.3	35.3
87.5°	8.4	9.3	11.2	11.2	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)