

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: P308093

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP187-W2A-U-5500K**

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: P308093
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-5500K
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: 1471.0 lumens
Efficiency: N/A
Efficacy: 85.5 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

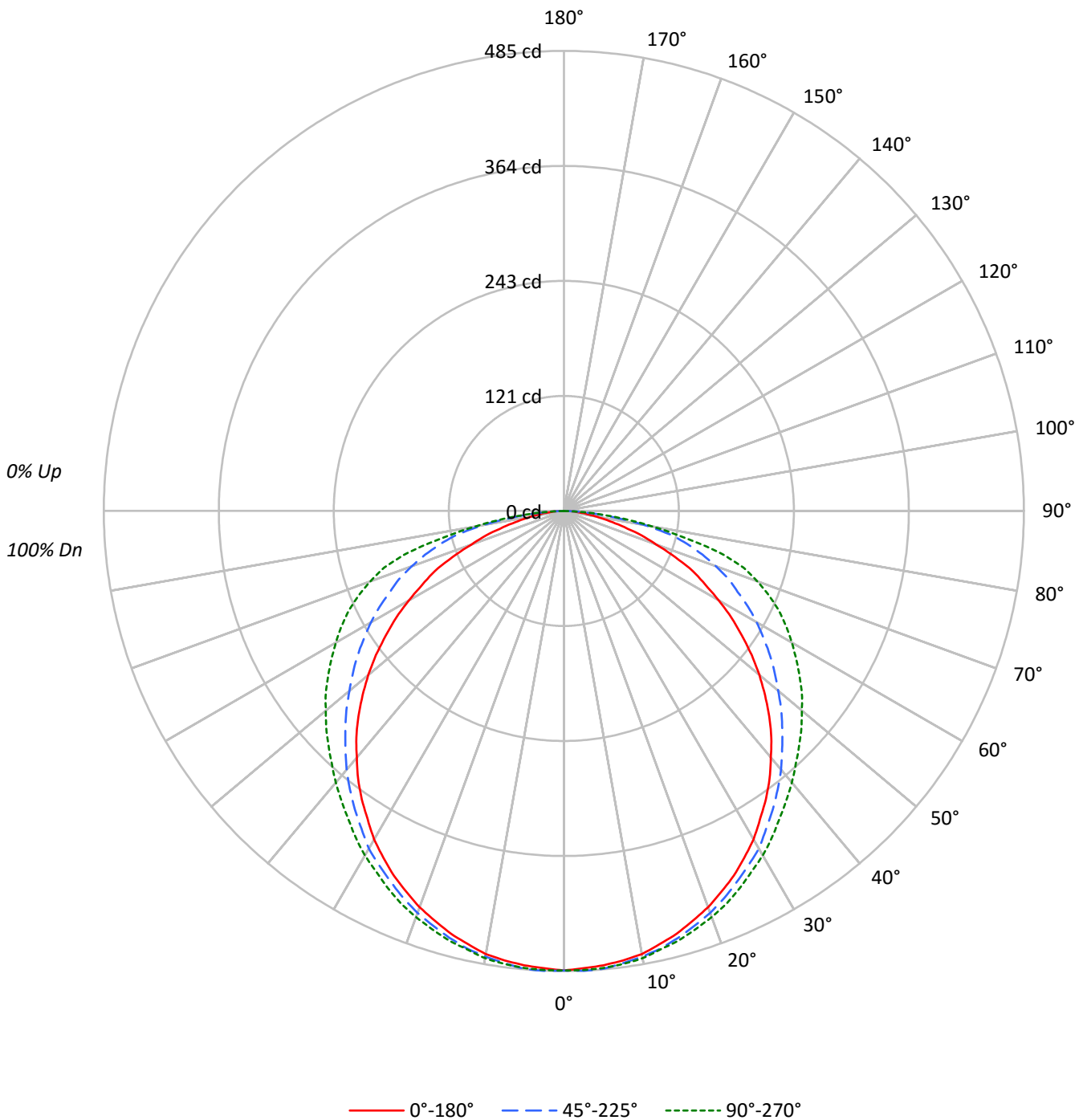
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1304	1304	1304
5°	1298	1308	1306
10°	1296	1303	1308
15°	1285	1298	1305
20°	1273	1292	1305
25°	1259	1281	1303
30°	1243	1277	1303
35°	1219	1262	1302
40°	1193	1252	1314
45°	1165	1239	1335
50°	1127	1235	1371
55°	1075	1245	1423
60°	1014	1264	1493
65°	957	1288	1595
70°	817	1343	1708
75°	685	1399	1775
80°	561	1351	1481
85°	488	1003	1090



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.9	3.1
10°-20°	131.3	8.9
20°-30°	199.0	13.5
30°-40°	240.3	16.3
40°-50°	252.5	17.2
50°-60°	237.6	16.2
60°-70°	198.1	13.5
70°-80°	131.3	8.9
80°-90°	35.0	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°	376.2	25.6
0°-40°	616.6	41.9
0°-60°	1106.7	75.2
0°-90°	1471.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1471.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	484	484	484	484	484	
5°	481	482	484	484	484	46
15°	461	463	466	468	469	130
25°	424	427	432	437	439	195
35°	371	375	384	392	396	232
45°	306	311	326	342	351	236
55°	229	239	265	292	303	205
65°	150	163	202	236	250	146
75°	66	92	135	162	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°	484.4	484.4	484.4	484.4	484.4
2.5°	482.5	483.5	485.3	485.3	484.4
5°	480.7	481.6	484.4	484.4	483.5
7.5°	477.9	478.8	480.7	482.5	481.6
10°	474.2	475.1	477.0	478.8	478.8
12.5°	467.7	468.6	472.3	473.2	473.2
15°	461.2	463.0	465.8	467.7	468.6
17.5°	452.8	454.7	458.4	462.1	462.1
20°	444.5	446.3	451.0	454.7	455.6
22.5°	434.3	437.1	441.7	446.3	448.2
25°	424.1	426.9	431.5	437.1	438.9
27.5°	412.0	414.8	421.3	427.8	428.7
30°	399.9	402.7	411.1	416.6	419.4
32.5°	385.1	388.8	397.2	405.5	408.3
35°	371.2	374.9	384.2	392.5	396.2
37.5°	356.3	360.0	370.2	380.5	385.1
40°	339.6	344.3	356.3	367.5	374.0
42.5°	323.9	328.5	340.6	355.4	361.9
45°	306.2	310.9	325.7	342.4	350.8
47.5°	287.7	293.2	310.9	331.3	339.6
50°	269.1	275.6	295.1	318.3	327.6
52.5°	249.6	258.0	280.2	305.3	316.4
55°	229.2	239.4	265.4	292.3	303.4
57.5°	209.7	219.0	249.6	278.4	290.4
60°	188.4	200.4	234.8	264.5	277.5
62.5°	168.0	180.9	219.0	250.5	264.5
65°	150.3	163.3	202.3	235.7	250.5
67.5°	127.1	144.8	188.4	219.9	234.8
70°	103.9	128.1	170.7	203.2	217.1
72.5°	86.3	109.5	153.1	185.6	198.6
75°	65.9	91.9	134.6	162.4	170.7
77.5°	49.2	76.1	115.1	129.0	129.9
80°	36.2	58.5	87.2	91.9	95.6
82.5°	25.1	40.8	56.6	62.2	64.0
85°	15.8	24.1	32.5	35.3	35.3
87.5°	8.4	9.3	11.1	11.1	11.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)