

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: P308361

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-RDP-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: P308361
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
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-RDP-CP187-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1238.0 lumens
Efficiency: N/A
Efficacy: 72.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

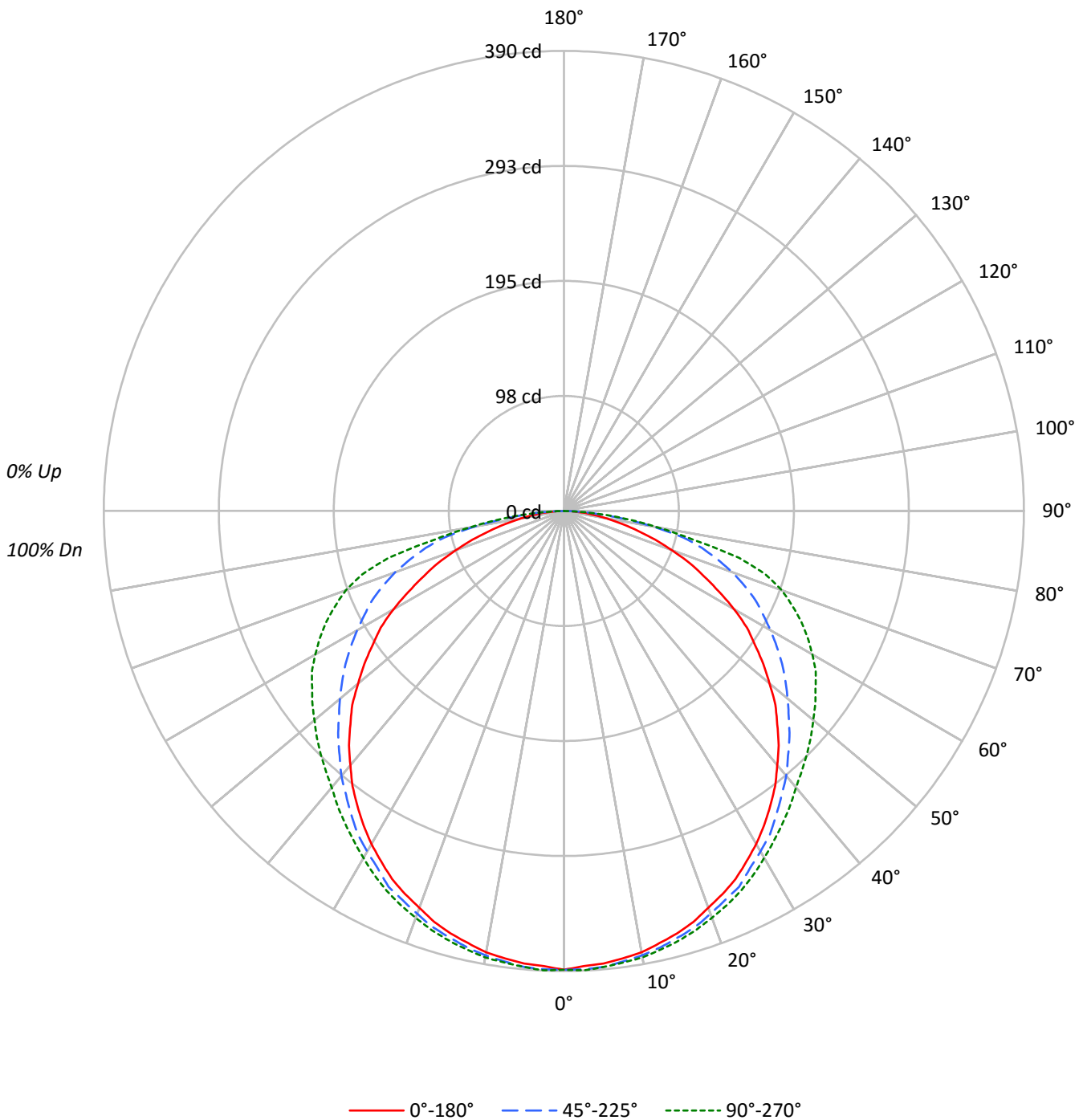
Input Watts (W): 17
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1047	1047	1047
5°	1041	1048	1048
10°	1038	1045	1050
15°	1033	1043	1050
20°	1025	1041	1051
25°	1022	1044	1055
30°	1013	1036	1056
35°	1002	1032	1062
40°	989	1030	1075
45°	974	1029	1109
50°	953	1037	1155
55°	927	1060	1222
60°	897	1088	1309
65°	835	1142	1415
70°	766	1197	1548
75°	673	1259	1600
80°	578	1199	1257
85°	506	871	957



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.8	3.0
10°-20°	105.6	8.5
20°-30°	161.1	13.0
30°-40°	196.8	15.9
40°-50°	210.4	17.0
50°-60°	203.1	16.4
60°-70°	174.8	14.1
70°-80°	118.3	9.6
80°-90°	31.2	2.5
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°	303.5	24.5
0°-40°	500.3	40.4
0°-60°	913.7	73.8
0°-90°	1238.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1238.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	389	389	389	389	389	
5°	385	386	388	388	388	37
15°	371	372	374	376	377	105
25°	344	346	352	353	355	158
35°	305	308	314	321	323	191
45°	256	260	270	284	291	198
55°	198	204	226	249	260	177
65°	131	144	179	208	222	130
75°	65	86	121	146	154	69
85°	16	23	28	29	31	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	388.9	388.9	388.9	388.9	388.9
2.5°	386.1	387.1	388.9	388.9	389.8
5°	385.2	386.1	388.0	388.0	388.0
7.5°	382.5	383.4	385.2	386.1	386.1
10°	379.8	380.7	382.5	383.4	384.3
12.5°	375.2	376.1	378.9	380.7	380.7
15°	370.7	371.6	374.3	376.1	377.0
17.5°	365.2	367.0	369.8	371.6	372.5
20°	357.9	359.7	363.4	366.1	367.0
22.5°	351.5	353.4	357.0	359.7	361.6
25°	344.3	346.1	351.5	353.4	355.2
27.5°	335.1	337.0	341.5	345.2	347.9
30°	326.0	327.9	333.3	337.9	339.7
32.5°	316.0	318.8	325.1	328.8	331.5
35°	305.1	307.8	314.2	320.6	323.3
37.5°	294.2	296.9	303.3	311.5	315.1
40°	281.4	285.1	293.3	304.2	306.0
42.5°	269.6	274.1	281.4	294.2	298.7
45°	255.9	260.5	270.5	284.1	291.4
47.5°	243.2	247.7	258.6	275.0	284.1
50°	227.7	234.1	247.7	266.8	275.9
52.5°	213.1	218.6	236.8	257.7	268.7
55°	197.6	204.0	225.9	248.6	260.5
57.5°	184.0	189.4	214.0	239.5	253.2
60°	166.7	173.9	202.2	229.5	243.2
62.5°	148.4	159.4	190.3	218.6	233.1
65°	131.1	143.9	179.4	207.6	222.2
67.5°	115.7	129.3	165.8	195.8	209.5
70°	97.4	114.8	152.1	181.2	196.7
72.5°	81.1	100.2	136.6	165.8	179.4
75°	64.7	85.6	121.1	145.7	153.9
77.5°	50.1	70.1	103.8	111.1	112.0
80°	37.3	55.6	77.4	78.3	81.1
82.5°	25.5	39.2	50.1	54.6	55.6
85°	16.4	22.8	28.2	29.1	31.0
87.5°	7.3	8.2	10.0	9.1	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)