

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: P308365

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-RDP-CP187-W2A-U-6500K**

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: P308365
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-6500K
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: 1274.0 lumens
Efficiency: N/A
Efficacy: 73.2 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

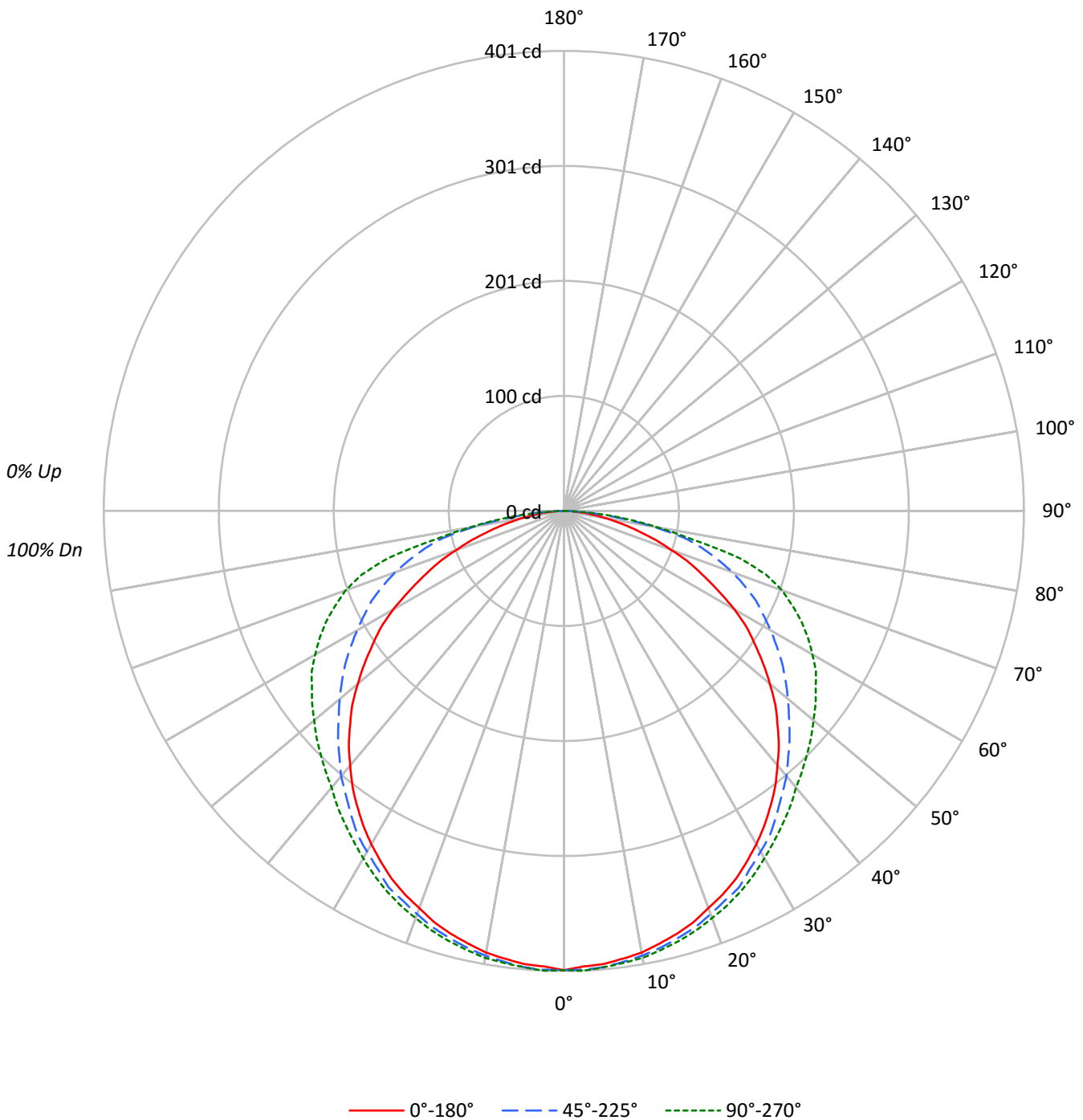
Input Watts (W): 17.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1077	1077	1077
5°	1071	1078	1078
10°	1068	1076	1081
15°	1063	1073	1081
20°	1055	1071	1082
25°	1052	1074	1085
30°	1042	1066	1086
35°	1032	1062	1093
40°	1017	1060	1106
45°	1002	1059	1141
50°	981	1067	1189
55°	954	1090	1257
60°	923	1120	1347
65°	860	1175	1456
70°	789	1231	1592
75°	691	1295	1647
80°	595	1235	1292
85°	522	898	985



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.9	3.0
10°-20°	108.7	8.5
20°-30°	165.8	13.0
30°-40°	202.5	15.9
40°-50°	216.5	17.0
50°-60°	209.0	16.4
60°-70°	179.9	14.1
70°-80°	121.7	9.6
80°-90°	32.1	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°	312.4	24.5
0°-40°	514.8	40.4
0°-60°	940.3	73.8
0°-90°	1274.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1274.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	400	400	400	400	400	
5°	396	397	399	399	399	38
15°	381	382	385	387	388	108
25°	354	356	362	364	366	163
35°	314	317	323	330	333	196
45°	263	268	278	292	300	203
55°	203	210	232	256	268	182
65°	135	148	185	214	229	134
75°	66	88	125	150	158	71
85°	17	23	29	30	32	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	400.2	400.2	400.2	400.2	400.2
2.5°	397.4	398.3	400.2	400.2	401.1
5°	396.4	397.4	399.2	399.2	399.2
7.5°	393.6	394.6	396.4	397.4	397.4
10°	390.8	391.8	393.6	394.6	395.5
12.5°	386.1	387.1	389.9	391.8	391.8
15°	381.4	382.4	385.2	387.1	388.0
17.5°	375.8	377.7	380.5	382.4	383.3
20°	368.3	370.2	373.9	376.8	377.7
22.5°	361.8	363.6	367.4	370.2	372.1
25°	354.3	356.1	361.8	363.6	365.5
27.5°	344.9	346.8	351.5	355.2	358.0
30°	335.5	337.4	343.0	347.7	349.6
32.5°	325.2	328.0	334.6	338.3	341.1
35°	314.0	316.8	323.3	329.9	332.7
37.5°	302.7	305.5	312.1	320.5	324.3
40°	289.6	293.3	301.8	313.0	314.9
42.5°	277.4	282.1	289.6	302.7	307.4
45°	263.4	268.0	278.3	292.4	299.9
47.5°	250.2	254.9	266.2	283.0	292.4
50°	234.3	240.9	254.9	274.6	284.0
52.5°	219.3	224.9	243.7	265.2	276.5
55°	203.4	209.9	232.4	255.9	268.0
57.5°	189.3	194.9	220.2	246.5	260.5
60°	171.5	179.0	208.1	236.2	250.2
62.5°	152.8	164.0	195.9	224.9	239.9
65°	135.0	148.1	184.6	213.7	228.7
67.5°	119.0	133.1	170.6	201.5	215.6
70°	100.3	118.1	156.5	186.5	202.4
72.5°	83.4	103.1	140.6	170.6	184.6
75°	66.5	88.1	124.6	150.0	158.4
77.5°	51.5	72.2	106.8	114.3	115.3
80°	38.4	57.2	79.7	80.6	83.4
82.5°	26.2	40.3	51.5	56.2	57.2
85°	16.9	23.4	29.1	30.0	31.9
87.5°	7.5	8.4	10.3	9.4	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)