

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: P312613

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-RDP-CP250-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: P312613
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-L83050-RDP-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 4500K 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: 1281.0 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

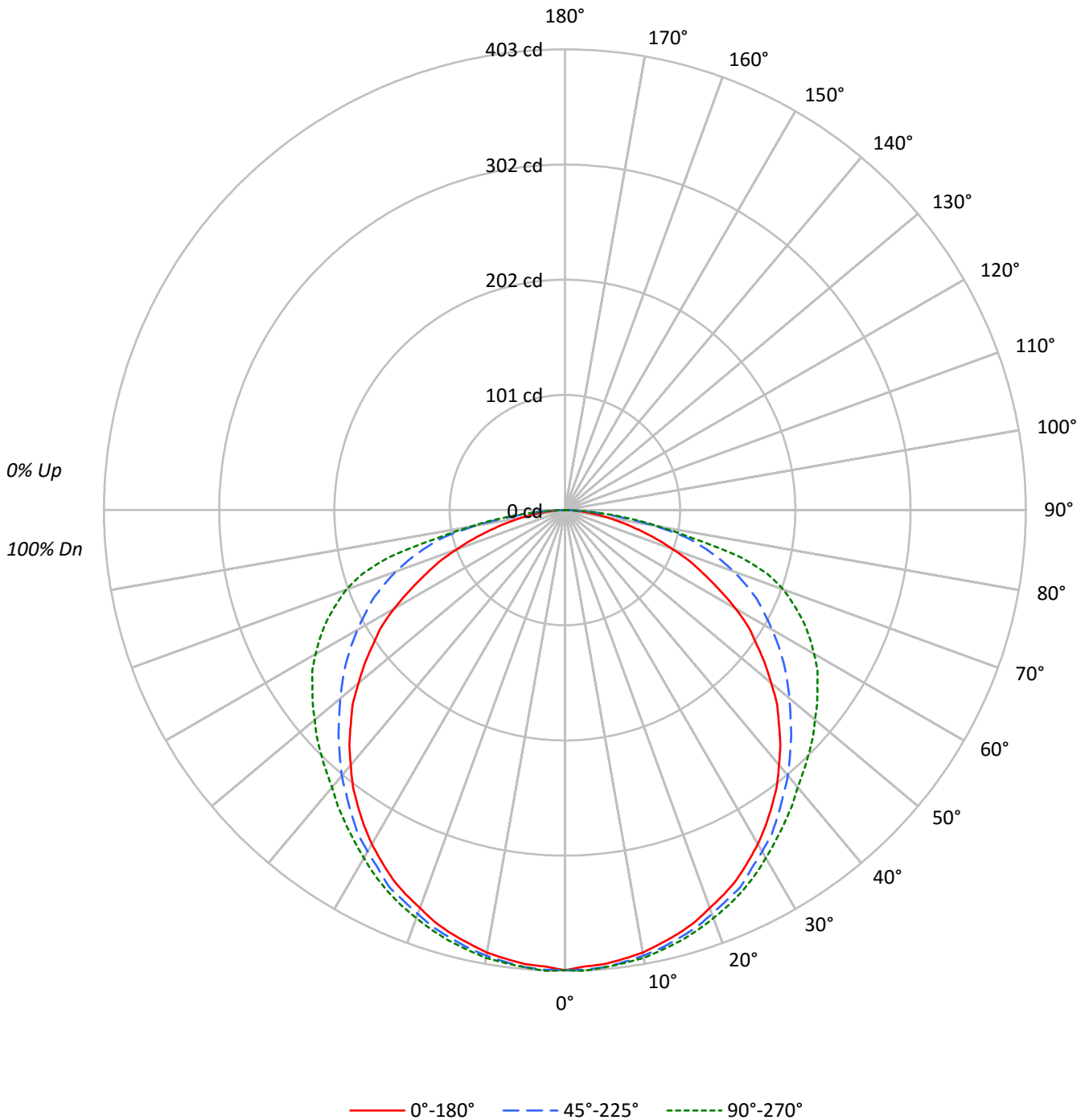
Input Watts (W): 17.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1083	1083	1083
5°	1077	1084	1084
10°	1074	1082	1087
15°	1068	1079	1087
20°	1060	1077	1088
25°	1058	1080	1091
30°	1048	1072	1092
35°	1037	1068	1099
40°	1023	1066	1112
45°	1008	1065	1148
50°	986	1073	1195
55°	959	1096	1264
60°	928	1126	1354
65°	864	1182	1464
70°	793	1238	1601
75°	696	1303	1656
80°	598	1241	1300
85°	525	902	988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.1	3.0
10°-20°	109.3	8.5
20°-30°	166.7	13.0
30°-40°	203.6	15.9
40°-50°	217.7	17.0
50°-60°	210.1	16.4
60°-70°	180.9	14.1
70°-80°	122.4	9.6
80°-90°	32.3	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°	314.1	24.5
0°-40°	517.7	40.4
0°-60°	945.5	73.8
0°-90°	1281.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1281.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	402	402	402	402	402	
5°	399	400	401	401	401	38
15°	384	384	387	389	390	108
25°	356	358	364	366	368	164
35°	316	318	325	332	334	198
45°	265	270	280	294	302	204
55°	204	211	234	257	270	183
65°	136	149	186	215	230	135
75°	67	89	125	151	159	72
85°	17	24	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°	402.4	402.4	402.4	402.4	402.4
2.5°	399.6	400.5	402.4	402.4	403.3
5°	398.6	399.6	401.4	401.4	401.4
7.5°	395.8	396.7	398.6	399.6	399.6
10°	393.0	393.9	395.8	396.7	397.7
12.5°	388.2	389.2	392.0	393.9	393.9
15°	383.5	384.5	387.3	389.2	390.1
17.5°	377.9	379.8	382.6	384.5	385.4
20°	370.3	372.2	376.0	378.8	379.8
22.5°	363.7	365.6	369.4	372.2	374.1
25°	356.2	358.1	363.7	365.6	367.5
27.5°	346.8	348.7	353.4	357.2	360.0
30°	337.4	339.2	344.9	349.6	351.5
32.5°	327.0	329.8	336.4	340.2	343.0
35°	315.7	318.5	325.1	331.7	334.5
37.5°	304.4	307.2	313.8	322.3	326.1
40°	291.2	295.0	303.4	314.7	316.6
42.5°	278.9	283.6	291.2	304.4	309.1
45°	264.8	269.5	279.9	294.0	301.6
47.5°	251.6	256.3	267.6	284.6	294.0
50°	235.6	242.2	256.3	276.1	285.5
52.5°	220.5	226.2	245.0	266.7	278.0
55°	204.5	211.1	233.7	257.3	269.5
57.5°	190.4	196.0	221.5	247.8	262.0
60°	172.5	180.0	209.2	237.5	251.6
62.5°	153.6	164.9	197.0	226.2	241.2
65°	135.7	148.9	185.6	214.9	229.9
67.5°	119.7	133.8	171.5	202.6	216.7
70°	100.8	118.7	157.4	187.5	203.5
72.5°	83.9	103.7	141.4	171.5	185.6
75°	66.9	88.6	125.3	150.8	159.3
77.5°	51.8	72.6	107.4	115.0	115.9
80°	38.6	57.5	80.1	81.0	83.9
82.5°	26.4	40.5	51.8	56.5	57.5
85°	17.0	23.6	29.2	30.2	32.0
87.5°	7.5	8.5	10.4	9.4	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)