

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: P311862

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-CP250-W2A-U-4000K**

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: P311862
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L83050-HRP-CP250-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4000K 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: 1485.0 lumens
Efficiency: N/A
Efficacy: 87.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

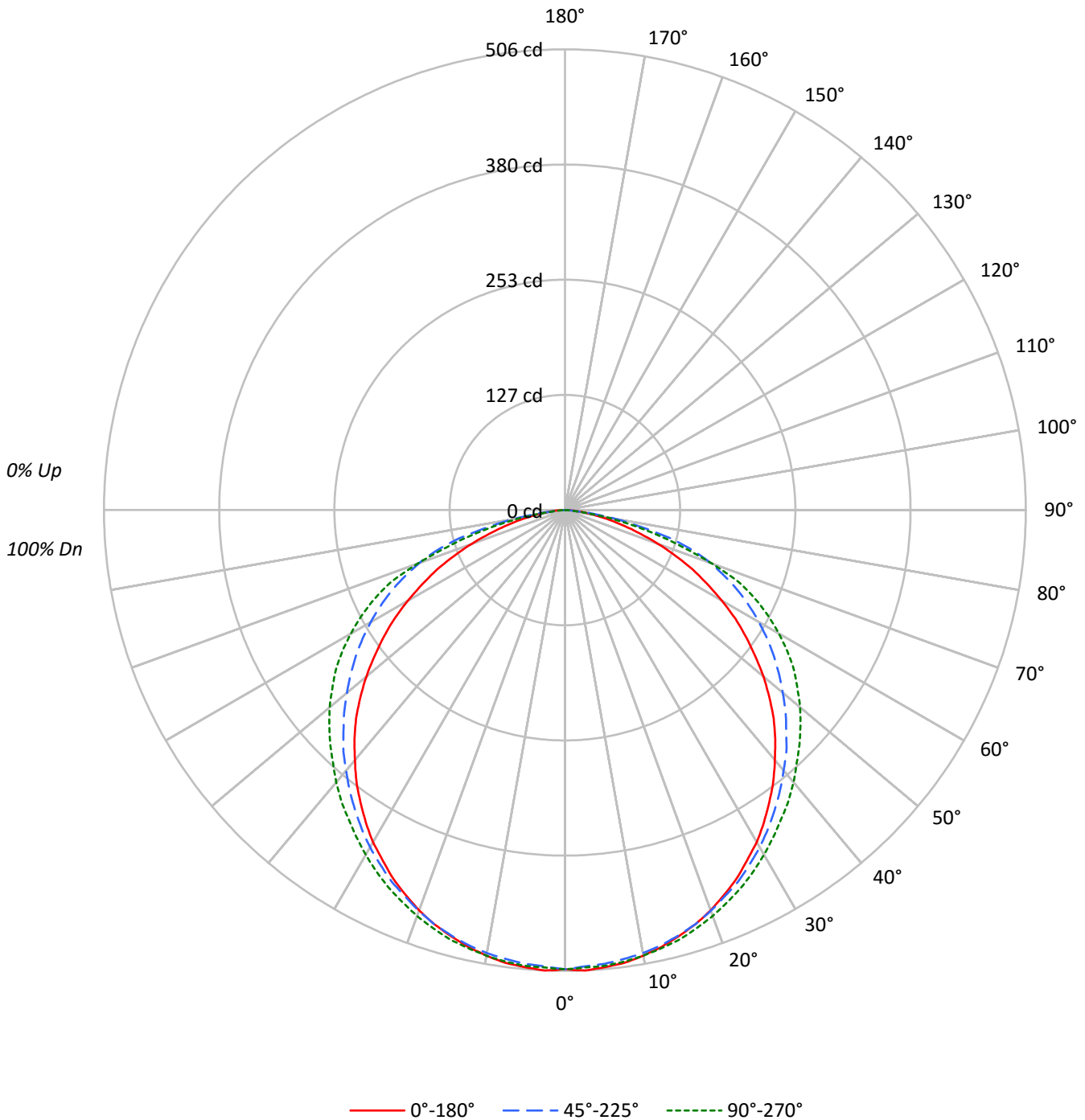
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 14FC22-20-UNV-L83050-HRP-CP250-W2A-U-4000K

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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1357	1357	1357
5°	1361	1351	1357
10°	1358	1350	1358
15°	1349	1346	1360
20°	1340	1341	1359
25°	1325	1336	1359
30°	1309	1329	1358
35°	1285	1319	1361
40°	1260	1312	1371
45°	1233	1308	1386
50°	1191	1308	1411
55°	1139	1315	1442
60°	1070	1324	1460
65°	987	1338	1469
70°	860	1341	1352
75°	709	1248	1093
80°	558	897	731
85°	432	346	173



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.7	3.2
10°-20°	137.0	9.2
20°-30°	208.0	14.0
30°-40°	252.1	17.0
40°-50°	265.6	17.9
50°-60°	248.0	16.7
60°-70°	198.2	13.3
70°-80°	109.1	7.3
80°-90°	19.3	1.3
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°	392.8	26.5
0°-40°	644.9	43.4
0°-60°	1158.5	78.0
0°-90°	1485.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1485.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	504	504	504	504	504	
5°	504	502	500	503	502	48
15°	484	484	483	488	488	137
25°	446	447	450	457	458	206
35°	391	395	402	412	414	245
45°	324	330	344	359	364	249
55°	243	255	280	300	307	217
65°	155	175	210	227	231	153
75°	68	98	120	108	105	73
85°	14	18	11	7	6	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	504.3	504.3	504.3	504.3	504.3
2.5°	506.2	504.8	501.5	504.3	502.9
5°	503.8	502.4	500.1	503.4	502.4
7.5°	501.5	499.6	497.3	501.0	500.1
10°	496.8	495.4	494.0	497.3	496.8
12.5°	491.2	490.8	489.4	493.1	492.6
15°	484.2	484.2	483.3	488.0	488.0
17.5°	476.8	476.3	476.8	481.9	481.4
20°	467.9	467.9	468.4	474.4	474.4
22.5°	457.2	457.6	459.0	466.5	466.0
25°	446.4	447.3	450.1	456.7	457.6
27.5°	433.3	435.7	438.9	446.9	447.8
30°	421.2	422.6	427.7	435.2	437.1
32.5°	406.7	409.5	415.1	423.5	425.9
35°	391.3	395.0	401.6	411.9	414.2
37.5°	375.9	379.2	388.0	398.8	403.0
40°	358.6	364.2	373.6	385.7	390.4
42.5°	341.8	347.4	360.0	372.6	376.8
45°	324.1	330.1	343.7	359.1	364.2
47.5°	304.5	311.5	328.7	345.1	350.7
50°	284.4	293.2	312.4	330.6	337.1
52.5°	263.4	274.6	296.5	315.7	321.7
55°	242.8	255.0	280.2	299.8	307.3
57.5°	221.8	234.9	263.4	285.8	290.0
60°	198.9	214.8	246.1	265.7	271.3
62.5°	176.5	194.7	228.3	247.0	251.7
65°	155.0	174.6	210.1	227.4	230.7
67.5°	131.7	155.0	190.1	205.9	206.9
70°	109.3	136.4	170.4	177.9	171.8
72.5°	87.3	116.3	147.6	141.5	136.4
75°	68.2	97.6	120.0	107.9	105.1
77.5°	50.4	79.8	85.9	79.4	74.2
80°	36.0	63.0	57.9	49.5	47.2
82.5°	24.7	39.7	31.8	24.7	21.5
85°	14.0	17.7	11.2	7.0	5.6
87.5°	6.1	4.2	2.3	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)