

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: P311992

Luminaire Tested: **14FCZ2-20-UNV-L83050-RDP-CA08-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: P311992
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-43)
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-RDP-CA08-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.08" ACRYLIC 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: 1354.0 lumens
Efficiency: N/A
Efficacy: 80.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

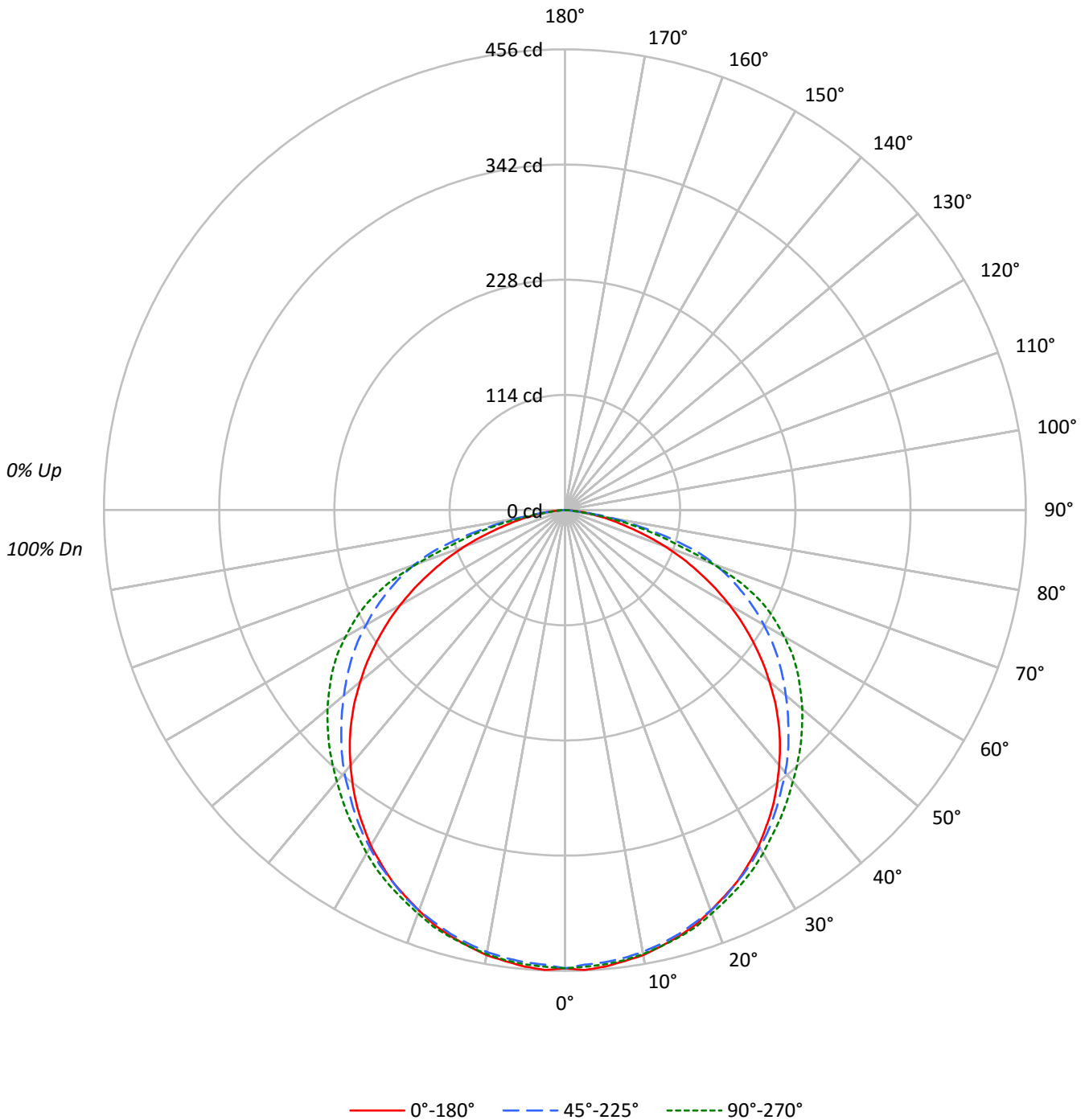
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84				84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69				69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58				58
4	82	70	61	54	80	68	60	53	66	58	53	63	57	52	61	56	51	49				49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42				42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37				37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32				32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29				29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26				26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23				23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1220	1220	1220
5°	1225	1214	1219
10°	1222	1213	1219
15°	1216	1210	1219
20°	1208	1208	1217
25°	1202	1202	1218
30°	1192	1199	1219
35°	1177	1194	1222
40°	1159	1192	1233
45°	1139	1191	1255
50°	1106	1195	1284
55°	1066	1210	1319
60°	1013	1223	1348
65°	935	1238	1366
70°	832	1248	1223
75°	671	1121	978
80°	524	786	638
85°	358	228	164



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.9	3.2
10°-20°	123.1	9.1
20°-30°	187.5	13.8
30°-40°	228.4	16.9
40°-50°	242.3	17.9
50°-60°	228.7	16.9
60°-70°	184.6	13.6
70°-80°	100.2	7.4
80°-90°	16.2	1.2
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°	353.6	26.1
0°-40°	582.0	43.0
0°-60°	1053.0	77.8
0°-90°	1354.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1354.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	454	454	454	454	454	
5°	454	452	449	452	451	43
15°	437	436	434	438	438	123
25°	405	404	405	409	410	186
35°	358	360	364	371	372	224
45°	299	303	313	324	330	230
55°	227	237	258	275	281	203
65°	147	165	194	210	215	146
75°	64	94	108	97	94	70
85°	12	13	7	6	5	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	453.5	453.5	453.5	453.5	453.5
2.5°	455.6	453.5	450.3	453.5	452.4
5°	453.5	452.4	449.3	452.4	451.4
7.5°	450.3	450.3	447.1	449.3	449.3
10°	447.1	446.1	444.0	447.1	446.1
12.5°	441.9	440.8	439.7	442.9	441.9
15°	436.6	435.5	434.5	437.6	437.6
17.5°	430.2	429.2	428.1	432.3	432.3
20°	421.8	421.8	421.8	426.0	424.9
22.5°	413.3	413.3	414.4	418.6	417.5
25°	404.9	403.8	404.9	409.1	410.1
27.5°	394.3	395.3	396.4	400.6	401.7
30°	383.7	384.8	385.8	391.1	392.2
32.5°	371.0	373.2	375.3	381.6	381.6
35°	358.4	360.5	363.6	371.0	372.1
37.5°	344.6	346.7	351.0	359.4	361.5
40°	329.8	333.0	339.3	347.8	351.0
42.5°	315.0	319.2	326.6	336.2	340.4
45°	299.2	303.4	312.9	324.5	329.8
47.5°	282.2	287.5	299.2	314.0	318.2
50°	264.3	271.7	285.4	301.3	306.6
52.5°	246.3	254.8	271.7	288.6	293.9
55°	227.3	236.8	257.9	274.8	281.2
57.5°	208.2	218.8	243.1	261.1	267.4
60°	188.2	200.8	227.3	245.2	250.5
62.5°	168.1	182.9	211.4	229.4	233.6
65°	146.9	164.9	194.5	210.4	214.6
67.5°	126.9	148.0	177.6	189.2	189.2
70°	105.7	129.0	158.6	161.7	155.4
72.5°	84.6	111.0	137.4	125.8	120.5
75°	64.5	94.1	107.8	97.3	94.1
77.5°	48.6	76.1	76.1	69.8	67.7
80°	33.8	58.1	50.7	44.4	41.2
82.5°	22.2	32.8	26.4	21.1	18.0
85°	11.6	12.7	7.4	6.3	5.3
87.5°	4.2	2.1	1.1	2.1	1.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)