

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: P312591

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-RDP-CA08-W2A-U-3500K**

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: P312591
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-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K 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: 1302.0 lumens
Efficiency: N/A
Efficacy: 78.0 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

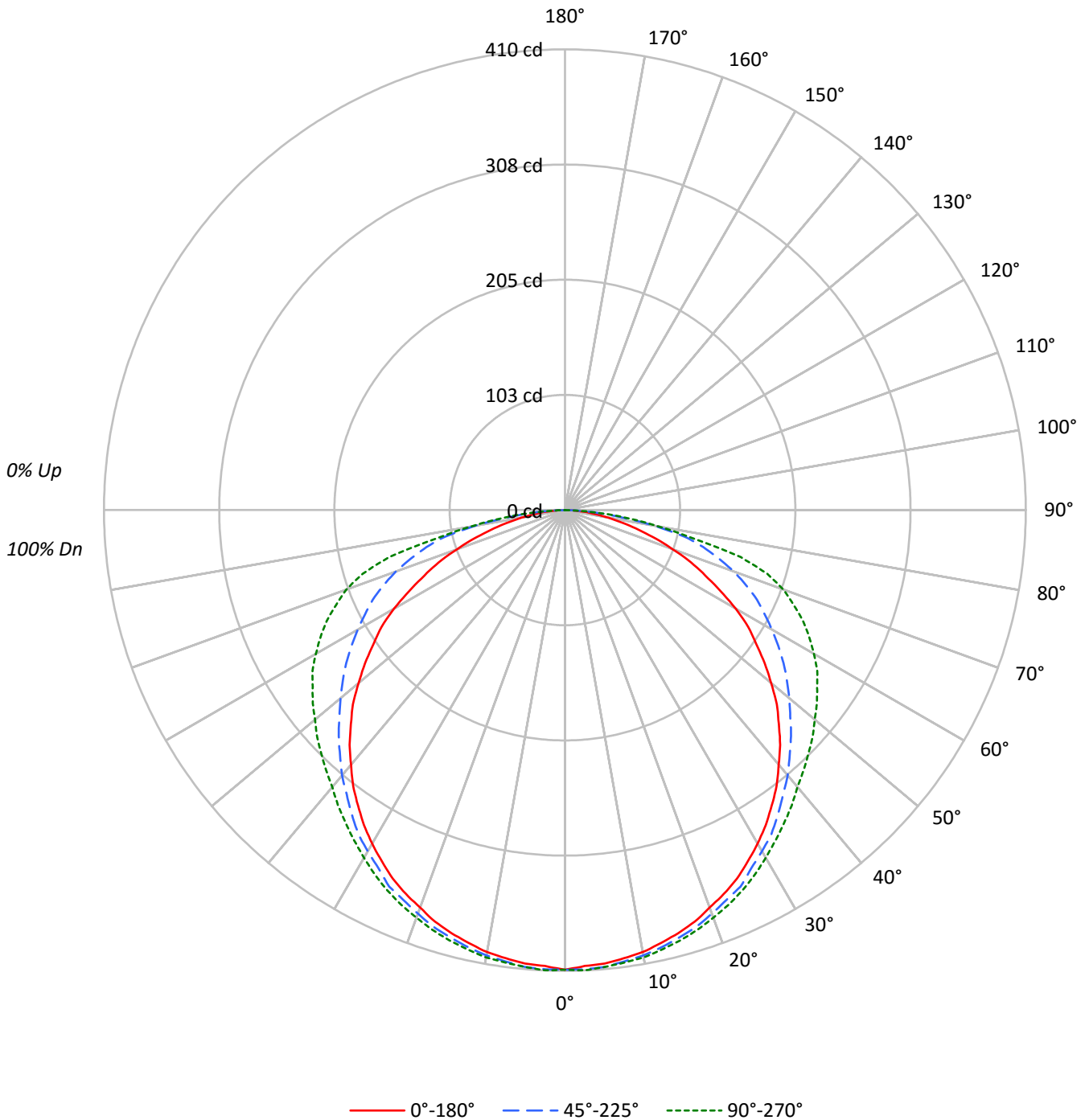
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1101	1101	1101
5°	1094	1102	1102
10°	1091	1099	1104
15°	1086	1097	1105
20°	1078	1094	1105
25°	1075	1098	1109
30°	1065	1089	1110
35°	1054	1085	1117
40°	1040	1083	1130
45°	1024	1083	1166
50°	1003	1091	1215
55°	975	1114	1285
60°	943	1144	1376
65°	878	1202	1488
70°	806	1259	1628
75°	707	1325	1683
80°	609	1261	1320
85°	531	917	1007



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.7	3.0
10°-20°	111.1	8.5
20°-30°	169.5	13.0
30°-40°	206.9	15.9
40°-50°	221.3	17.0
50°-60°	213.6	16.4
60°-70°	183.8	14.1
70°-80°	124.4	9.6
80°-90°	32.8	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°	319.2	24.5
0°-40°	526.2	40.4
0°-60°	961.0	73.8
0°-90°	1302.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1302.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	409	409	409	409	409	
5°	405	406	408	408	408	38
15°	390	391	394	396	396	110
25°	362	364	370	372	374	167
35°	321	324	330	337	340	201
45°	269	274	284	299	306	208
55°	208	214	238	262	274	186
65°	138	151	189	218	234	137
75°	68	90	127	153	162	73
85°	17	24	30	31	33	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	409.0	409.0	409.0	409.0	409.0
2.5°	406.1	407.1	409.0	409.0	409.9
5°	405.1	406.1	408.0	408.0	408.0
7.5°	402.3	403.2	405.1	406.1	406.1
10°	399.4	400.4	402.3	403.2	404.2
12.5°	394.6	395.6	398.4	400.4	400.4
15°	389.8	390.8	393.7	395.6	396.5
17.5°	384.1	386.0	388.9	390.8	391.7
20°	376.4	378.3	382.2	385.0	386.0
22.5°	369.7	371.6	375.5	378.3	380.2
25°	362.0	364.0	369.7	371.6	373.5
27.5°	352.5	354.4	359.2	363.0	365.9
30°	342.9	344.8	350.6	355.3	357.3
32.5°	332.4	335.2	341.9	345.8	348.6
35°	320.9	323.7	330.4	337.1	340.0
37.5°	309.4	312.2	318.9	327.6	331.4
40°	296.0	299.8	308.4	319.9	321.8
42.5°	283.5	288.3	296.0	309.4	314.2
45°	269.1	273.9	284.5	298.8	306.5
47.5°	255.7	260.5	272.0	289.3	298.8
50°	239.5	246.2	260.5	280.6	290.2
52.5°	224.1	229.9	249.0	271.1	282.6
55°	207.8	214.5	237.5	261.5	273.9
57.5°	193.5	199.2	225.1	251.9	266.3
60°	175.3	182.9	212.6	241.4	255.7
62.5°	156.1	167.6	200.2	229.9	245.2
65°	137.9	151.3	188.7	218.4	233.7
67.5°	121.6	136.0	174.3	205.9	220.3
70°	102.5	120.7	160.0	190.6	206.9
72.5°	85.2	105.4	143.7	174.3	188.7
75°	68.0	90.0	127.4	153.2	161.9
77.5°	52.7	73.8	109.2	116.9	117.8
80°	39.3	58.4	81.4	82.4	85.2
82.5°	26.8	41.2	52.7	57.5	58.4
85°	17.2	23.9	29.7	30.6	32.6
87.5°	7.7	8.6	10.5	9.6	9.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)