

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: P312453

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-HRP-CP125-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: P312453
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
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-HRP-CP125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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: 1622.0 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

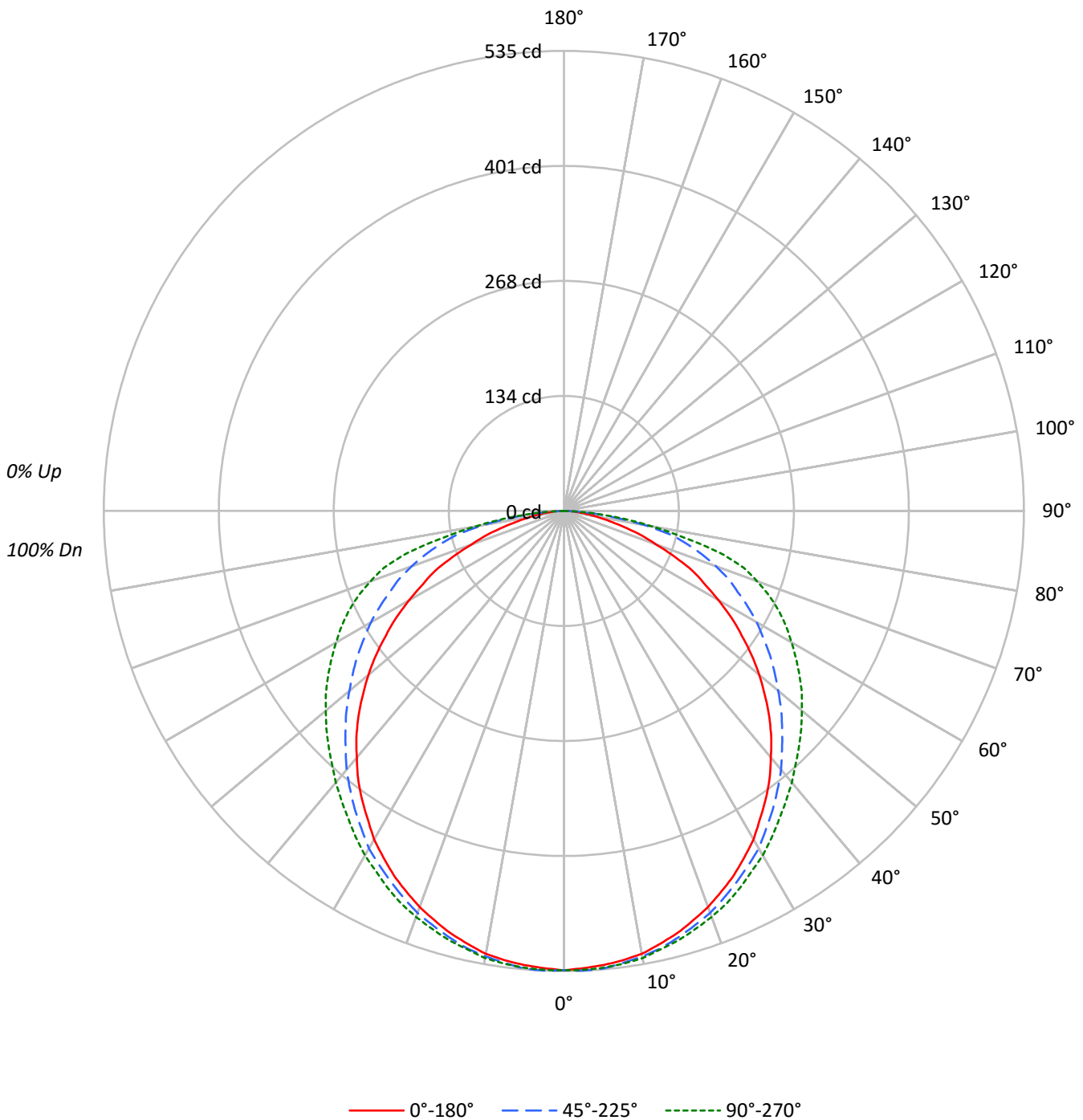
Input Watts (W): 17.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1437	1437	1437
5°	1432	1443	1440
10°	1429	1437	1443
15°	1417	1431	1439
20°	1403	1424	1439
25°	1388	1413	1437
30°	1370	1409	1437
35°	1345	1392	1435
40°	1316	1380	1448
45°	1285	1367	1472
50°	1242	1362	1512
55°	1186	1373	1570
60°	1118	1393	1646
65°	1056	1421	1759
70°	902	1482	1884
75°	755	1543	1958
80°	618	1491	1633
85°	537	1105	1201



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.6	3.1
10°-20°	144.8	8.9
20°-30°	219.4	13.5
30°-40°	265.0	16.3
40°-50°	278.4	17.2
50°-60°	262.0	16.2
60°-70°	218.4	13.5
70°-80°	144.7	8.9
80°-90°	38.6	2.4
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°	414.9	25.6
0°-40°	679.8	41.9
0°-60°	1220.3	75.2
0°-90°	1622.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1622.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	534	534	534	534	534	
5°	530	531	534	534	533	50
15°	508	511	514	516	517	143
25°	468	471	476	482	484	215
35°	409	413	424	433	437	256
45°	338	343	359	378	387	260
55°	253	264	293	322	335	226
65°	166	180	223	260	276	161
75°	73	101	148	179	188	79
85°	17	27	36	39	39	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	534.1	534.1	534.1	534.1	534.1
2.5°	532.1	533.1	535.1	535.1	534.1
5°	530.0	531.0	534.1	534.1	533.1
7.5°	526.9	528.0	530.0	532.1	531.0
10°	522.9	523.9	525.9	528.0	528.0
12.5°	515.7	516.7	520.8	521.8	521.8
15°	508.5	510.6	513.6	515.7	516.7
17.5°	499.3	501.4	505.5	509.5	509.5
20°	490.1	492.2	497.3	501.4	502.4
22.5°	478.9	481.9	487.0	492.2	494.2
25°	467.6	470.7	475.8	481.9	484.0
27.5°	454.3	457.4	464.5	471.7	472.7
30°	441.0	444.1	453.3	459.4	462.5
32.5°	424.6	428.7	437.9	447.1	450.2
35°	409.3	413.4	423.6	432.8	436.9
37.5°	392.9	397.0	408.3	419.5	424.6
40°	374.5	379.6	392.9	405.2	412.3
42.5°	357.1	362.2	375.5	391.9	399.0
45°	337.7	342.8	359.1	377.6	386.8
47.5°	317.2	323.3	342.8	365.3	374.5
50°	296.7	303.9	325.4	351.0	361.2
52.5°	275.2	284.4	309.0	336.6	348.9
55°	252.7	264.0	292.6	322.3	334.6
57.5°	231.2	241.5	275.2	307.0	320.3
60°	207.7	221.0	258.9	291.6	305.9
62.5°	185.2	199.5	241.5	276.3	291.6
65°	165.8	180.1	223.1	259.9	276.3
67.5°	140.2	159.6	207.7	242.5	258.9
70°	114.6	141.2	188.3	224.1	239.4
72.5°	95.2	120.7	168.8	204.6	219.0
75°	72.6	101.3	148.4	179.1	188.3
77.5°	54.2	83.9	126.9	142.2	143.2
80°	39.9	64.5	96.2	101.3	105.4
82.5°	27.6	45.0	62.4	68.6	70.6
85°	17.4	26.6	35.8	38.9	38.9
87.5°	9.2	10.2	12.3	12.3	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)