

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: P312328

Luminaire Tested: **14FCZ2-25-UNV-L83050-S-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: P312328
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-25-UNV-L83050-S-CP125-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH 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: 2453.0 lumens
Efficiency: N/A
Efficacy: 119.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

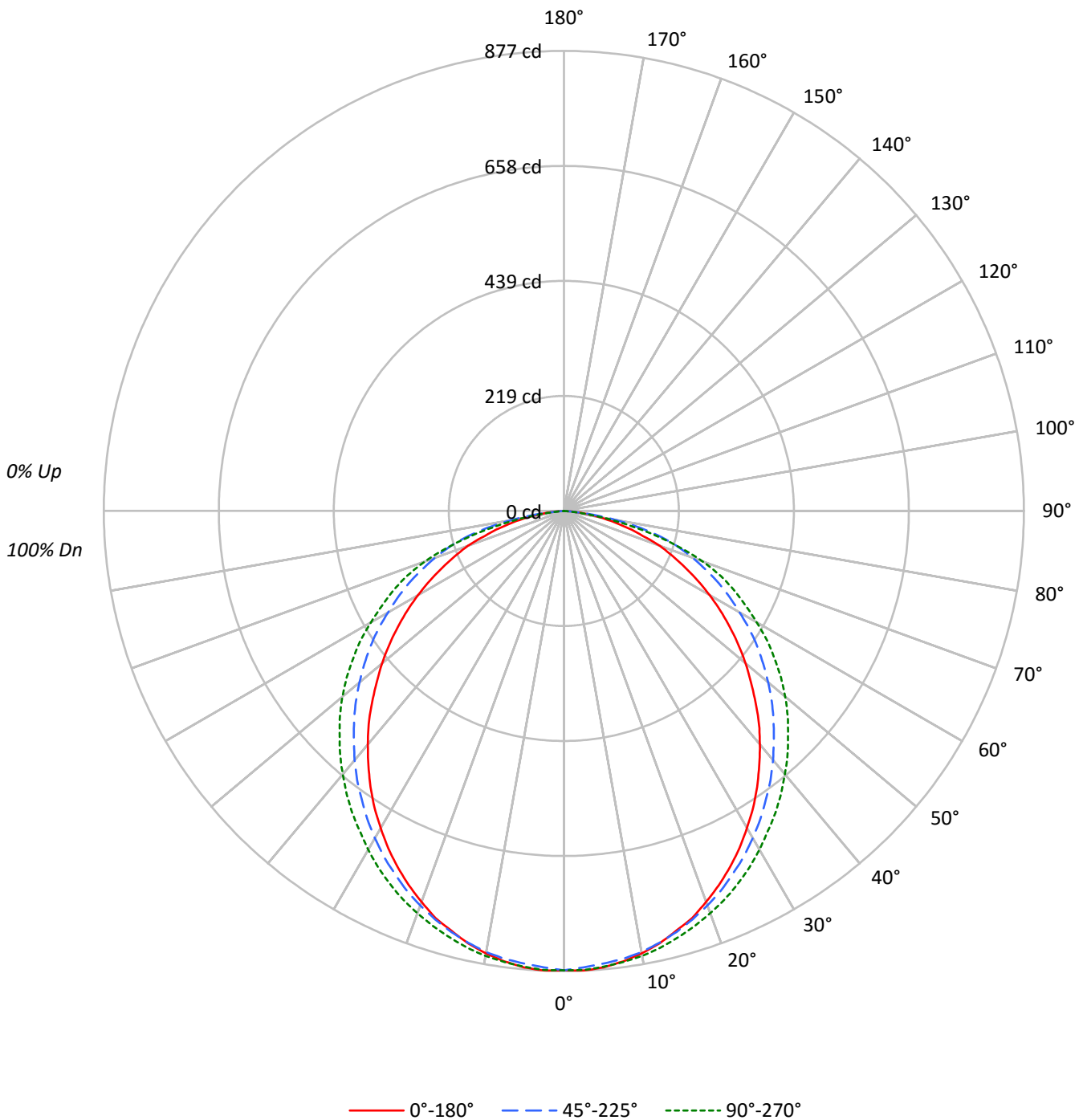
Input Watts (W): 20.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2356	2356	2356
5°	2359	2339	2355
10°	2340	2333	2353
15°	2307	2314	2345
20°	2271	2292	2337
25°	2224	2264	2329
30°	2169	2237	2316
35°	2110	2206	2309
40°	2042	2179	2303
45°	1967	2152	2300
50°	1894	2128	2306
55°	1815	2111	2299
60°	1728	2082	2285
65°	1626	2075	2285
70°	1531	2057	2220
75°	1328	2011	1896
80°	1074	1621	1263
85°	713	562	377



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.7	3.4
10°-20°	235.3	9.6
20°-30°	353.0	14.4
30°-40°	421.1	17.2
40°-50°	435.3	17.7
50°-60°	397.4	16.2
60°-70°	312.7	12.7
70°-80°	182.0	7.4
80°-90°	33.5	1.4
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°	670.9	27.4
0°-40°	1092.0	44.5
0°-60°	1924.7	78.5
0°-90°	2453.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2453.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	876	876	876	876	876	
5°	873	871	866	873	872	83
15°	828	830	831	842	842	234
25°	749	753	763	781	784	345
35°	642	651	671	697	703	401
45°	517	534	566	597	604	399
55°	387	407	450	483	490	346
65°	255	282	326	352	359	254
75°	128	158	193	190	182	136
85°	23	33	18	15	12	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	875.7	875.7	875.7	875.7	875.7
2.5°	876.9	874.5	870.8	876.9	875.7
5°	873.2	870.8	866.0	873.2	872.0
7.5°	866.0	863.5	861.1	868.4	867.2
10°	856.2	855.0	853.8	862.3	861.1
12.5°	844.1	844.1	842.8	852.6	852.6
15°	828.2	829.5	830.7	841.6	841.6
17.5°	813.7	812.4	816.1	828.2	829.5
20°	793.0	795.4	800.3	814.9	816.1
22.5°	772.3	774.7	783.2	797.8	801.5
25°	749.2	752.8	762.6	780.8	784.5
27.5°	724.9	729.7	743.1	762.6	766.2
30°	698.1	705.4	720.0	741.9	745.5
32.5°	671.4	678.7	696.9	718.8	723.7
35°	642.2	650.7	671.4	696.9	703.0
37.5°	611.8	622.7	647.0	672.6	679.9
40°	581.4	593.5	620.3	647.0	655.5
42.5°	550.9	563.1	592.3	622.7	631.2
45°	516.9	533.9	565.5	597.2	604.5
47.5°	484.1	502.3	537.6	569.2	578.9
50°	452.4	470.7	508.4	541.2	550.9
52.5°	419.6	439.1	479.2	513.2	521.8
55°	386.8	407.4	450.0	482.8	490.1
57.5°	353.9	375.8	419.6	451.2	459.7
60°	321.1	344.2	386.8	418.4	424.5
62.5°	288.2	312.6	356.4	384.3	390.4
65°	255.4	282.2	325.9	351.5	358.8
67.5°	223.8	250.5	293.1	317.4	323.5
70°	194.6	218.9	261.5	279.7	282.2
72.5°	158.1	188.5	229.9	239.6	233.5
75°	127.7	158.1	193.4	189.7	182.4
77.5°	97.3	127.7	150.8	138.6	128.9
80°	69.3	99.7	104.6	86.4	81.5
82.5°	45.0	69.3	58.4	45.0	36.5
85°	23.1	32.8	18.2	14.6	12.2
87.5°	7.3	4.9	2.4	2.4	1.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)