

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: P313552

Luminaire Tested: **24FCZ2-40-UNV-L83050-RDP-CP125-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: P313552
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40-UNV-L83050-RDP-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" 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

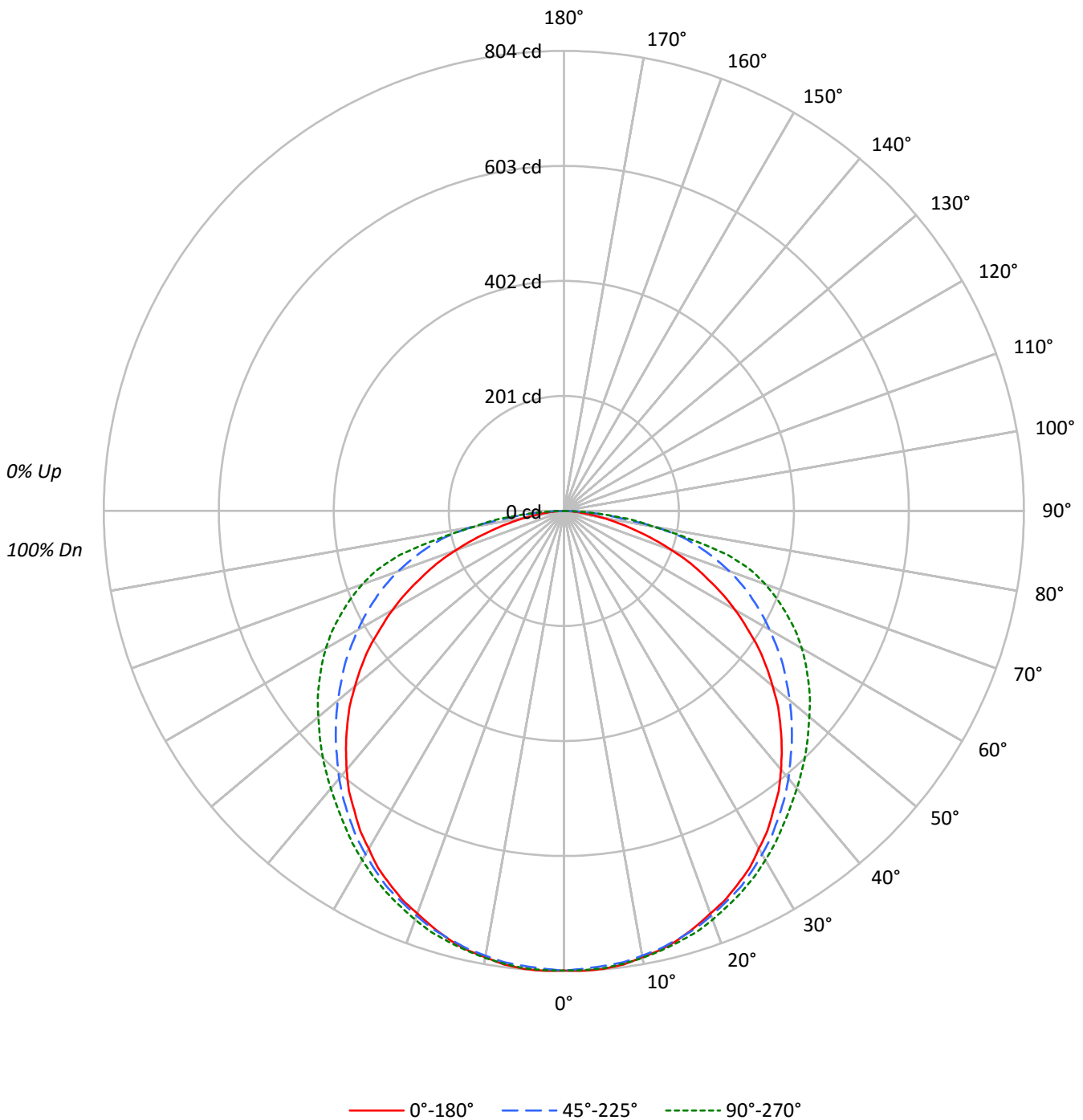
Lumens per Lamp: N/A
Luminaire Lumens: 2554.0 lumens
Efficiency: N/A
Efficacy: 76.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.5
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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	1081	1081	1081
5°	1085	1078	1083
10°	1082	1078	1083
15°	1080	1078	1085
20°	1072	1077	1088
25°	1068	1080	1091
30°	1059	1077	1094
35°	1049	1074	1099
40°	1037	1072	1113
45°	1020	1073	1138
50°	997	1079	1172
55°	972	1097	1224
60°	931	1118	1292
65°	871	1158	1371
70°	792	1211	1475
75°	672	1278	1541
80°	530	1286	1247
85°	391	977	1095



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.2	3.0
10°-20°	219.3	8.6
20°-30°	335.3	13.1
30°-40°	409.9	16.0
40°-50°	436.9	17.1
50°-60°	417.7	16.4
60°-70°	353.8	13.9
70°-80°	237.8	9.3
80°-90°	67.1	2.6
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°	630.8	24.7
0°-40°	1040.7	40.7
0°-60°	1895.2	74.2
0°-90°	2554.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2554.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	803	803	803	803	803	
5°	803	802	798	802	802	76
15°	775	775	774	780	779	219
25°	720	722	727	734	735	332
35°	638	644	654	666	669	400
45°	536	545	564	588	598	413
55°	414	429	468	504	522	369
65°	274	302	364	412	431	272
75°	129	176	246	288	296	138
85°	25	52	63	68	71	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	803.2	803.2	803.2	803.2	803.2
2.5°	804.4	804.4	800.6	803.2	803.2
5°	803.2	801.9	798.1	801.9	801.9
7.5°	799.4	798.1	795.6	799.4	798.1
10°	791.8	791.8	789.2	793.0	793.0
12.5°	785.4	784.2	782.9	788.0	786.7
15°	775.3	775.3	774.0	780.4	779.1
17.5°	762.6	763.9	765.2	770.2	771.5
20°	748.7	751.2	752.5	760.1	760.1
22.5°	736.0	737.3	739.8	747.4	747.4
25°	719.6	722.1	727.2	733.5	734.8
27.5°	703.1	704.3	710.7	719.6	720.8
30°	681.5	685.3	692.9	703.1	704.3
32.5°	662.5	666.3	675.2	685.3	687.9
35°	638.5	643.5	653.7	666.3	668.9
37.5°	616.9	620.7	633.4	647.3	651.1
40°	590.3	597.9	610.6	627.1	633.4
42.5°	563.7	571.3	586.5	608.1	615.7
45°	535.9	544.7	563.7	587.8	597.9
47.5°	508.0	518.1	539.7	567.5	578.9
50°	476.3	489.0	515.6	547.3	559.9
52.5°	445.9	461.1	490.3	525.7	542.2
55°	414.2	429.4	467.5	504.2	521.9
57.5°	378.8	399.0	440.9	482.7	501.7
60°	345.8	364.8	415.5	461.1	480.1
62.5°	310.4	335.7	390.2	438.3	457.3
65°	273.6	301.5	363.6	411.7	430.7
67.5°	240.7	271.1	337.0	385.1	404.1
70°	201.4	239.4	307.8	356.0	375.0
72.5°	164.7	206.5	277.4	324.3	342.0
75°	129.2	176.1	245.8	287.6	296.4
77.5°	96.3	145.7	212.8	230.6	224.2
80°	68.4	116.5	166.0	157.1	160.9
82.5°	44.3	88.7	102.6	116.5	120.3
85°	25.3	51.9	63.3	68.4	70.9
87.5°	11.4	19.0	25.3	25.3	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)