

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: P313528

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-RDP-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: P313528
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: 24FCZ2-40HE-UNV-L83050-RDP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 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: 2594.0 lumens
Efficiency: N/A
Efficacy: 81.3 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

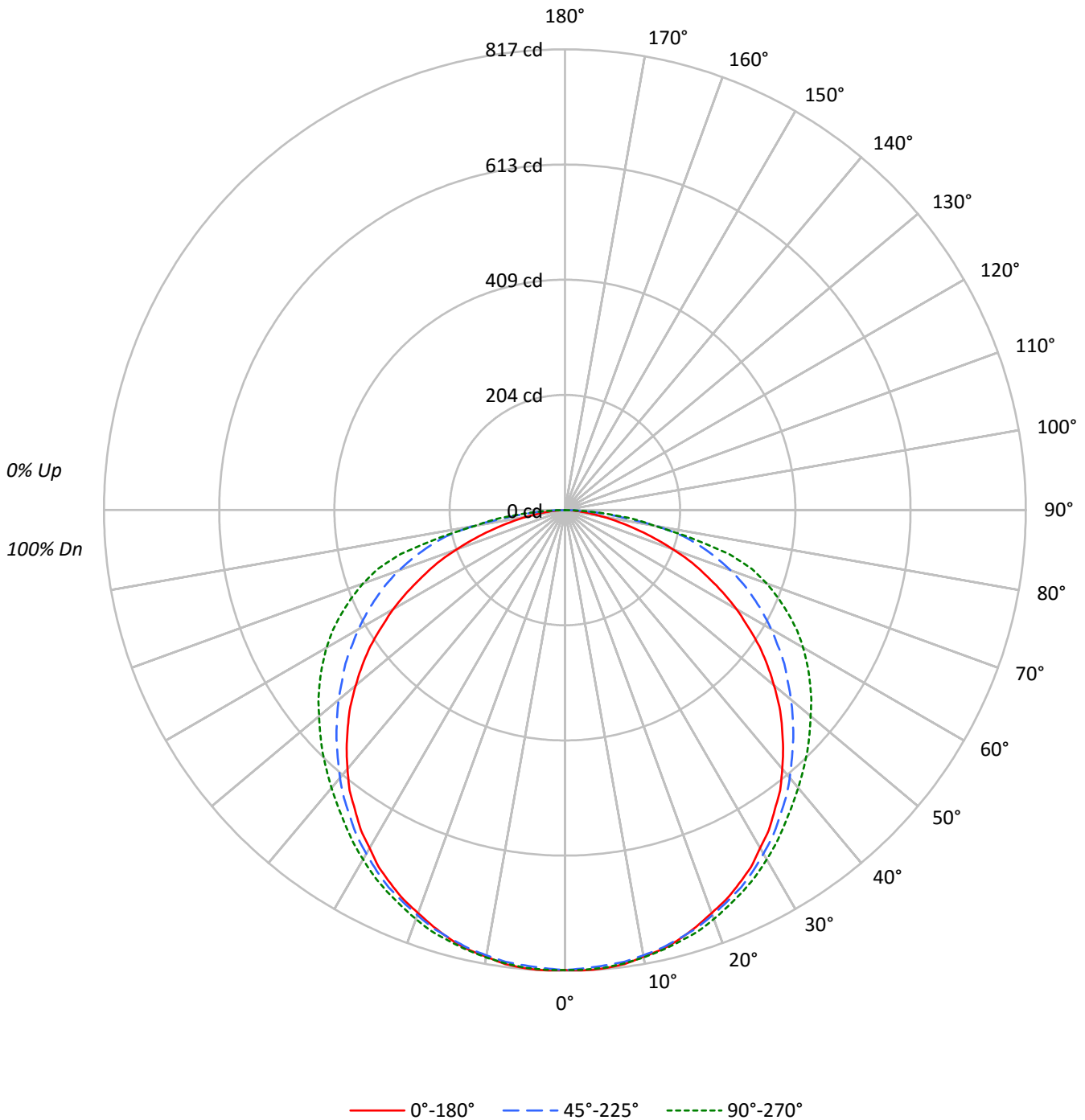
Input Watts (W): 31.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	67	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°	1098	1098	1098
5°	1102	1095	1100
10°	1099	1095	1100
15°	1097	1095	1102
20°	1089	1094	1105
25°	1085	1096	1108
30°	1075	1093	1111
35°	1065	1090	1116
40°	1053	1089	1130
45°	1036	1090	1156
50°	1013	1096	1190
55°	987	1114	1244
60°	945	1136	1312
65°	885	1176	1393
70°	805	1230	1498
75°	682	1298	1565
80°	539	1306	1266
85°	397	993	1113



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	3.0
10°-20°	222.7	8.6
20°-30°	340.6	13.1
30°-40°	416.3	16.0
40°-50°	443.7	17.1
50°-60°	424.3	16.4
60°-70°	359.4	13.9
70°-80°	241.6	9.3
80°-90°	68.1	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°	640.6	24.7
0°-40°	1057.0	40.7
0°-60°	1924.9	74.2
0°-90°	2594.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2594.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	816	814	811	814	814	78
15°	787	787	786	793	791	222
25°	731	733	738	745	746	337
35°	648	654	664	677	679	406
45°	544	553	573	597	607	420
55°	421	436	475	512	530	375
65°	278	306	369	418	438	276
75°	131	179	250	292	301	141
85°	26	53	64	70	72	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	815.7	815.7	815.7	815.7	815.7
2.5°	817.0	817.0	813.2	815.7	815.7
5°	815.7	814.5	810.6	814.5	814.5
7.5°	811.9	810.6	808.0	811.9	810.6
10°	804.2	804.2	801.6	805.4	805.4
12.5°	797.7	796.4	795.2	800.3	799.0
15°	787.4	787.4	786.1	792.6	791.3
17.5°	774.6	775.9	777.1	782.3	783.6
20°	760.4	763.0	764.3	772.0	772.0
22.5°	747.5	748.8	751.4	759.1	759.1
25°	730.8	733.4	738.5	745.0	746.3
27.5°	714.1	715.4	721.8	730.8	732.1
30°	692.2	696.1	703.8	714.1	715.4
32.5°	672.9	676.8	685.8	696.1	698.7
35°	648.5	653.6	663.9	676.8	679.4
37.5°	626.6	630.5	643.3	657.5	661.3
40°	599.6	607.3	620.2	636.9	643.3
42.5°	572.6	580.3	595.7	617.6	625.3
45°	544.3	553.3	572.6	597.0	607.3
47.5°	515.9	526.2	548.1	576.4	588.0
50°	483.8	496.6	523.7	555.8	568.7
52.5°	452.9	468.3	497.9	534.0	550.7
55°	420.7	436.2	474.8	512.1	530.1
57.5°	384.7	405.3	447.8	490.2	509.5
60°	351.3	370.6	422.0	468.3	487.6
62.5°	315.2	341.0	396.3	445.2	464.5
65°	277.9	306.2	369.3	418.2	437.5
67.5°	244.5	275.3	342.3	391.1	410.4
70°	204.6	243.2	312.7	361.5	380.8
72.5°	167.3	209.7	281.8	329.4	347.4
75°	131.2	178.8	249.6	292.1	301.1
77.5°	97.8	148.0	216.2	234.2	227.7
80°	69.5	118.4	168.6	159.5	163.4
82.5°	45.0	90.1	104.2	118.4	122.2
85°	25.7	52.8	64.3	69.5	72.1
87.5°	11.6	19.3	25.7	25.7	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)