

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: P310037

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-5500K**

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: P310037
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-L82765-RDP-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5500K 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: 2417.0 lumens
Efficiency: N/A
Efficacy: 77.2 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

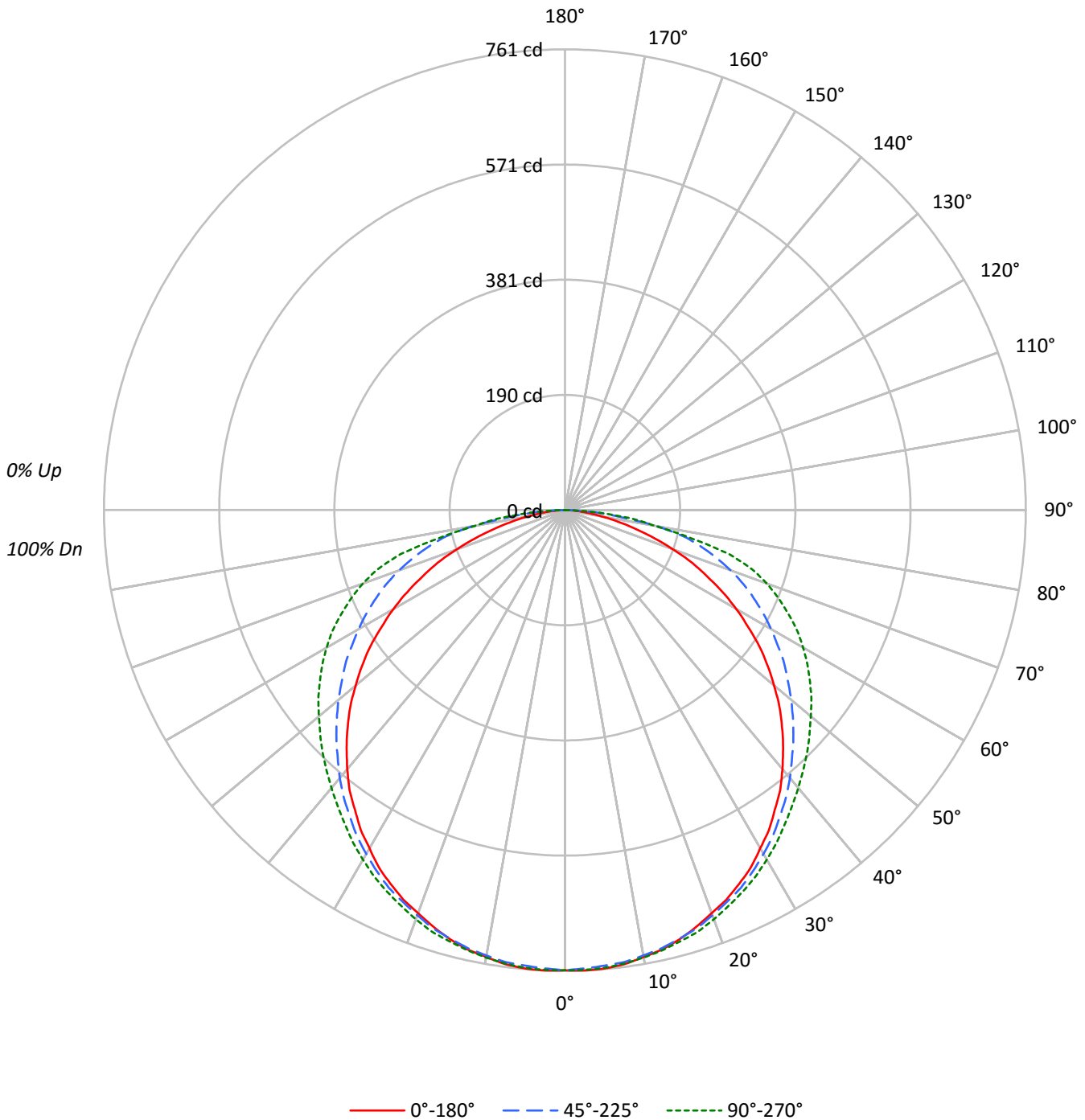
Input Watts (W): 31.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1023	1023	1023
5°	1027	1020	1025
10°	1024	1020	1025
15°	1022	1020	1027
20°	1014	1020	1030
25°	1011	1022	1032
30°	1002	1019	1036
35°	992	1016	1040
40°	981	1015	1053
45°	965	1015	1077
50°	944	1021	1109
55°	920	1038	1159
60°	881	1058	1223
65°	825	1096	1298
70°	750	1146	1396
75°	636	1209	1458
80°	501	1217	1180
85°	371	925	1036



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.1	3.0
10°-20°	207.5	8.6
20°-30°	317.3	13.1
30°-40°	387.9	16.0
40°-50°	413.4	17.1
50°-60°	395.3	16.4
60°-70°	334.9	13.9
70°-80°	225.1	9.3
80°-90°	63.5	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°	596.9	24.7
0°-40°	984.8	40.7
0°-60°	1793.6	74.2
0°-90°	2417.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2417.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	760	760	760	760	760	
5°	760	759	755	759	759	72
15°	734	734	732	738	737	207
25°	681	683	688	694	695	314
35°	604	609	619	631	633	379
45°	507	516	534	556	566	391
55°	392	406	442	477	494	349
65°	259	285	344	390	408	257
75°	122	167	233	272	280	131
85°	24	49	60	65	67	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	760.1	760.1	760.1	760.1	760.1
2.5°	761.3	761.3	757.7	760.1	760.1
5°	760.1	758.9	755.3	758.9	758.9
7.5°	756.5	755.3	752.9	756.5	755.3
10°	749.3	749.3	746.9	750.5	750.5
12.5°	743.3	742.1	740.9	745.7	744.5
15°	733.7	733.7	732.5	738.5	737.3
17.5°	721.7	722.9	724.1	728.9	730.1
20°	708.5	710.9	712.1	719.3	719.3
22.5°	696.5	697.7	700.1	707.3	707.3
25°	681.0	683.4	688.1	694.1	695.3
27.5°	665.4	666.6	672.6	681.0	682.2
30°	645.0	648.6	655.8	665.4	666.6
32.5°	627.0	630.6	639.0	648.6	651.0
35°	604.2	609.0	618.6	630.6	633.0
37.5°	583.8	587.4	599.4	612.6	616.2
40°	558.7	565.9	577.9	593.4	599.4
42.5°	533.5	540.7	555.1	575.5	582.6
45°	507.1	515.5	533.5	556.3	565.9
47.5°	480.7	490.3	510.7	537.1	547.9
50°	450.8	462.8	487.9	517.9	529.9
52.5°	422.0	436.4	464.0	497.5	513.1
55°	392.0	406.4	442.4	477.1	493.9
57.5°	358.5	377.6	417.2	456.8	474.7
60°	327.3	345.3	393.2	436.4	454.4
62.5°	293.7	317.7	369.2	414.8	432.8
65°	259.0	285.3	344.1	389.6	407.6
67.5°	227.8	256.6	318.9	364.5	382.4
70°	190.6	226.6	291.3	336.9	354.9
72.5°	155.9	195.4	262.6	306.9	323.7
75°	122.3	166.6	232.6	272.1	280.5
77.5°	91.1	137.9	201.4	218.2	212.2
80°	64.7	110.3	157.1	148.7	152.3
82.5°	42.0	83.9	97.1	110.3	113.9
85°	24.0	49.2	59.9	64.7	67.1
87.5°	10.8	18.0	24.0	24.0	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)