

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: P310027

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CP187-W2A-U-5000K**

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: P310027
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-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 5000K 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: 2413.0 lumens
Efficiency: N/A
Efficacy: 77.6 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

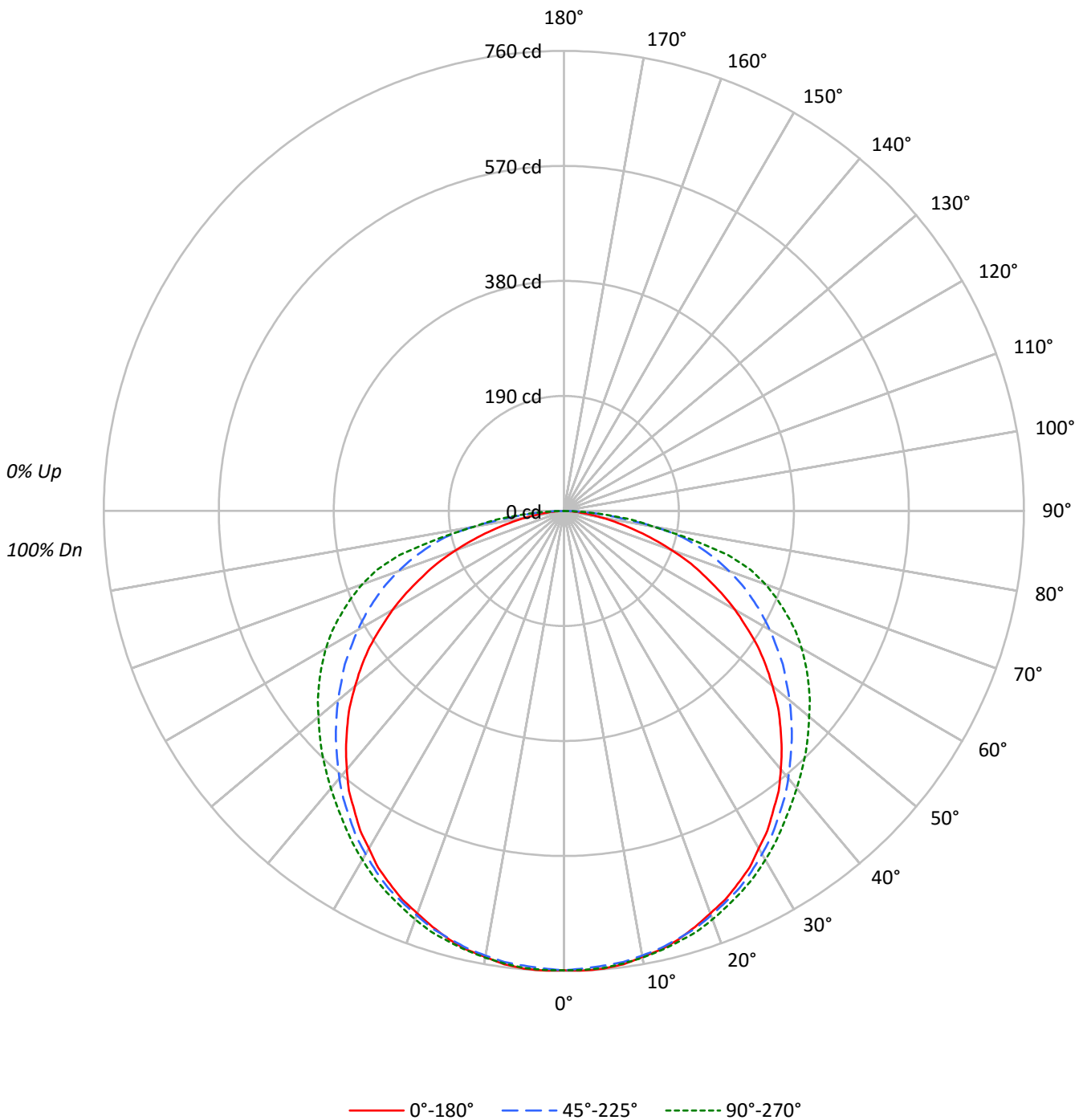
Input Watts (W): 31.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1021	1021	1021
5°	1025	1018	1023
10°	1022	1019	1024
15°	1020	1019	1025
20°	1013	1018	1028
25°	1009	1020	1031
30°	1000	1017	1034
35°	991	1014	1038
40°	980	1013	1051
45°	963	1013	1075
50°	942	1020	1107
55°	918	1036	1157
60°	879	1056	1221
65°	823	1094	1295
70°	749	1144	1394
75°	635	1207	1456
80°	501	1215	1178
85°	369	923	1034



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.0	3.0
10°-20°	207.2	8.6
20°-30°	316.8	13.1
30°-40°	387.3	16.0
40°-50°	412.8	17.1
50°-60°	394.7	16.4
60°-70°	334.3	13.9
70°-80°	224.7	9.3
80°-90°	63.4	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°	595.9	24.7
0°-40°	983.2	40.7
0°-60°	1790.6	74.2
0°-90°	2413.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2413.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	759	759	759	759	759	
5°	759	758	754	758	758	72
15°	732	732	731	737	736	207
25°	680	682	687	693	694	313
35°	603	608	618	630	632	378
45°	506	515	533	555	565	390
55°	391	406	442	476	493	349
65°	258	285	344	389	407	257
75°	122	166	232	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°	758.8	758.8	758.8	758.8	758.8
2.5°	760.0	760.0	756.4	758.8	758.8
5°	758.8	757.6	754.0	757.6	757.6
7.5°	755.2	754.0	751.6	755.2	754.0
10°	748.0	748.0	745.7	749.2	749.2
12.5°	742.1	740.9	739.7	744.5	743.3
15°	732.5	732.5	731.3	737.3	736.1
17.5°	720.5	721.7	722.9	727.7	728.9
20°	707.4	709.7	710.9	718.1	718.1
22.5°	695.4	696.6	699.0	706.2	706.2
25°	679.8	682.2	687.0	693.0	694.2
27.5°	664.3	665.5	671.4	679.8	681.0
30°	643.9	647.5	654.7	664.3	665.5
32.5°	626.0	629.6	637.9	647.5	649.9
35°	603.2	608.0	617.6	629.6	632.0
37.5°	582.9	586.5	598.4	611.6	615.2
40°	557.7	564.9	576.9	592.5	598.4
42.5°	532.6	539.8	554.2	574.5	581.7
45°	506.3	514.7	532.6	555.4	564.9
47.5°	479.9	489.5	509.9	536.2	547.0
50°	450.0	462.0	487.1	517.1	529.0
52.5°	421.3	435.7	463.2	496.7	512.3
55°	391.4	405.7	441.6	476.4	493.1
57.5°	357.9	377.0	416.5	456.0	474.0
60°	326.7	344.7	392.6	435.7	453.6
62.5°	293.2	317.2	368.6	414.1	432.1
65°	258.5	284.9	343.5	389.0	406.9
67.5°	227.4	256.1	318.4	363.9	381.8
70°	190.3	226.2	290.8	336.3	354.3
72.5°	155.6	195.1	262.1	306.4	323.2
75°	122.1	166.4	232.2	271.7	280.1
77.5°	91.0	137.6	201.1	217.8	211.8
80°	64.6	110.1	156.8	148.4	152.0
82.5°	41.9	83.8	96.9	110.1	113.7
85°	23.9	49.1	59.8	64.6	67.0
87.5°	10.8	18.0	23.9	23.9	22.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)