

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: P310003

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CA08-W2A-U-6500K**

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: P310003
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-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 6500K 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: 2618.0 lumens
Efficiency: N/A
Efficacy: 82.3 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

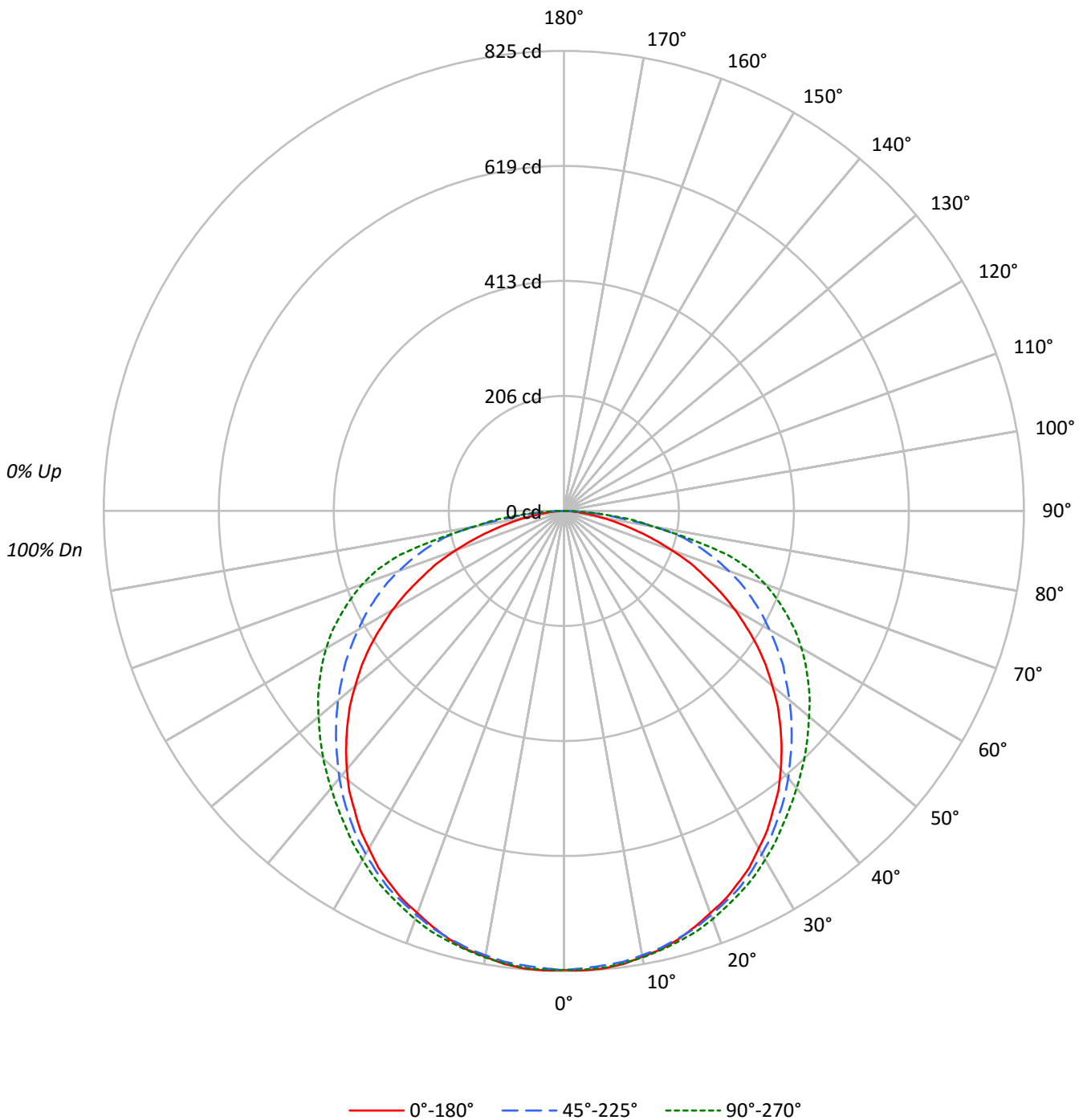
Input Watts (W): 31.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1108	1108	1108
5°	1112	1105	1110
10°	1109	1105	1111
15°	1107	1105	1112
20°	1099	1104	1116
25°	1095	1107	1118
30°	1085	1104	1122
35°	1075	1101	1126
40°	1063	1099	1140
45°	1045	1100	1166
50°	1022	1106	1202
55°	996	1124	1255
60°	954	1146	1324
65°	893	1187	1406
70°	812	1241	1512
75°	689	1310	1580
80°	543	1318	1278
85°	401	1002	1122



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.1	3.0
10°-20°	224.8	8.6
20°-30°	343.7	13.1
30°-40°	420.2	16.0
40°-50°	447.8	17.1
50°-60°	428.2	16.4
60°-70°	362.7	13.9
70°-80°	243.8	9.3
80°-90°	68.8	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°	646.6	24.7
0°-40°	1066.7	40.7
0°-60°	1942.7	74.2
0°-90°	2618.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2618.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	823	823	823	823	823	
5°	823	822	818	822	822	78
15°	795	795	793	800	799	224
25°	738	740	745	752	753	340
35°	654	660	670	683	686	410
45°	549	558	578	602	613	424
55°	425	440	479	517	535	378
65°	280	309	373	422	442	278
75°	132	180	252	295	304	142
85°	26	53	65	70	73	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	823.3	823.3	823.3	823.3	823.3
2.5°	824.6	824.6	820.7	823.3	823.3
5°	823.3	822.0	818.1	822.0	822.0
7.5°	819.4	818.1	815.5	819.4	818.1
10°	811.6	811.6	809.0	812.9	812.9
12.5°	805.1	803.8	802.5	807.7	806.4
15°	794.7	794.7	793.4	799.9	798.6
17.5°	781.7	783.0	784.3	789.5	790.8
20°	767.4	770.0	771.3	779.1	779.1
22.5°	754.5	755.8	758.4	766.1	766.1
25°	737.6	740.2	745.4	751.9	753.2
27.5°	720.7	722.0	728.5	737.6	738.9
30°	698.6	702.5	710.3	720.7	722.0
32.5°	679.1	683.0	692.1	702.5	705.1
35°	654.5	659.7	670.1	683.0	685.6
37.5°	632.4	636.3	649.3	663.6	667.5
40°	605.1	612.9	625.9	642.8	649.3
42.5°	577.9	585.6	601.2	623.3	631.1
45°	549.3	558.4	577.9	602.5	612.9
47.5°	520.7	531.1	553.2	581.8	593.4
50°	488.3	501.2	528.5	561.0	574.0
52.5°	457.1	472.7	502.5	538.9	555.8
55°	424.6	440.2	479.2	516.8	535.0
57.5°	388.3	409.0	451.9	494.8	514.2
60°	354.5	374.0	425.9	472.7	492.2
62.5°	318.1	344.1	400.0	449.3	468.8
65°	280.5	309.1	372.7	422.0	441.5
67.5°	246.7	277.9	345.4	394.8	414.2
70°	206.5	245.4	315.5	364.9	384.4
72.5°	168.8	211.7	284.4	332.4	350.6
75°	132.5	180.5	251.9	294.8	303.9
77.5°	98.7	149.3	218.2	236.3	229.8
80°	70.1	119.5	170.1	161.0	164.9
82.5°	45.4	90.9	105.2	119.5	123.4
85°	26.0	53.2	64.9	70.1	72.7
87.5°	11.7	19.5	26.0	26.0	24.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)