

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: P313518

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-RDP-CA08-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: P313518
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-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 2655.0 lumens
Efficiency: N/A
Efficacy: 83.2 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

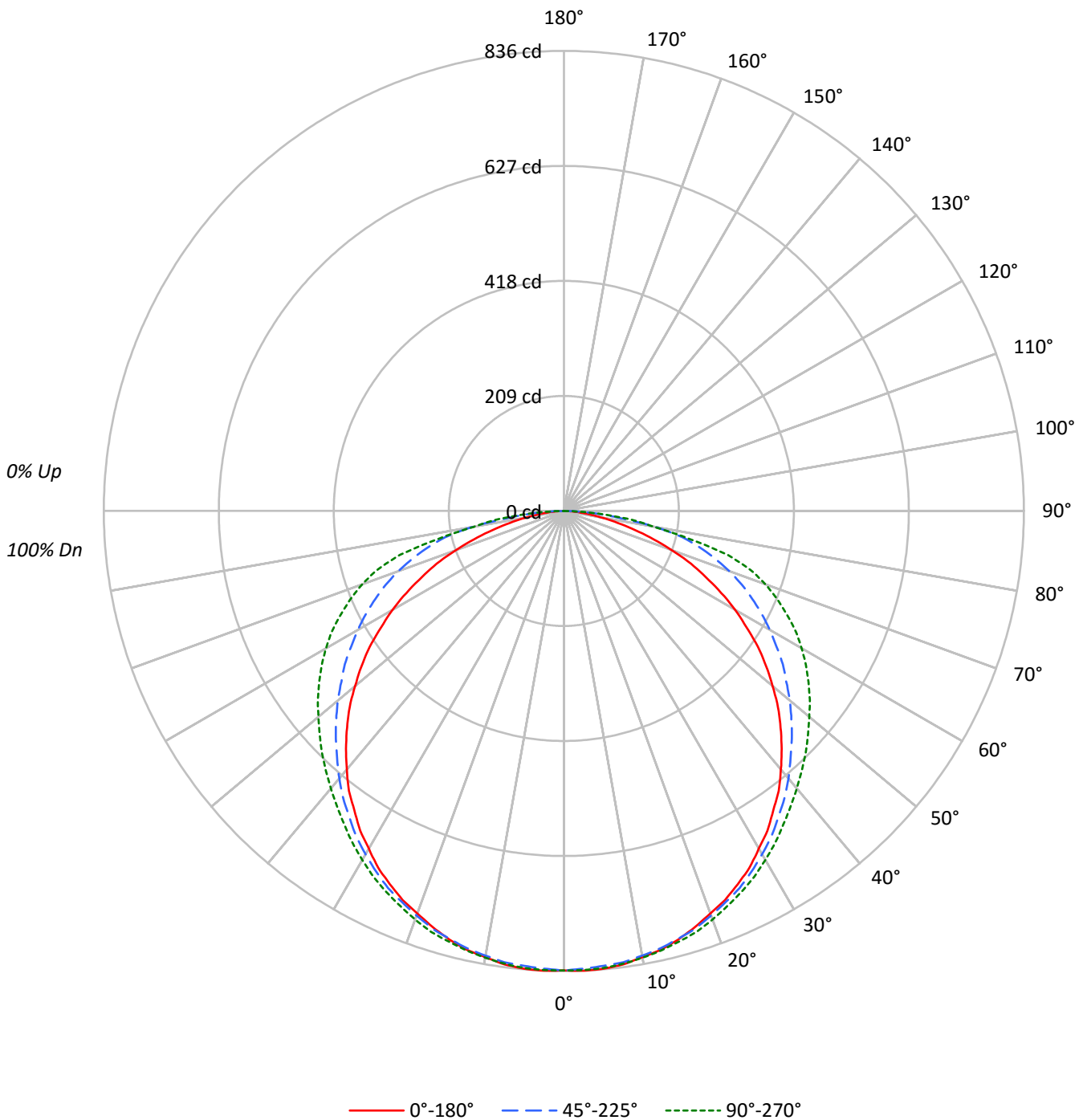
Input Watts (W): 31.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1123	1123	1123
5°	1128	1121	1126
10°	1125	1121	1126
15°	1123	1121	1128
20°	1114	1120	1131
25°	1110	1122	1134
30°	1101	1119	1138
35°	1090	1116	1142
40°	1078	1115	1157
45°	1060	1115	1183
50°	1037	1122	1218
55°	1010	1140	1273
60°	967	1162	1343
65°	906	1203	1425
70°	824	1259	1533
75°	698	1328	1602
80°	551	1337	1296
85°	406	1016	1138



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.2	3.0
10°-20°	227.9	8.6
20°-30°	348.6	13.1
30°-40°	426.1	16.0
40°-50°	454.1	17.1
50°-60°	434.2	16.4
60°-70°	367.8	13.9
70°-80°	247.2	9.3
80°-90°	69.7	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°	655.7	24.7
0°-40°	1081.8	40.7
0°-60°	1970.2	74.2
0°-90°	2655.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2655.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	835	835	835	835	835	
5°	835	834	830	834	834	79
15°	806	806	805	811	810	227
25°	748	751	756	762	764	345
35°	664	669	680	693	695	416
45°	557	566	586	611	622	430
55°	431	446	486	524	543	384
65°	284	313	378	428	448	282
75°	134	183	256	299	308	144
85°	26	54	66	71	74	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	834.9	834.9	834.9	834.9	834.9
2.5°	836.2	836.2	832.3	834.9	834.9
5°	834.9	833.6	829.7	833.6	833.6
7.5°	831.0	829.7	827.0	831.0	829.7
10°	823.1	823.1	820.4	824.4	824.4
12.5°	816.5	815.2	813.9	819.1	817.8
15°	805.9	805.9	804.6	811.2	809.9
17.5°	792.8	794.1	795.4	800.7	802.0
20°	778.3	780.9	782.2	790.1	790.1
22.5°	765.1	766.4	769.1	777.0	777.0
25°	748.0	750.6	755.9	762.5	763.8
27.5°	730.9	732.2	738.8	748.0	749.3
30°	708.5	712.4	720.4	730.9	732.2
32.5°	688.7	692.7	701.9	712.4	715.1
35°	663.7	669.0	679.5	692.7	695.3
37.5°	641.3	645.3	658.5	672.9	676.9
40°	613.7	621.6	634.8	651.9	658.5
42.5°	586.0	593.9	609.7	632.1	640.0
45°	557.1	566.3	586.0	611.0	621.6
47.5°	528.1	538.6	561.0	590.0	601.8
50°	495.2	508.3	536.0	568.9	582.1
52.5°	463.6	479.4	509.6	546.5	563.6
55°	430.6	446.4	485.9	524.1	542.6
57.5°	393.8	414.8	458.3	501.7	521.5
60°	359.5	379.3	431.9	479.4	499.1
62.5°	322.6	349.0	405.6	455.7	475.4
65°	284.5	313.4	378.0	428.0	447.7
67.5°	250.2	281.8	350.3	400.3	420.1
70°	209.4	248.9	320.0	370.1	389.8
72.5°	171.2	214.7	288.4	337.1	355.6
75°	134.3	183.1	255.5	298.9	308.2
77.5°	100.1	151.4	221.2	239.7	233.1
80°	71.1	121.2	172.5	163.3	167.2
82.5°	46.1	92.2	106.7	121.2	125.1
85°	26.3	54.0	65.8	71.1	73.7
87.5°	11.9	19.8	26.3	26.3	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)