

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: P310088

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-CA08-W2A-U-4000K**

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: P310088
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: 24FCZ2-45HE-UNV-L82765-RDP-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 4000K 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: 2753.0 lumens
Efficiency: N/A
Efficacy: 80.5 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

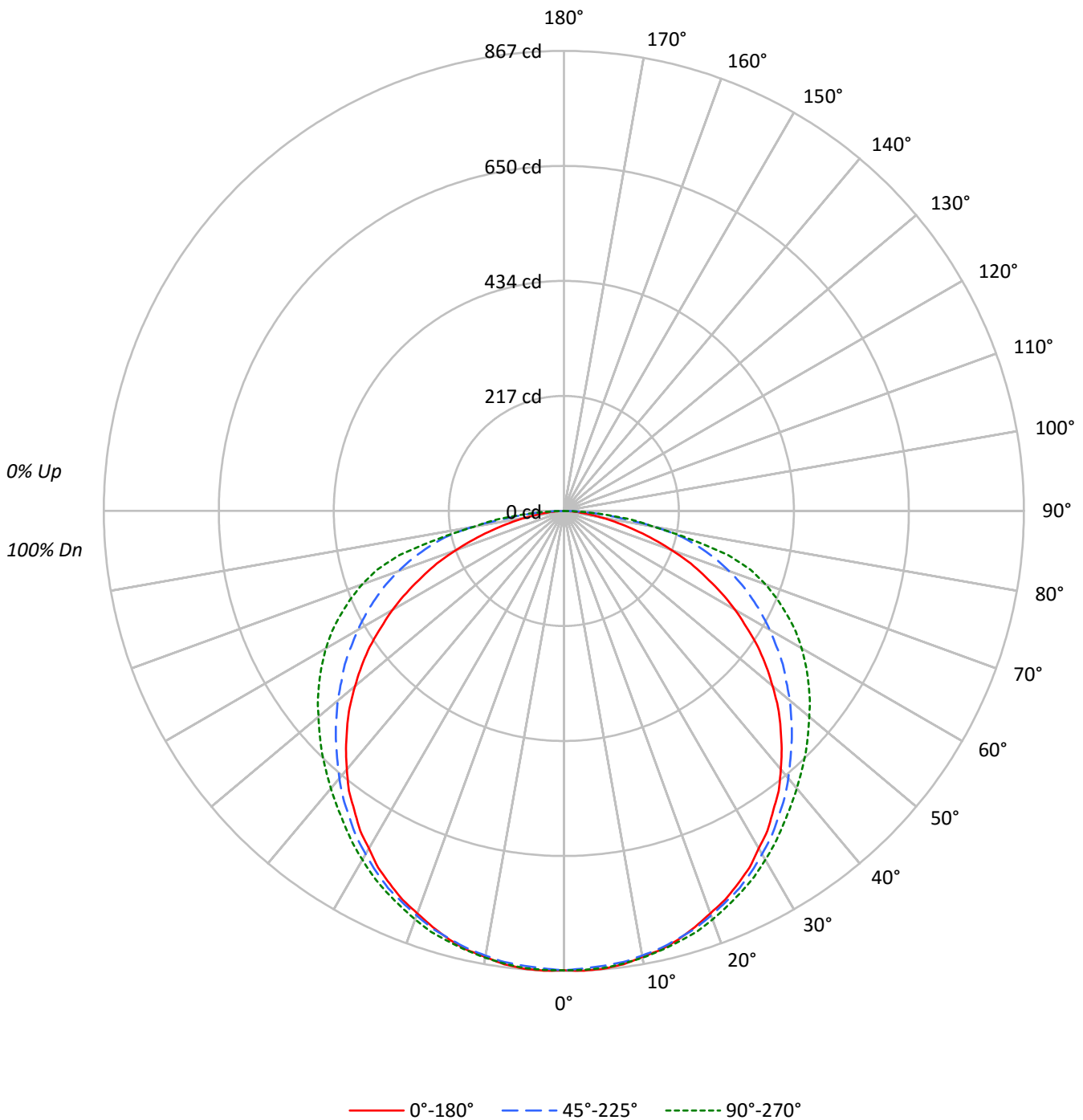
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1165	1165	1165
5°	1169	1162	1167
10°	1166	1162	1168
15°	1164	1162	1170
20°	1155	1161	1173
25°	1151	1164	1176
30°	1141	1160	1180
35°	1130	1157	1184
40°	1118	1156	1199
45°	1099	1156	1226
50°	1075	1163	1263
55°	1047	1182	1320
60°	1003	1205	1393
65°	939	1248	1478
70°	854	1305	1590
75°	724	1377	1661
80°	571	1386	1344
85°	421	1054	1181



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.1	3.0
10°-20°	236.4	8.6
20°-30°	361.4	13.1
30°-40°	441.8	16.0
40°-50°	470.9	17.1
50°-60°	450.3	16.4
60°-70°	381.4	13.9
70°-80°	256.3	9.3
80°-90°	72.3	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°	679.9	24.7
0°-40°	1121.7	40.7
0°-60°	2042.9	74.2
0°-90°	2753.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2753.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	866	864	860	864	864	82
15°	836	836	834	841	840	236
25°	776	778	784	791	792	357
35°	688	694	705	718	721	431
45°	578	587	608	634	644	446
55°	446	463	504	544	563	398
65°	295	325	392	444	464	293
75°	139	190	265	310	320	149
85°	27	56	68	74	76	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	865.7	865.7	865.7	865.7	865.7
2.5°	867.1	867.1	863.0	865.7	865.7
5°	865.7	864.4	860.3	864.4	864.4
7.5°	861.6	860.3	857.5	861.6	860.3
10°	853.5	853.5	850.7	854.8	854.8
12.5°	846.6	845.3	843.9	849.4	848.0
15°	835.7	835.7	834.3	841.2	839.8
17.5°	822.0	823.4	824.8	830.2	831.6
20°	807.0	809.8	811.1	819.3	819.3
22.5°	793.4	794.7	797.5	805.7	805.7
25°	775.6	778.3	783.8	790.6	792.0
27.5°	757.9	759.2	766.1	775.6	777.0
30°	734.6	738.7	746.9	757.9	759.2
32.5°	714.2	718.3	727.8	738.7	741.5
35°	688.2	693.7	704.6	718.3	721.0
37.5°	665.0	669.1	682.8	697.8	701.9
40°	636.3	644.5	658.2	675.9	682.8
42.5°	607.7	615.8	632.2	655.4	663.6
45°	577.6	587.2	607.7	633.6	644.5
47.5°	547.6	558.5	581.7	611.8	624.0
50°	513.4	527.1	555.8	589.9	603.6
52.5°	480.7	497.0	528.5	566.7	584.4
55°	446.5	462.9	503.9	543.5	562.6
57.5°	408.3	430.1	475.2	520.3	540.7
60°	372.8	393.3	447.9	497.0	517.5
62.5°	334.6	361.9	420.6	472.5	493.0
65°	295.0	325.0	391.9	443.8	464.3
67.5°	259.4	292.2	363.2	415.1	435.6
70°	217.1	258.1	331.8	383.7	404.2
72.5°	177.5	222.6	299.0	349.6	368.7
75°	139.3	189.8	264.9	310.0	319.5
77.5°	103.8	157.0	229.4	248.5	241.7
80°	73.7	125.6	178.9	169.3	173.4
82.5°	47.8	95.6	110.6	125.6	129.7
85°	27.3	56.0	68.3	73.7	76.5
87.5°	12.3	20.5	27.3	27.3	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)