

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: P310211

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CP250-W2A-U-2700K**

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: P310211
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: 24FCZ2-50HE-UNV-L82765-RDP-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 2700K 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: 2632.0 lumens
Efficiency: N/A
Efficacy: 68.5 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

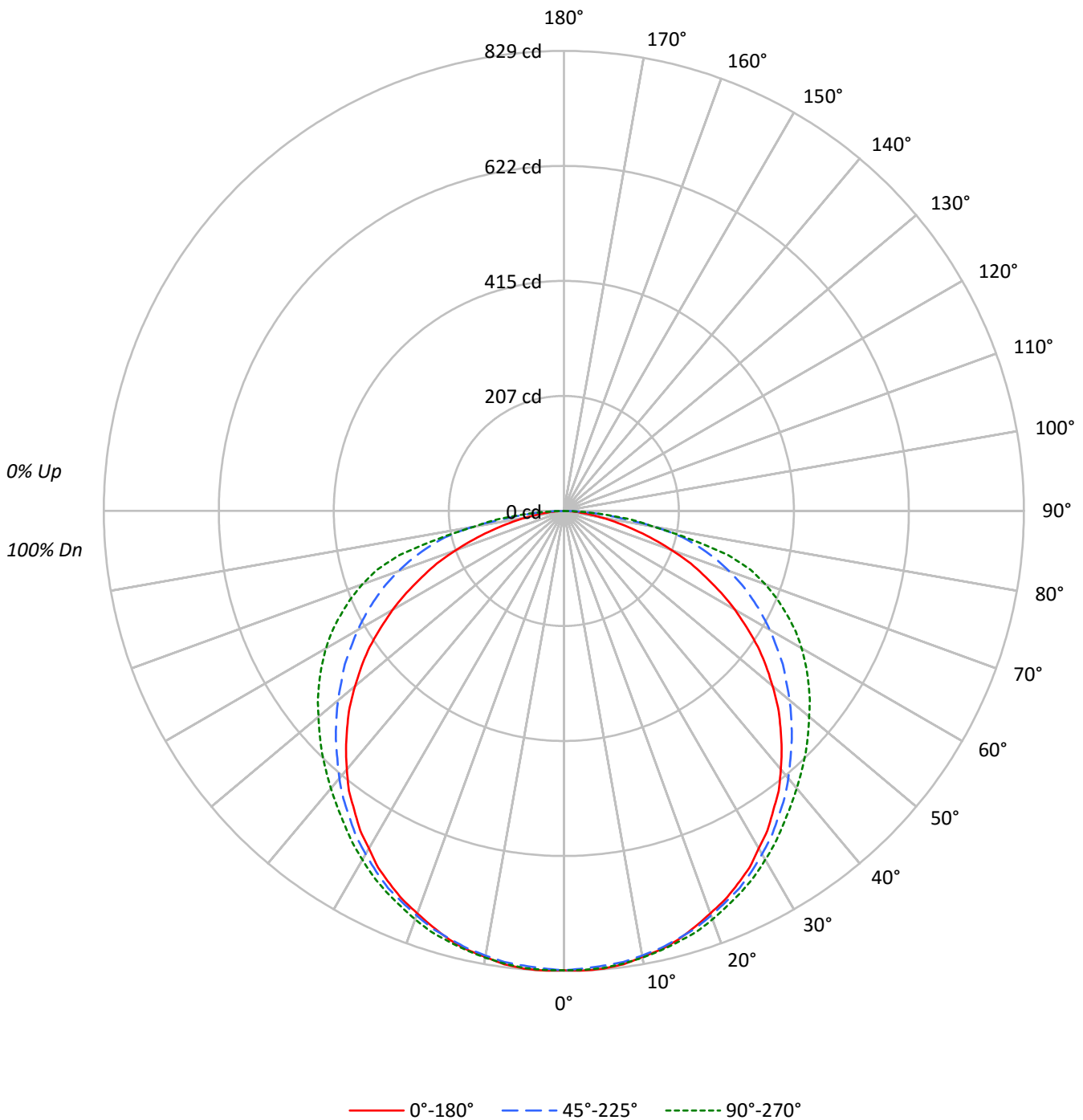
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1114	1114	1114
5°	1118	1111	1116
10°	1115	1111	1116
15°	1113	1111	1118
20°	1105	1110	1122
25°	1101	1113	1124
30°	1091	1109	1128
35°	1081	1106	1132
40°	1069	1105	1147
45°	1051	1105	1173
50°	1028	1112	1208
55°	1001	1130	1262
60°	959	1152	1331
65°	898	1193	1413
70°	817	1248	1520
75°	692	1317	1588
80°	546	1325	1285
85°	403	1008	1129



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	3.0
10°-20°	226.0	8.6
20°-30°	345.5	13.1
30°-40°	422.4	16.0
40°-50°	450.2	17.1
50°-60°	430.5	16.4
60°-70°	364.7	13.9
70°-80°	245.1	9.3
80°-90°	69.1	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°	650.0	24.7
0°-40°	1072.5	40.7
0°-60°	1953.1	74.2
0°-90°	2632.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2632.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	828	826	822	826	826	79
15°	799	799	798	804	803	225
25°	742	744	749	756	757	342
35°	658	663	674	687	689	412
45°	552	561	581	606	616	426
55°	427	443	482	520	538	380
65°	282	311	375	424	444	280
75°	133	182	253	296	306	143
85°	26	54	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°	827.7	827.7	827.7	827.7	827.7
2.5°	829.0	829.0	825.1	827.7	827.7
5°	827.7	826.4	822.5	826.4	826.4
7.5°	823.8	822.5	819.9	823.8	822.5
10°	815.9	815.9	813.3	817.2	817.2
12.5°	809.4	808.1	806.8	812.0	810.7
15°	799.0	799.0	797.7	804.2	802.9
17.5°	785.9	787.2	788.5	793.7	795.1
20°	771.6	774.2	775.5	783.3	783.3
22.5°	758.5	759.8	762.4	770.2	770.2
25°	741.5	744.1	749.4	755.9	757.2
27.5°	724.6	725.9	732.4	741.5	742.8
30°	702.4	706.3	714.1	724.6	725.9
32.5°	682.8	686.7	695.8	706.3	708.9
35°	658.0	663.2	673.6	686.7	689.3
37.5°	635.8	639.7	652.8	667.1	671.0
40°	608.4	616.2	629.3	646.2	652.8
42.5°	580.9	588.8	604.4	626.6	634.5
45°	552.2	561.4	580.9	605.8	616.2
47.5°	523.5	534.0	556.1	584.9	596.6
50°	490.9	503.9	531.3	564.0	577.0
52.5°	459.5	475.2	505.2	541.8	558.8
55°	426.9	442.6	481.7	519.6	537.9
57.5°	390.3	411.2	454.3	497.4	517.0
60°	356.4	376.0	428.2	475.2	494.8
62.5°	319.8	346.0	402.1	451.7	471.3
65°	282.0	310.7	374.7	424.3	443.9
67.5°	248.0	279.4	347.3	396.9	416.5
70°	207.6	246.7	317.2	366.8	386.4
72.5°	169.7	212.8	285.9	334.2	352.5
75°	133.2	181.5	253.3	296.3	305.5
77.5°	99.2	150.1	219.3	237.6	231.1
80°	70.5	120.1	171.0	161.9	165.8
82.5°	45.7	91.4	105.7	120.1	124.0
85°	26.1	53.5	65.3	70.5	73.1
87.5°	11.7	19.6	26.1	26.1	24.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)