

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: P310213

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CP250-W2A-U-3500K**

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: P310213
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-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 3500K 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: 2801.0 lumens
Efficiency: N/A
Efficacy: 72.6 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

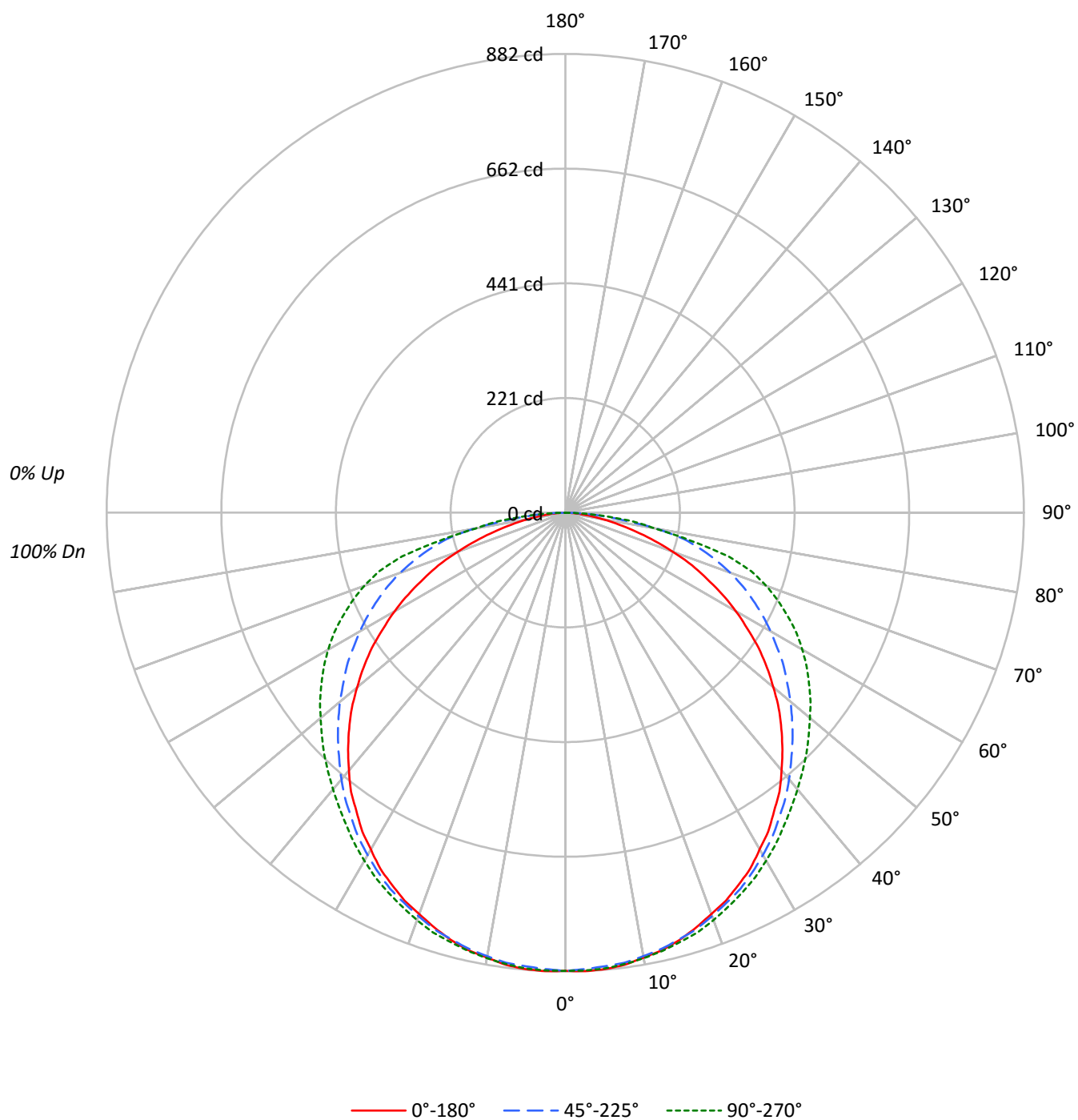
Input Watts (W): 38.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1185	1185	1185
5°	1190	1182	1188
10°	1186	1183	1188
15°	1184	1182	1190
20°	1176	1182	1194
25°	1171	1184	1196
30°	1161	1181	1200
35°	1150	1178	1205
40°	1137	1176	1220
45°	1118	1177	1248
50°	1093	1184	1285
55°	1066	1203	1343
60°	1021	1226	1417
65°	955	1269	1504
70°	869	1328	1618
75°	737	1401	1690
80°	581	1410	1367
85°	429	1073	1201



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.6	3.0
10°-20°	240.5	8.6
20°-30°	367.7	13.1
30°-40°	449.6	16.0
40°-50°	479.1	17.1
50°-60°	458.1	16.4
60°-70°	388.1	13.9
70°-80°	260.8	9.3
80°-90°	73.6	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°	691.8	24.7
0°-40°	1141.3	40.7
0°-60°	2078.6	74.2
0°-90°	2801.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2801.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	881	881	881	881	881	
5°	881	879	875	879	879	84
15°	850	850	849	856	854	240
25°	789	792	798	804	806	364
35°	700	706	717	731	734	439
45°	588	597	618	645	656	453
55°	454	471	513	553	572	405
65°	300	331	399	452	472	298
75°	142	193	270	315	325	152
85°	28	57	70	75	78	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	880.8	880.8	880.8	880.8	880.8
2.5°	882.2	882.2	878.1	880.8	880.8
5°	880.8	879.4	875.3	879.4	879.4
7.5°	876.7	875.3	872.5	876.7	875.3
10°	868.3	868.3	865.6	869.7	869.7
12.5°	861.4	860.0	858.6	864.2	862.8
15°	850.3	850.3	848.9	855.8	854.4
17.5°	836.4	837.8	839.2	844.7	846.1
20°	821.1	823.9	825.3	833.6	833.6
22.5°	807.2	808.6	811.4	819.7	819.7
25°	789.1	791.9	797.5	804.4	805.8
27.5°	771.1	772.5	779.4	789.1	790.5
30°	747.5	751.6	760.0	771.1	772.5
32.5°	726.6	730.8	740.5	751.6	754.4
35°	700.2	705.8	716.9	730.8	733.6
37.5°	676.6	680.8	694.7	709.9	714.1
40°	647.4	655.8	669.7	687.7	694.7
42.5°	618.3	626.6	643.3	666.9	675.2
45°	587.7	597.4	618.3	644.6	655.8
47.5°	557.1	568.2	591.9	622.4	634.9
50°	522.4	536.3	565.5	600.2	614.1
52.5°	489.0	505.7	537.7	576.6	594.6
55°	454.3	471.0	512.7	553.0	572.4
57.5°	415.4	437.6	483.5	529.3	550.2
60°	379.3	400.1	455.7	505.7	526.6
62.5°	340.4	368.2	427.9	480.7	501.5
65°	300.1	330.7	398.7	451.5	472.4
67.5°	264.0	297.3	369.6	422.4	443.2
70°	220.9	262.6	337.6	390.4	411.2
72.5°	180.6	226.5	304.3	355.7	375.1
75°	141.7	193.1	269.5	315.4	325.1
77.5°	105.6	159.8	233.4	252.9	245.9
80°	75.0	127.8	182.0	172.3	176.4
82.5°	48.6	97.3	112.5	127.8	132.0
85°	27.8	57.0	69.5	75.0	77.8
87.5°	12.5	20.8	27.8	27.8	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)