

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: P310181

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CA08-W2A-U-5500K**

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: P310181
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-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 5500K 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: 3214.0 lumens
Efficiency: N/A
Efficacy: 81.4 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

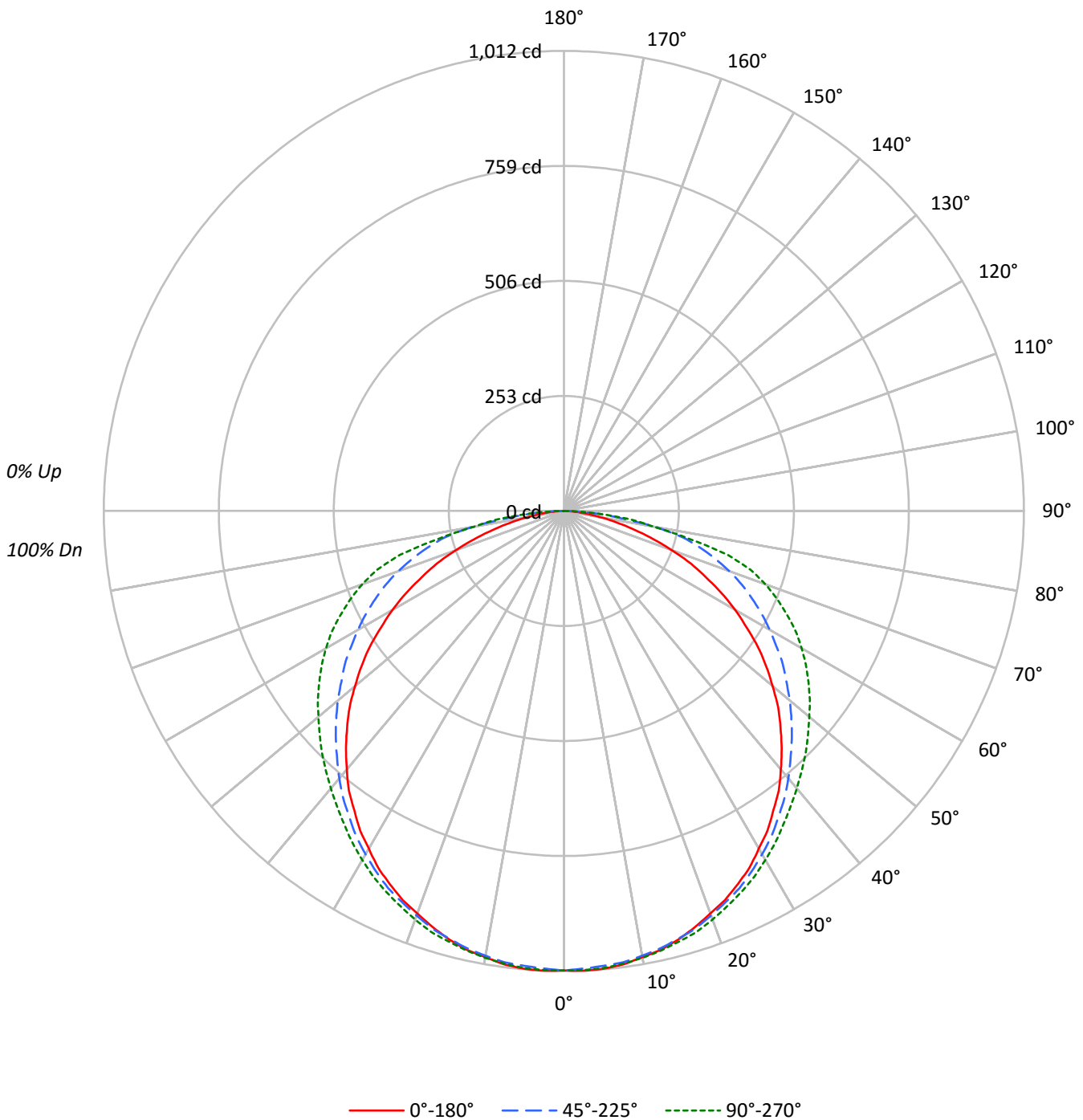
Input Watts (W): 39.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1360	1360	1360
5°	1365	1356	1363
10°	1361	1357	1364
15°	1359	1357	1366
20°	1349	1356	1370
25°	1344	1359	1373
30°	1333	1355	1377
35°	1320	1351	1383
40°	1305	1350	1400
45°	1283	1350	1432
50°	1255	1358	1475
55°	1223	1380	1541
60°	1171	1407	1626
65°	1096	1457	1726
70°	997	1524	1856
75°	845	1608	1939
80°	667	1618	1569
85°	492	1230	1379



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.9	3.0
10°-20°	275.9	8.6
20°-30°	422.0	13.1
30°-40°	515.8	16.0
40°-50°	549.8	17.1
50°-60°	525.7	16.4
60°-70°	445.3	13.9
70°-80°	299.3	9.3
80°-90°	84.4	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°	793.8	24.7
0°-40°	1309.6	40.7
0°-60°	2385.0	74.2
0°-90°	3214.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3214.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1011	1011	1011	1011	1011	
5°	1011	1009	1004	1009	1009	96
15°	976	976	974	982	980	275
25°	906	909	915	923	925	417
35°	804	810	823	838	842	503
45°	674	686	709	740	752	520
55°	521	540	588	634	657	464
65°	344	379	458	518	542	342
75°	163	222	309	362	373	174
85°	32	65	80	86	89	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1010.7	1010.7	1010.7	1010.7	1010.7
2.5°	1012.3	1012.3	1007.5	1010.7	1010.7
5°	1010.7	1009.1	1004.3	1009.1	1009.1
7.5°	1005.9	1004.3	1001.1	1005.9	1004.3
10°	996.4	996.4	993.2	998.0	998.0
12.5°	988.4	986.8	985.2	991.6	990.0
15°	975.6	975.6	974.0	982.0	980.4
17.5°	959.7	961.3	962.9	969.3	970.9
20°	942.2	945.3	946.9	956.5	956.5
22.5°	926.2	927.8	931.0	940.6	940.6
25°	905.5	908.7	915.1	923.0	924.6
27.5°	884.8	886.4	894.3	905.5	907.1
30°	857.7	862.5	872.0	884.8	886.4
32.5°	833.8	838.5	849.7	862.5	865.6
35°	803.5	809.8	822.6	838.5	841.7
37.5°	776.4	781.1	797.1	814.6	819.4
40°	742.9	752.5	768.4	789.1	797.1
42.5°	709.4	719.0	738.1	765.2	774.8
45°	674.3	685.5	709.4	739.7	752.5
47.5°	639.3	652.0	679.1	714.2	728.5
50°	599.4	615.4	648.8	688.7	704.6
52.5°	561.2	580.3	616.9	661.6	682.3
55°	521.3	540.4	588.3	634.5	656.8
57.5°	476.7	502.2	554.8	607.4	631.3
60°	435.2	459.1	522.9	580.3	604.2
62.5°	390.6	422.5	491.0	551.6	575.5
65°	344.3	379.4	457.5	518.1	542.0
67.5°	302.9	341.2	424.1	484.6	508.5
70°	253.5	301.3	387.4	448.0	471.9
72.5°	207.2	259.9	349.1	408.1	430.4
75°	162.6	221.6	309.3	361.9	373.0
77.5°	121.2	183.3	267.8	290.1	282.2
80°	86.1	146.7	208.8	197.7	202.5
82.5°	55.8	111.6	129.1	146.7	151.4
85°	31.9	65.4	79.7	86.1	89.3
87.5°	14.3	23.9	31.9	31.9	30.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)