

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: P310176

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CA08-W2A-U-3000K**

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: P310176
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-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 3000K 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: 2918.0 lumens
Efficiency: N/A
Efficacy: 76.6 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

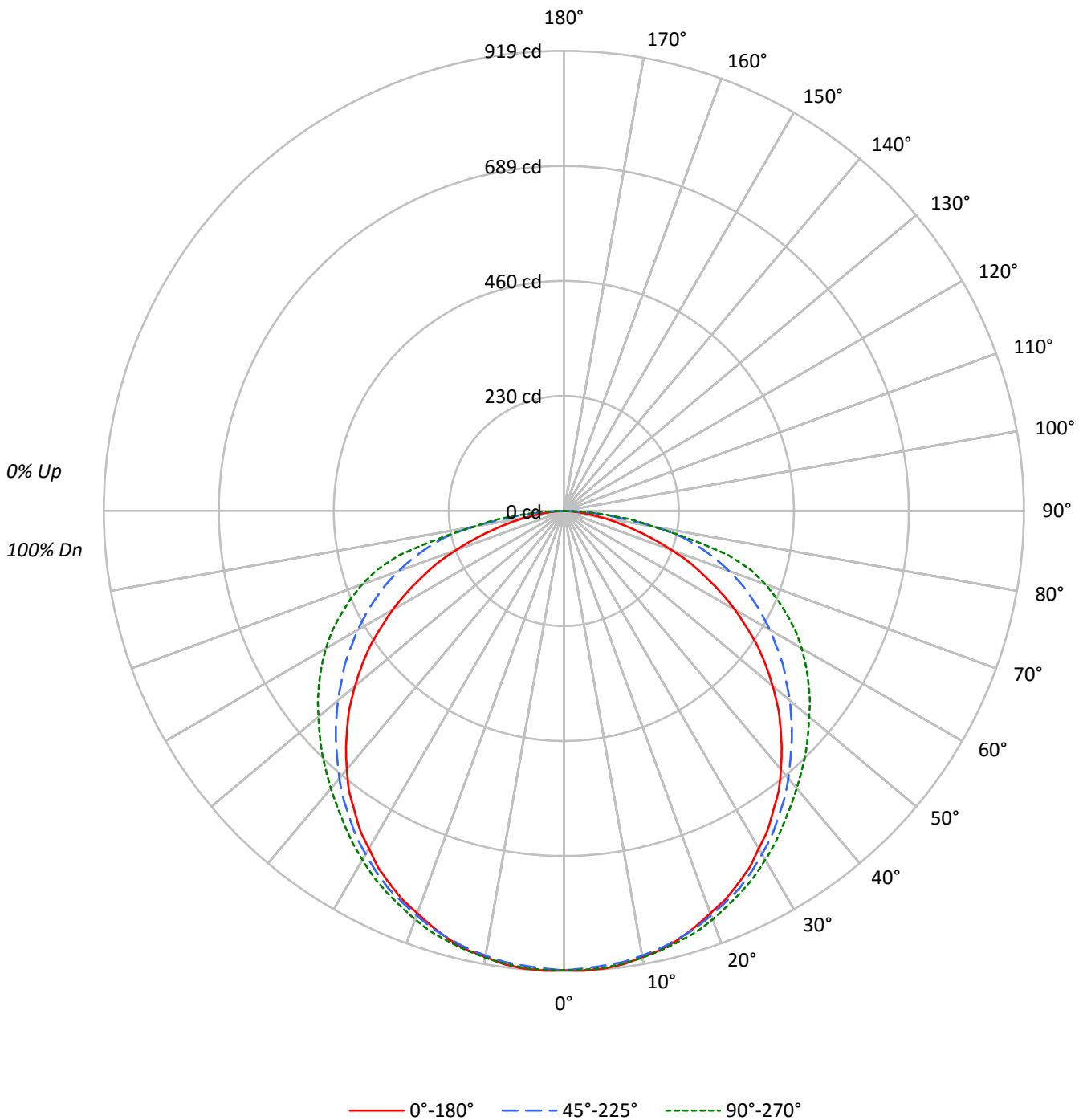
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1235	1235	1235
5°	1239	1232	1237
10°	1236	1232	1238
15°	1234	1232	1240
20°	1225	1231	1243
25°	1220	1233	1246
30°	1210	1230	1250
35°	1198	1227	1255
40°	1185	1225	1271
45°	1165	1226	1300
50°	1139	1233	1339
55°	1110	1253	1399
60°	1063	1277	1476
65°	995	1323	1567
70°	905	1384	1685
75°	767	1460	1761
80°	606	1469	1424
85°	446	1118	1252



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.0	3.0
10°-20°	250.5	8.6
20°-30°	383.1	13.1
30°-40°	468.3	16.0
40°-50°	499.1	17.1
50°-60°	477.2	16.4
60°-70°	404.3	13.9
70°-80°	271.7	9.3
80°-90°	76.6	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°	720.7	24.7
0°-40°	1189.0	40.7
0°-60°	2165.4	74.2
0°-90°	2918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2918.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	918	918	918	918	918	
5°	918	916	912	916	916	87
15°	886	886	884	892	890	250
25°	822	825	831	838	840	379
35°	730	735	747	761	764	457
45°	612	622	644	672	683	472
55°	473	491	534	576	596	422
65°	313	344	415	470	492	310
75°	148	201	281	329	339	158
85°	29	59	72	78	81	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	917.6	917.6	917.6	917.6	917.6
2.5°	919.1	919.1	914.7	917.6	917.6
5°	917.6	916.2	911.8	916.2	916.2
7.5°	913.3	911.8	908.9	913.3	911.8
10°	904.6	904.6	901.7	906.0	906.0
12.5°	897.4	895.9	894.5	900.3	898.8
15°	885.8	885.8	884.3	891.6	890.1
17.5°	871.3	872.8	874.2	880.0	881.4
20°	855.4	858.3	859.7	868.4	868.4
22.5°	840.9	842.4	845.3	853.9	853.9
25°	822.1	825.0	830.8	838.0	839.5
27.5°	803.3	804.7	812.0	822.1	823.5
30°	778.7	783.0	791.7	803.3	804.7
32.5°	757.0	761.3	771.4	783.0	785.9
35°	729.5	735.3	746.8	761.3	764.2
37.5°	704.9	709.2	723.7	739.6	743.9
40°	674.5	683.2	697.6	716.4	723.7
42.5°	644.1	652.8	670.1	694.7	703.4
45°	612.2	622.4	644.1	671.6	683.2
47.5°	580.4	592.0	616.6	648.4	661.4
50°	544.2	558.7	589.1	625.3	639.7
52.5°	509.5	526.8	560.1	600.7	619.5
55°	473.3	490.7	534.1	576.1	596.3
57.5°	432.8	455.9	503.7	551.4	573.2
60°	395.1	416.8	474.7	526.8	548.6
62.5°	354.6	383.6	445.8	500.8	522.5
65°	312.6	344.5	415.4	470.4	492.1
67.5°	275.0	309.7	385.0	440.0	461.7
70°	230.1	273.6	351.7	406.7	428.4
72.5°	188.2	235.9	317.0	370.5	390.8
75°	147.6	201.2	280.8	328.6	338.7
77.5°	110.0	166.4	243.2	263.4	256.2
80°	78.2	133.2	189.6	179.5	183.8
82.5°	50.7	101.3	117.2	133.2	137.5
85°	28.9	59.3	72.4	78.2	81.1
87.5°	13.0	21.7	28.9	28.9	27.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)