

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: P314006

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-CP187-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: P314006
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-L83050-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" 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: 4300.0 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

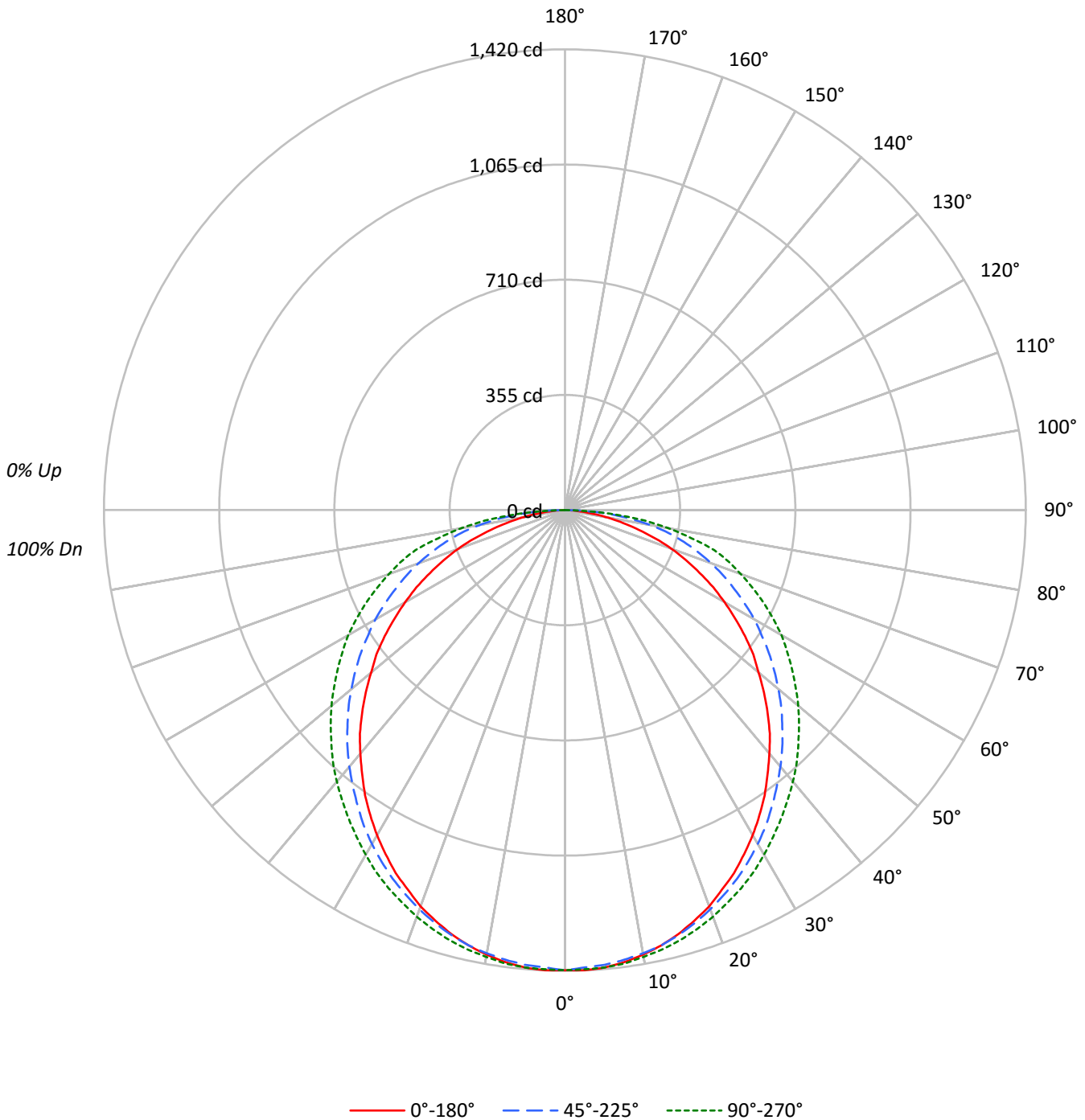
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1908	1908	1908
5°	1911	1900	1911
10°	1900	1895	1910
15°	1884	1888	1912
20°	1861	1875	1910
25°	1832	1862	1908
30°	1798	1846	1906
35°	1762	1828	1907
40°	1721	1814	1919
45°	1680	1803	1936
50°	1631	1798	1965
55°	1590	1800	2005
60°	1528	1816	2073
65°	1458	1835	2148
70°	1381	1891	2268
75°	1231	1973	2477
80°	1050	2089	2531
85°	749	2070	2422



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.2	3.1
10°-20°	383.7	8.9
20°-30°	579.6	13.5
30°-40°	698.6	16.2
40°-50°	733.4	17.1
50°-60°	686.1	16.0
60°-70°	566.6	13.2
70°-80°	386.1	9.0
80°-90°	131.7	3.1
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°	1097.6	25.5
0°-40°	1796.1	41.8
0°-60°	3215.6	74.8
0°-90°	4300.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4300.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1418	1418	1418	1418	1418	
5°	1415	1414	1407	1415	1415	134
15°	1352	1354	1355	1370	1372	381
25°	1234	1240	1254	1278	1285	568
35°	1073	1084	1113	1150	1161	670
45°	883	902	947	999	1017	681
55°	678	705	768	830	855	605
65°	458	496	576	649	675	454
75°	237	291	380	451	476	253
85°	48	96	134	151	157	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1418.1	1418.1	1418.1	1418.1	1418.1
2.5°	1419.5	1418.1	1411.0	1418.1	1416.7
5°	1415.2	1413.8	1406.7	1415.2	1415.2
7.5°	1405.3	1405.3	1398.1	1408.1	1409.5
10°	1391.0	1391.0	1386.7	1398.1	1398.1
12.5°	1373.9	1373.9	1373.9	1385.3	1386.7
15°	1352.5	1353.9	1355.3	1369.6	1372.4
17.5°	1326.8	1329.6	1333.9	1351.0	1353.9
20°	1299.7	1302.5	1309.7	1329.6	1333.9
22.5°	1265.4	1272.6	1282.6	1305.4	1309.7
25°	1234.1	1239.8	1254.0	1278.3	1285.4
27.5°	1195.5	1204.1	1222.6	1248.3	1258.3
30°	1157.0	1165.6	1188.4	1218.4	1226.9
32.5°	1115.7	1128.5	1152.7	1184.1	1194.1
35°	1072.9	1084.3	1112.8	1149.9	1161.3
37.5°	1025.8	1041.5	1072.9	1112.8	1127.1
40°	980.1	997.2	1032.9	1075.7	1092.8
42.5°	934.5	951.6	991.5	1040.0	1057.2
45°	883.1	901.7	947.3	998.7	1017.2
47.5°	831.7	854.6	904.5	958.7	978.7
50°	779.0	804.6	858.9	915.9	938.7
52.5°	731.9	756.1	813.2	874.5	895.9
55°	677.7	704.8	767.5	830.3	854.6
57.5°	622.0	652.0	719.0	787.5	811.8
60°	567.8	600.6	674.8	743.3	770.4
62.5°	515.0	547.8	624.9	696.2	723.3
65°	458.0	496.5	576.4	649.1	674.8
67.5°	403.7	445.1	529.3	600.6	626.3
70°	351.0	390.9	480.8	550.7	576.4
72.5°	293.9	339.5	429.4	502.2	529.3
75°	236.8	291.0	379.5	450.8	476.5
77.5°	184.0	239.7	328.1	386.6	399.5
80°	135.5	192.6	269.6	311.0	326.7
82.5°	87.0	144.1	205.4	235.4	248.2
85°	48.5	95.6	134.1	151.2	156.9
87.5°	20.0	41.4	54.2	61.3	61.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)