

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: P310885

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CP187-W2A-U-6500K**

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: P310885
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-L82765-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 6500K 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: 4495.0 lumens
Efficiency: N/A
Efficacy: 112.1 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

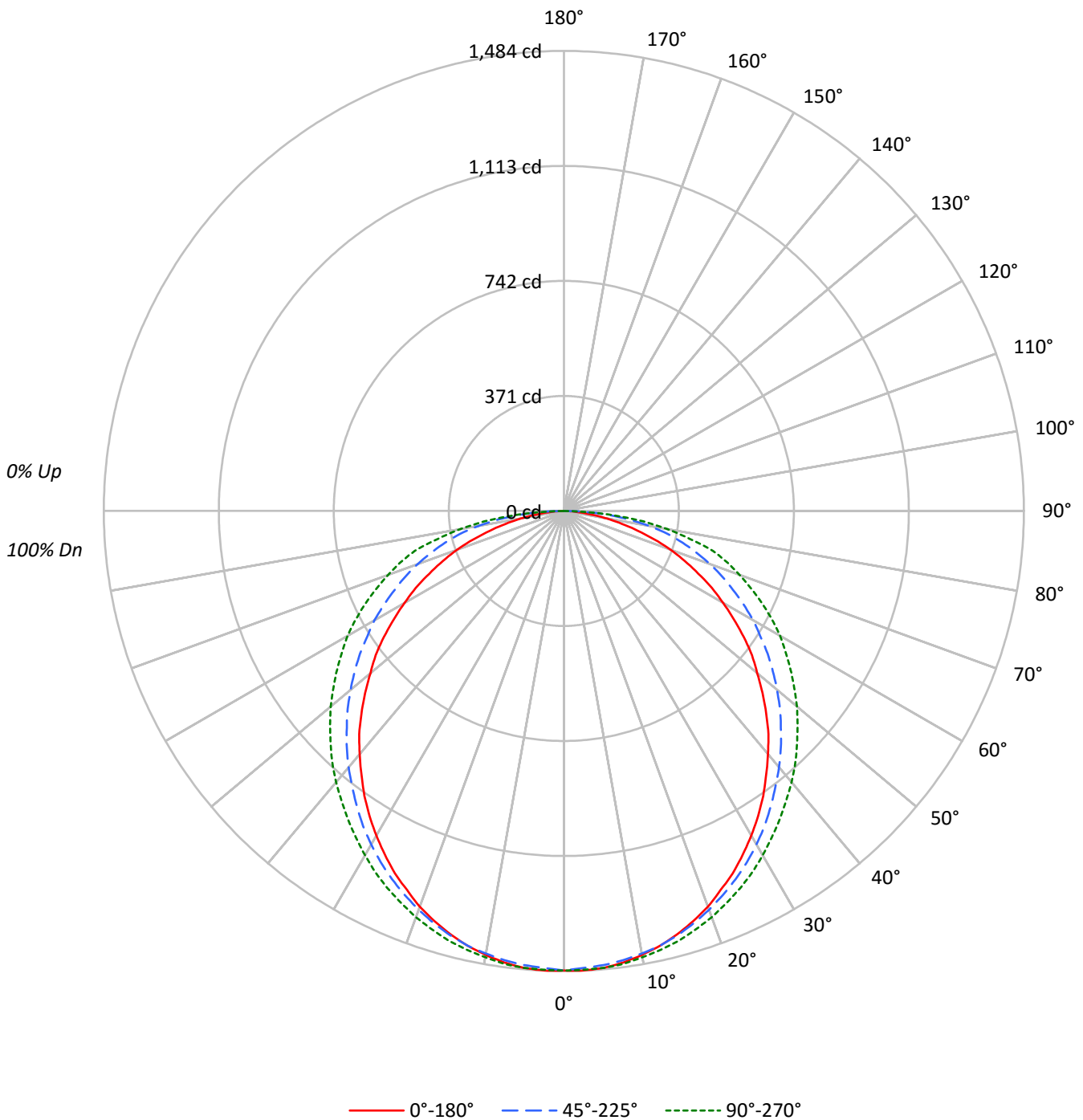
Input Watts (W): 40.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1995	1995	1995
5°	1998	1986	1998
10°	1987	1981	1997
15°	1969	1974	1998
20°	1945	1960	1997
25°	1915	1946	1995
30°	1879	1930	1993
35°	1842	1911	1994
40°	1800	1896	2007
45°	1757	1884	2023
50°	1705	1879	2054
55°	1662	1882	2095
60°	1597	1898	2167
65°	1524	1918	2246
70°	1443	1977	2370
75°	1287	2062	2589
80°	1098	2184	2646
85°	783	2164	2532



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.3	3.1
10°-20°	401.1	8.9
20°-30°	605.9	13.5
30°-40°	730.2	16.2
40°-50°	766.6	17.1
50°-60°	717.2	16.0
60°-70°	592.3	13.2
70°-80°	403.6	9.0
80°-90°	137.6	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°	1147.3	25.5
0°-40°	1877.6	41.8
0°-60°	3361.4	74.8
0°-90°	4495.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4495.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1482	1482	1482	1482	1482	
5°	1479	1478	1470	1479	1479	140
15°	1414	1415	1417	1432	1435	399
25°	1290	1296	1311	1336	1344	594
35°	1122	1133	1163	1202	1214	701
45°	923	942	990	1044	1063	712
55°	708	737	802	868	893	632
65°	479	519	602	679	705	475
75°	248	304	397	471	498	264
85°	51	100	140	158	164	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1482.4	1482.4	1482.4	1482.4	1482.4
2.5°	1483.9	1482.4	1475.0	1482.4	1480.9
5°	1479.4	1477.9	1470.5	1479.4	1479.4
7.5°	1469.0	1469.0	1461.5	1472.0	1473.5
10°	1454.1	1454.1	1449.6	1461.5	1461.5
12.5°	1436.2	1436.2	1436.2	1448.1	1449.6
15°	1413.8	1415.3	1416.8	1431.7	1434.7
17.5°	1387.0	1389.9	1394.4	1412.3	1415.3
20°	1358.6	1361.6	1369.1	1389.9	1394.4
22.5°	1322.8	1330.3	1340.7	1364.6	1369.1
25°	1290.0	1296.0	1310.9	1336.3	1343.7
27.5°	1249.8	1258.7	1278.1	1304.9	1315.4
30°	1209.5	1218.4	1242.3	1273.6	1282.6
32.5°	1166.2	1179.7	1205.0	1237.8	1248.3
35°	1121.5	1133.4	1163.3	1202.0	1214.0
37.5°	1072.3	1088.7	1121.5	1163.3	1178.2
40°	1024.6	1042.5	1079.7	1124.5	1142.4
42.5°	976.8	994.7	1036.5	1087.2	1105.1
45°	923.2	942.5	990.3	1044.0	1063.3
47.5°	869.5	893.3	945.5	1002.2	1023.1
50°	814.3	841.1	897.8	957.5	981.3
52.5°	765.1	790.4	850.1	914.2	936.6
55°	708.4	736.7	802.4	868.0	893.3
57.5°	650.2	681.6	751.6	823.2	848.6
60°	593.6	627.9	705.4	777.0	805.3
62.5°	538.4	572.7	653.2	727.8	756.1
65°	478.7	519.0	602.5	678.6	705.4
67.5°	422.1	465.3	553.3	627.9	654.7
70°	366.9	408.6	502.6	575.7	602.5
72.5°	307.2	354.9	448.9	525.0	553.3
75°	247.6	304.2	396.7	471.3	498.1
77.5°	192.4	250.5	343.0	404.2	417.6
80°	141.7	201.3	281.9	325.1	341.5
82.5°	91.0	150.6	214.8	246.1	259.5
85°	50.7	99.9	140.2	158.1	164.0
87.5°	20.9	43.2	56.7	64.1	64.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)