

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: P310894

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CP250-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: P310894
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-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 4458.0 lumens
Efficiency: N/A
Efficacy: 111.2 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

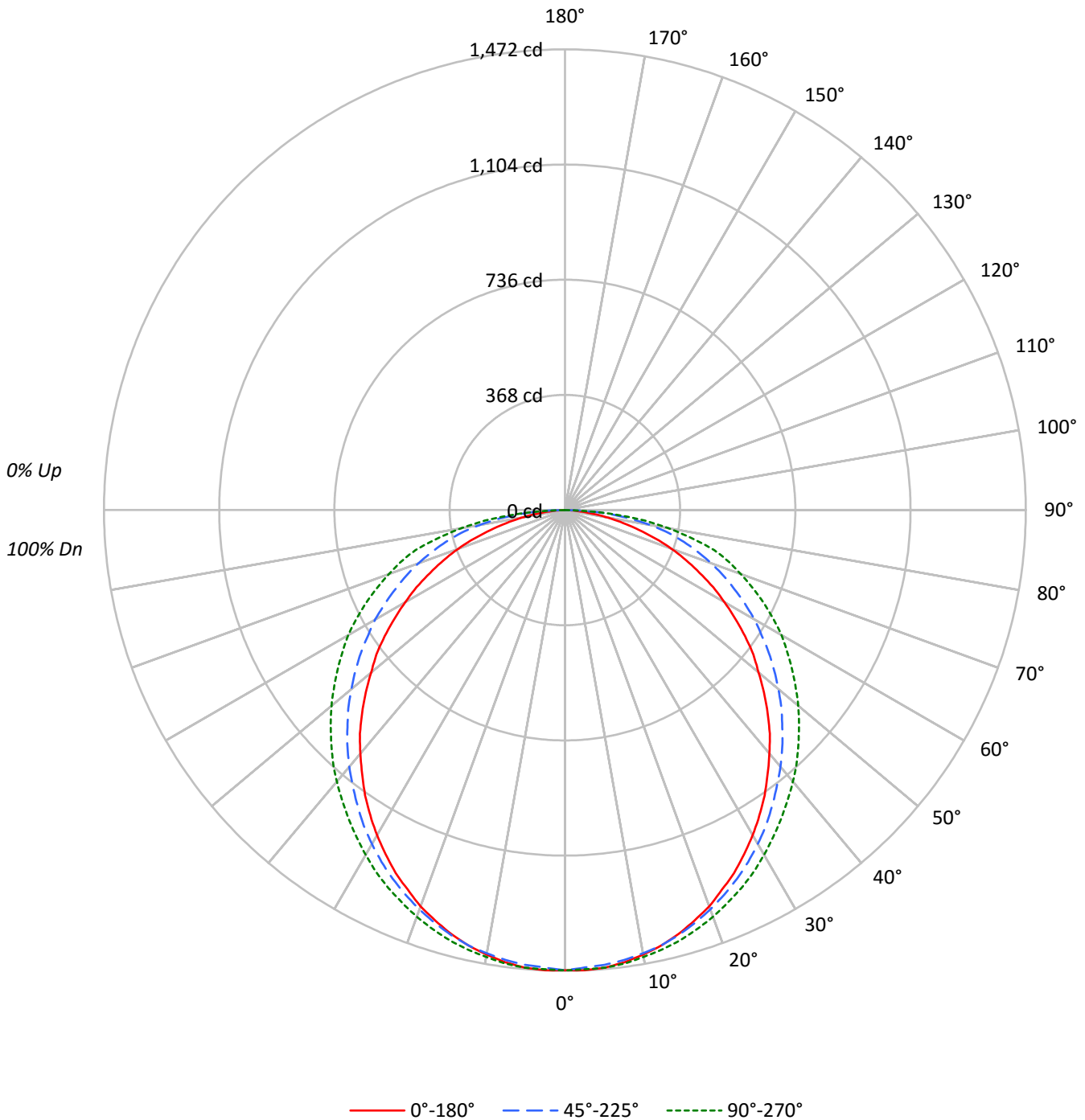
Input Watts (W): 40.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1978	1978	1978
5°	1982	1970	1982
10°	1970	1964	1980
15°	1953	1957	1982
20°	1929	1944	1980
25°	1899	1930	1979
30°	1864	1914	1976
35°	1827	1895	1978
40°	1785	1881	1990
45°	1742	1869	2007
50°	1690	1864	2037
55°	1648	1867	2078
60°	1584	1883	2149
65°	1512	1902	2227
70°	1432	1961	2351
75°	1276	2045	2568
80°	1089	2166	2624
85°	777	2146	2512



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.1	3.1
10°-20°	397.8	8.9
20°-30°	600.9	13.5
30°-40°	724.2	16.2
40°-50°	760.3	17.1
50°-60°	711.3	16.0
60°-70°	587.4	13.2
70°-80°	400.3	9.0
80°-90°	136.5	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°	1137.9	25.5
0°-40°	1862.1	41.8
0°-60°	3333.8	74.8
0°-90°	4458.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4458.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1470	1470	1470	1470	1470	
5°	1467	1466	1458	1467	1467	139
15°	1402	1404	1405	1420	1423	395
25°	1279	1285	1300	1325	1333	589
35°	1112	1124	1154	1192	1204	695
45°	916	935	982	1035	1055	706
55°	703	731	796	861	886	627
65°	475	515	598	673	700	471
75°	246	302	393	467	494	262
85°	50	99	139	157	163	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1470.2	1470.2	1470.2	1470.2	1470.2
2.5°	1471.7	1470.2	1462.8	1470.2	1468.7
5°	1467.3	1465.8	1458.4	1467.3	1467.3
7.5°	1456.9	1456.9	1449.5	1459.9	1461.3
10°	1442.1	1442.1	1437.7	1449.5	1449.5
12.5°	1424.4	1424.4	1424.4	1436.2	1437.7
15°	1402.2	1403.7	1405.1	1419.9	1422.9
17.5°	1375.5	1378.5	1382.9	1400.7	1403.7
20°	1347.4	1350.4	1357.8	1378.5	1382.9
22.5°	1311.9	1319.3	1329.7	1353.4	1357.8
25°	1279.4	1285.3	1300.1	1325.3	1332.7
27.5°	1239.5	1248.3	1267.6	1294.2	1304.6
30°	1199.5	1208.4	1232.1	1263.1	1272.0
32.5°	1156.6	1170.0	1195.1	1227.6	1238.0
35°	1112.3	1124.1	1153.7	1192.1	1204.0
37.5°	1063.5	1079.7	1112.3	1153.7	1168.5
40°	1016.1	1033.9	1070.9	1115.2	1133.0
42.5°	968.8	986.5	1028.0	1078.3	1096.0
45°	915.6	934.8	982.1	1035.4	1054.6
47.5°	862.3	886.0	937.7	993.9	1014.7
50°	807.6	834.2	890.4	949.6	973.2
52.5°	758.8	783.9	843.1	906.7	928.9
55°	702.6	730.7	795.7	860.8	886.0
57.5°	644.9	675.9	745.5	816.5	841.6
60°	588.7	622.7	699.6	770.6	798.7
62.5°	533.9	568.0	647.8	721.8	749.9
65°	474.8	514.7	597.5	673.0	699.6
67.5°	418.6	461.5	548.7	622.7	649.3
70°	363.9	405.3	498.5	570.9	597.5
72.5°	304.7	352.0	445.2	520.6	548.7
75°	245.5	301.7	393.4	467.4	494.0
77.5°	190.8	248.5	340.2	400.8	414.1
80°	140.5	199.7	279.5	322.4	338.7
82.5°	90.2	149.4	213.0	244.0	257.4
85°	50.3	99.1	139.0	156.8	162.7
87.5°	20.7	42.9	56.2	63.6	63.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)