

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: P313243

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-HRP-CA08-W2A-U-4500K**

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: P313243
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 4500K 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: 3784.0 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

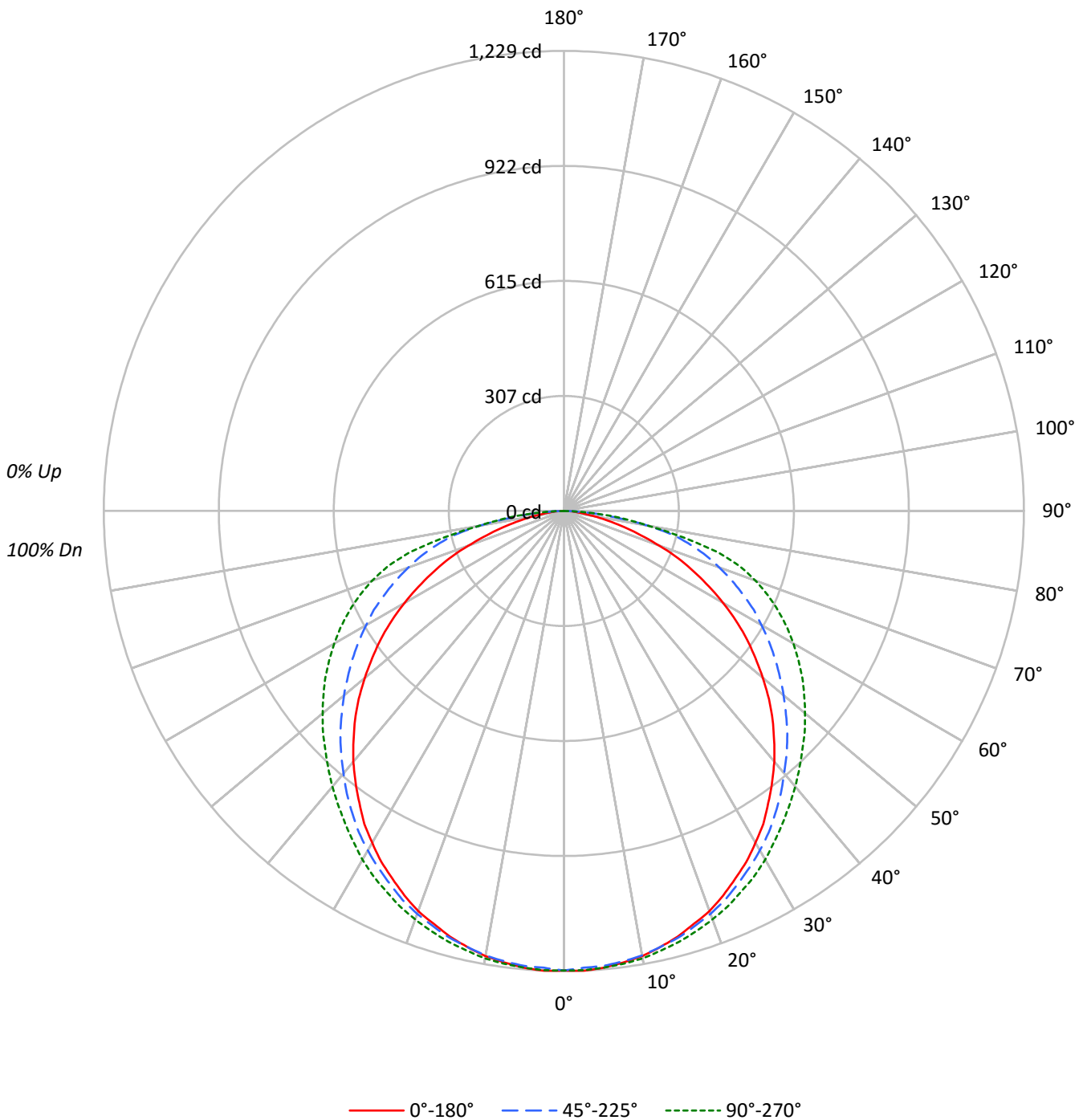
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1652	1652	1652
5°	1654	1647	1654
10°	1649	1647	1658
15°	1640	1644	1659
20°	1629	1640	1663
25°	1609	1632	1665
30°	1590	1627	1671
35°	1564	1618	1673
40°	1536	1608	1689
45°	1501	1607	1715
50°	1452	1605	1761
55°	1401	1616	1825
60°	1322	1641	1905
65°	1221	1679	2012
70°	1066	1739	2144
75°	865	1828	2215
80°	638	1792	1792
85°	489	1320	1491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	3.1
10°-20°	334.0	8.8
20°-30°	508.4	13.4
30°-40°	617.4	16.3
40°-50°	652.3	17.2
50°-60°	615.5	16.3
60°-70°	511.7	13.5
70°-80°	336.7	8.9
80°-90°	91.8	2.4
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°	958.7	25.3
0°-40°	1576.1	41.7
0°-60°	2843.8	75.2
0°-90°	3784.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3784.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1225	1225	1220	1225	1225	116
15°	1177	1179	1180	1191	1191	332
25°	1084	1090	1099	1118	1122	500
35°	952	963	985	1011	1019	596
45°	789	805	844	886	901	608
55°	597	623	689	754	778	532
65°	383	428	528	605	632	379
75°	166	242	352	417	426	179
85°	32	70	86	95	97	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1227.7	1227.7	1227.7	1227.7	1227.7
2.5°	1229.3	1227.7	1221.4	1227.7	1227.7
5°	1224.6	1224.6	1219.8	1224.6	1224.6
7.5°	1216.6	1216.6	1213.5	1219.8	1219.8
10°	1207.1	1207.1	1205.5	1213.5	1213.5
12.5°	1192.9	1194.5	1192.9	1202.4	1202.4
15°	1177.0	1178.6	1180.2	1191.3	1191.3
17.5°	1156.4	1159.6	1162.8	1175.4	1177.0
20°	1137.4	1139.0	1145.3	1159.6	1161.2
22.5°	1112.1	1116.8	1124.8	1139.0	1143.8
25°	1083.6	1089.9	1099.4	1118.4	1121.6
27.5°	1056.6	1061.4	1074.1	1094.7	1101.0
30°	1023.4	1031.3	1047.1	1067.7	1075.6
32.5°	991.7	999.6	1018.6	1040.8	1047.1
35°	952.1	963.2	985.3	1010.7	1018.6
37.5°	914.1	925.1	952.1	980.6	990.1
40°	874.5	887.1	915.6	948.9	961.6
42.5°	831.7	849.1	880.8	917.2	931.5
45°	788.9	804.8	844.4	885.5	901.4
47.5°	743.0	762.0	804.8	853.9	872.9
50°	693.9	717.6	766.7	820.6	841.2
52.5°	644.8	671.7	727.1	787.3	809.5
55°	597.2	622.6	689.1	754.1	777.8
57.5°	545.0	576.6	649.5	719.2	743.0
60°	491.1	525.9	609.9	682.8	708.1
62.5°	437.2	476.8	571.9	644.8	671.7
65°	383.4	427.7	527.5	605.1	632.1
67.5°	331.1	380.2	486.3	564.0	590.9
70°	270.9	332.7	442.0	518.0	545.0
72.5°	215.4	286.7	399.2	470.5	494.3
75°	166.3	242.4	351.7	416.6	426.1
77.5°	122.0	198.0	302.6	324.8	326.3
80°	82.4	158.4	231.3	228.1	231.3
82.5°	53.9	118.8	145.7	163.2	164.8
85°	31.7	69.7	85.5	95.0	96.6
87.5°	15.8	23.8	30.1	31.7	34.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)