

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: P313251

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-HRP-CP125-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: P313251
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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: 3488.0 lumens
Efficiency: N/A
Efficacy: 90.8 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

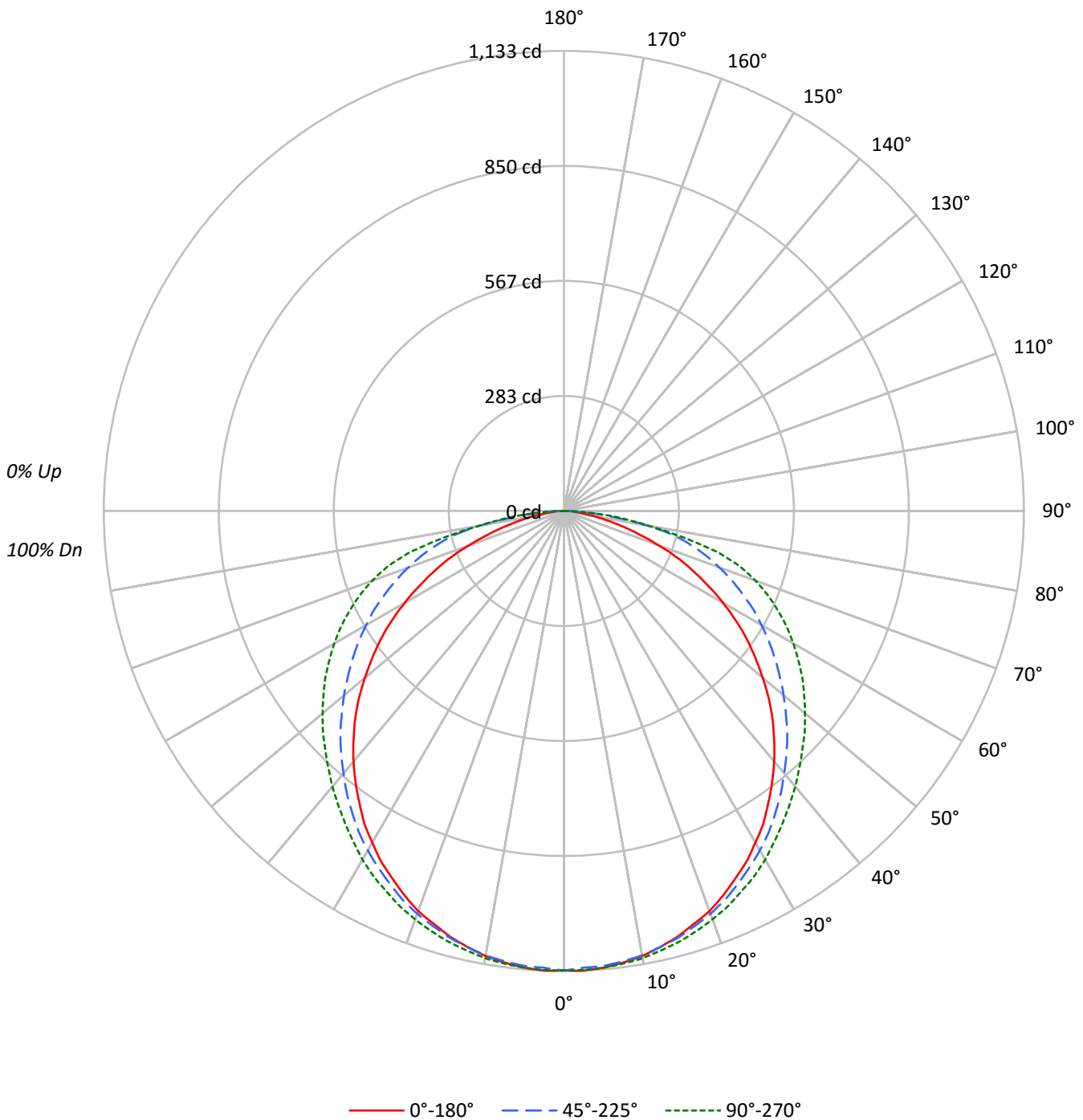
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82					82			
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67					67			
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56					56			
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48					48			
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36					36			
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28					28			
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25					25			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1523	1523	1523
5°	1525	1519	1525
10°	1520	1518	1528
15°	1511	1515	1530
20°	1501	1512	1533
25°	1483	1504	1535
30°	1466	1500	1540
35°	1441	1492	1542
40°	1416	1482	1557
45°	1384	1481	1581
50°	1339	1479	1623
55°	1291	1490	1682
60°	1218	1513	1756
65°	1125	1548	1855
70°	982	1603	1976
75°	797	1685	2042
80°	588	1652	1652
85°	451	1218	1376



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.2	3.1
10°-20°	307.9	8.8
20°-30°	468.7	13.4
30°-40°	569.1	16.3
40°-50°	601.2	17.2
50°-60°	567.3	16.3
60°-70°	471.7	13.5
70°-80°	310.3	8.9
80°-90°	84.6	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°	883.7	25.3
0°-40°	1452.8	41.7
0°-60°	2621.4	75.2
0°-90°	3488.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3488.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1132	1132	1132	1132	1132	
5°	1129	1129	1124	1129	1129	107
15°	1085	1086	1088	1098	1098	306
25°	999	1005	1013	1031	1034	461
35°	878	888	908	932	939	549
45°	727	742	778	816	831	560
55°	550	574	635	695	717	490
65°	353	394	486	558	583	349
75°	153	223	324	384	393	165
85°	29	64	79	88	89	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1131.7	1131.7	1131.7	1131.7	1131.7
2.5°	1133.1	1131.7	1125.8	1131.7	1131.7
5°	1128.8	1128.8	1124.4	1128.8	1128.8
7.5°	1121.5	1121.5	1118.5	1124.4	1124.4
10°	1112.7	1112.7	1111.2	1118.5	1118.5
12.5°	1099.6	1101.0	1099.6	1108.3	1108.3
15°	1085.0	1086.4	1087.9	1098.1	1098.1
17.5°	1066.0	1068.9	1071.8	1083.5	1085.0
20°	1048.5	1049.9	1055.8	1068.9	1070.4
22.5°	1025.1	1029.5	1036.8	1049.9	1054.3
25°	998.8	1004.6	1013.4	1030.9	1033.8
27.5°	974.0	978.4	990.0	1009.0	1014.9
30°	943.3	950.6	965.2	984.2	991.5
32.5°	914.1	921.4	938.9	959.4	965.2
35°	877.6	887.8	908.3	931.6	938.9
37.5°	842.6	852.8	877.6	903.9	912.6
40°	806.1	817.7	844.0	874.7	886.4
42.5°	766.6	782.7	811.9	845.5	858.6
45°	727.2	741.8	778.3	816.3	830.9
47.5°	684.9	702.4	741.8	787.1	804.6
50°	639.6	661.5	706.8	756.4	775.4
52.5°	594.3	619.1	670.2	725.7	746.2
55°	550.5	573.9	635.2	695.1	717.0
57.5°	502.3	531.5	598.7	662.9	684.9
60°	452.7	484.8	562.2	629.4	652.7
62.5°	403.0	439.5	527.1	594.3	619.1
65°	353.4	394.3	486.3	557.8	582.6
67.5°	305.2	350.5	448.3	519.8	544.7
70°	249.7	306.6	407.4	477.5	502.3
72.5°	198.6	264.3	368.0	433.7	455.6
75°	153.3	223.4	324.2	384.0	392.8
77.5°	112.4	182.5	278.9	299.3	300.8
80°	75.9	146.0	213.2	210.3	213.2
82.5°	49.6	109.5	134.3	150.4	151.9
85°	29.2	64.3	78.9	87.6	89.1
87.5°	14.6	21.9	27.7	29.2	32.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)