

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: P313277

Luminaire Tested: **24FCZ2-50-UNV-L83050-HRP-CP125-W2A-U-4000K**

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: P313277
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: 24FCZ2-50-UNV-L83050-HRP-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (168) 4000K 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: 3645.0 lumens
Efficiency: N/A
Efficacy: 83.4 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

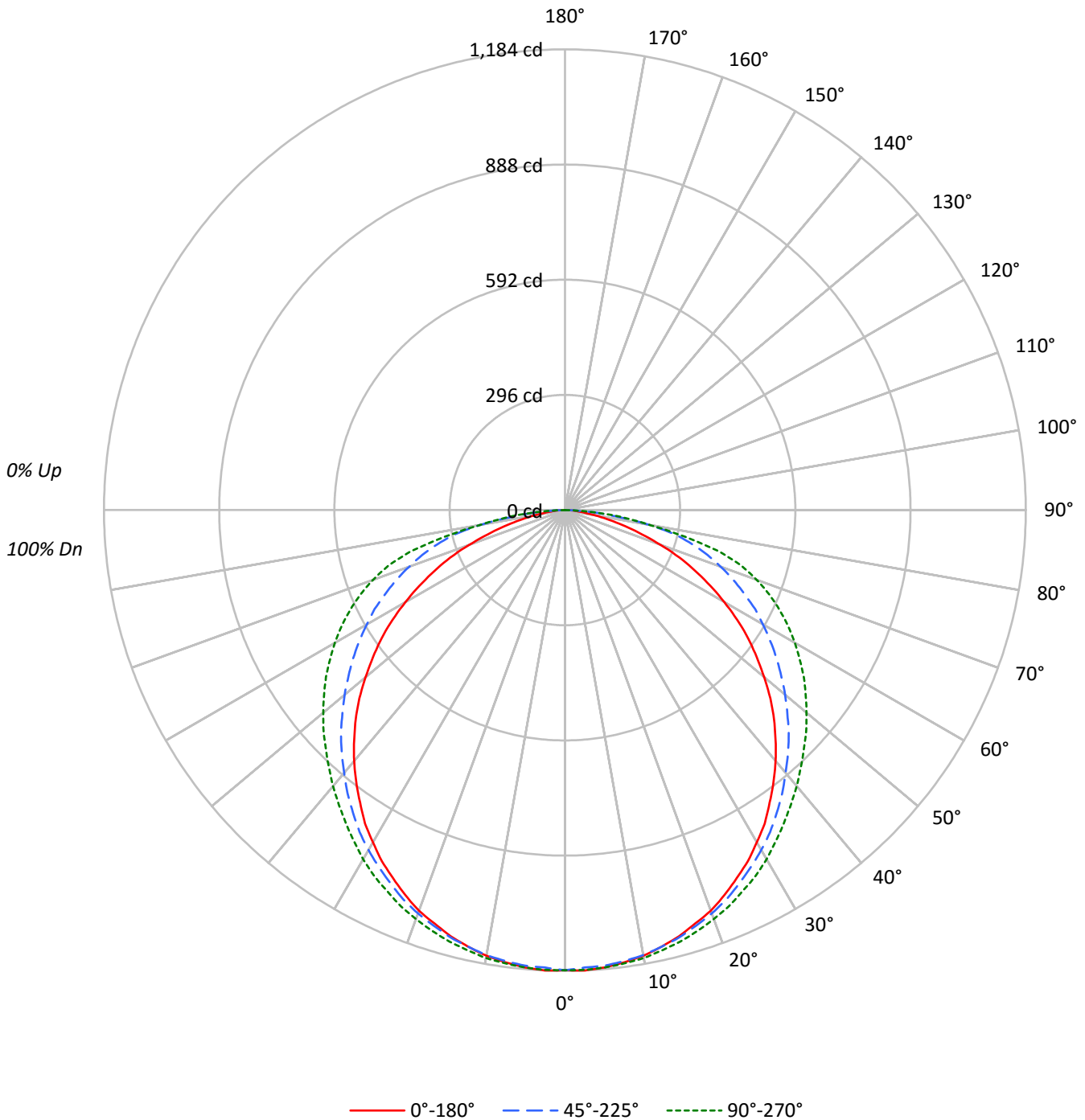
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1591	1591	1591
5°	1593	1587	1593
10°	1589	1587	1597
15°	1579	1584	1598
20°	1569	1580	1602
25°	1550	1572	1604
30°	1532	1567	1610
35°	1506	1559	1612
40°	1479	1549	1627
45°	1446	1548	1652
50°	1399	1546	1696
55°	1350	1557	1757
60°	1273	1581	1836
65°	1176	1618	1939
70°	1026	1675	2065
75°	833	1761	2134
80°	615	1726	1726
85°	471	1272	1437



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	3.1
10°-20°	321.7	8.8
20°-30°	489.8	13.4
30°-40°	594.7	16.3
40°-50°	628.3	17.2
50°-60°	592.9	16.3
60°-70°	492.9	13.5
70°-80°	324.3	8.9
80°-90°	88.4	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°	923.5	25.3
0°-40°	1518.2	41.7
0°-60°	2739.4	75.2
0°-90°	3645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3645.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1183	1183	1183	1183	1183	
5°	1180	1180	1175	1180	1180	112
15°	1134	1135	1137	1148	1148	320
25°	1044	1050	1059	1077	1080	481
35°	917	928	949	974	981	574
45°	760	775	813	853	868	585
55°	575	600	664	726	749	512
65°	369	412	508	583	609	365
75°	160	234	339	401	410	173
85°	30	67	82	92	93	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1182.6	1182.6	1182.6	1182.6	1182.6
2.5°	1184.1	1182.6	1176.5	1182.6	1182.6
5°	1179.6	1179.6	1175.0	1179.6	1179.6
7.5°	1171.9	1171.9	1168.9	1175.0	1175.0
10°	1162.8	1162.8	1161.3	1168.9	1168.9
12.5°	1149.1	1150.6	1149.1	1158.2	1158.2
15°	1133.8	1135.3	1136.8	1147.5	1147.5
17.5°	1114.0	1117.0	1120.1	1132.3	1133.8
20°	1095.6	1097.2	1103.3	1117.0	1118.5
22.5°	1071.2	1075.8	1083.4	1097.2	1101.7
25°	1043.8	1049.9	1059.0	1077.3	1080.4
27.5°	1017.8	1022.4	1034.6	1054.4	1060.5
30°	985.8	993.4	1008.7	1028.5	1036.1
32.5°	955.3	962.9	981.2	1002.6	1008.7
35°	917.1	927.8	949.2	973.6	981.2
37.5°	880.5	891.2	917.1	944.6	953.7
40°	842.3	854.5	882.0	914.1	926.3
42.5°	801.1	817.9	848.4	883.5	897.3
45°	759.9	775.2	813.3	853.0	868.3
47.5°	715.7	734.0	775.2	822.5	840.8
50°	668.4	691.3	738.6	790.5	810.3
52.5°	621.1	647.0	700.4	758.4	779.8
55°	575.3	599.7	663.8	726.4	749.2
57.5°	524.9	555.5	625.6	692.8	715.7
60°	473.0	506.6	587.5	657.7	682.1
62.5°	421.2	459.3	550.9	621.1	647.0
65°	369.3	412.0	508.1	582.9	608.9
67.5°	318.9	366.2	468.5	543.2	569.2
70°	260.9	320.5	425.7	499.0	524.9
72.5°	207.5	276.2	384.5	453.2	476.1
75°	160.2	233.5	338.8	401.3	410.5
77.5°	117.5	190.7	291.5	312.8	314.3
80°	79.4	152.6	222.8	219.7	222.8
82.5°	51.9	114.4	140.4	157.2	158.7
85°	30.5	67.1	82.4	91.6	93.1
87.5°	15.3	22.9	29.0	30.5	33.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)