

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: P309505

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CA08-W2A-U-5000K**

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: P309505
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-L82765-HRP-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5000K 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: 3589.0 lumens
Efficiency: N/A
Efficacy: 91.3 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

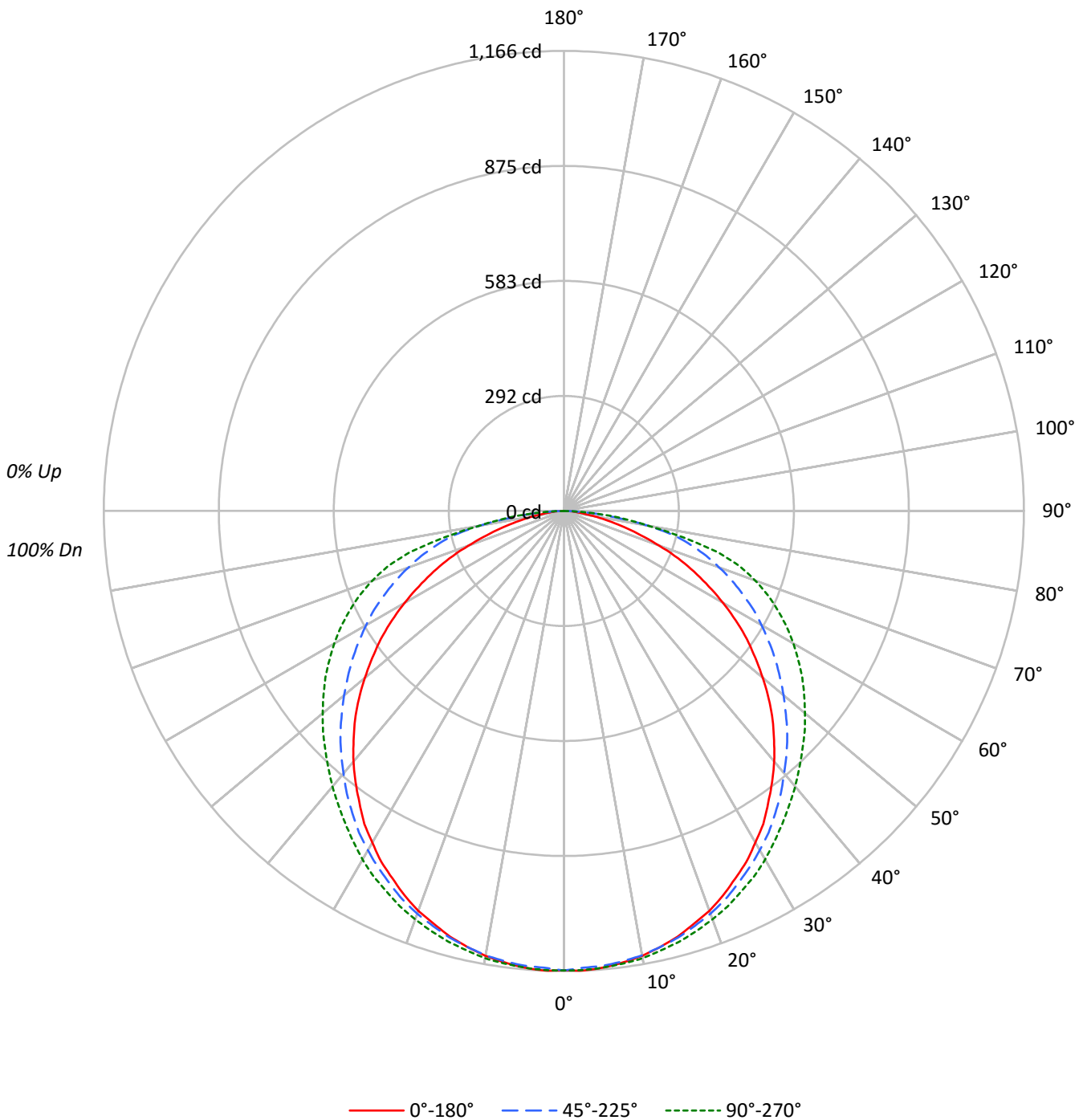
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1567	1567	1567
5°	1569	1563	1569
10°	1564	1562	1572
15°	1555	1559	1574
20°	1545	1555	1577
25°	1526	1548	1579
30°	1508	1543	1585
35°	1483	1535	1587
40°	1457	1525	1602
45°	1424	1524	1627
50°	1378	1522	1670
55°	1329	1533	1730
60°	1253	1557	1807
65°	1158	1593	1909
70°	1011	1649	2033
75°	820	1734	2101
80°	605	1700	1700
85°	465	1252	1416



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.3	3.1
10°-20°	316.8	8.8
20°-30°	482.2	13.4
30°-40°	585.6	16.3
40°-50°	618.6	17.2
50°-60°	583.8	16.3
60°-70°	485.4	13.5
70°-80°	319.3	8.9
80°-90°	87.1	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°	909.3	25.3
0°-40°	1494.9	41.7
0°-60°	2697.3	75.2
0°-90°	3589.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3589.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1164	1164	1164	1164	1164	
5°	1161	1161	1157	1161	1161	110
15°	1116	1118	1119	1130	1130	315
25°	1028	1034	1043	1061	1064	474
35°	903	914	935	959	966	565
45°	748	763	801	840	855	576
55°	566	590	654	715	738	505
65°	364	406	500	574	600	359
75°	158	230	334	395	404	170
85°	30	66	81	90	92	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1164.5	1164.5	1164.5	1164.5	1164.5
2.5°	1166.0	1164.5	1158.4	1164.5	1164.5
5°	1161.4	1161.4	1156.9	1161.4	1161.4
7.5°	1153.9	1153.9	1150.9	1156.9	1156.9
10°	1144.9	1144.9	1143.4	1150.9	1150.9
12.5°	1131.4	1132.9	1131.4	1140.4	1140.4
15°	1116.4	1117.9	1119.4	1129.9	1129.9
17.5°	1096.8	1099.8	1102.9	1114.9	1116.4
20°	1078.8	1080.3	1086.3	1099.8	1101.3
22.5°	1054.8	1059.3	1066.8	1080.3	1084.8
25°	1027.7	1033.7	1042.7	1060.8	1063.8
27.5°	1002.2	1006.7	1018.7	1038.2	1044.3
30°	970.6	978.1	993.2	1012.7	1020.2
32.5°	940.6	948.1	966.1	987.2	993.2
35°	903.0	913.5	934.6	958.6	966.1
37.5°	867.0	877.5	903.0	930.1	939.1
40°	829.4	841.4	868.5	900.0	912.0
42.5°	788.8	805.4	835.4	870.0	883.5
45°	748.3	763.3	800.8	839.9	854.9
47.5°	704.7	722.7	763.3	809.9	827.9
50°	658.1	680.6	727.2	778.3	797.8
52.5°	611.5	637.1	689.7	746.8	767.8
55°	566.5	590.5	653.6	715.2	737.7
57.5°	516.9	546.9	616.0	682.1	704.7
60°	465.8	498.8	578.5	647.6	671.6
62.5°	414.7	452.3	542.4	611.5	637.1
65°	363.6	405.7	500.3	574.0	599.5
67.5°	314.0	360.6	461.3	534.9	560.4
70°	256.9	315.5	419.2	491.3	516.9
72.5°	204.3	272.0	378.6	446.2	468.8
75°	157.8	229.9	333.6	395.2	404.2
77.5°	115.7	187.8	287.0	308.0	309.5
80°	78.1	150.3	219.4	216.4	219.4
82.5°	51.1	112.7	138.2	154.8	156.3
85°	30.1	66.1	81.1	90.2	91.7
87.5°	15.0	22.5	28.5	30.1	33.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)