

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: P310709

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-CP250-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: P310709
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: 24FCZ2-40HE-UNV-L82765-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 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: 3450.0 lumens
Efficiency: N/A
Efficacy: 112.0 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

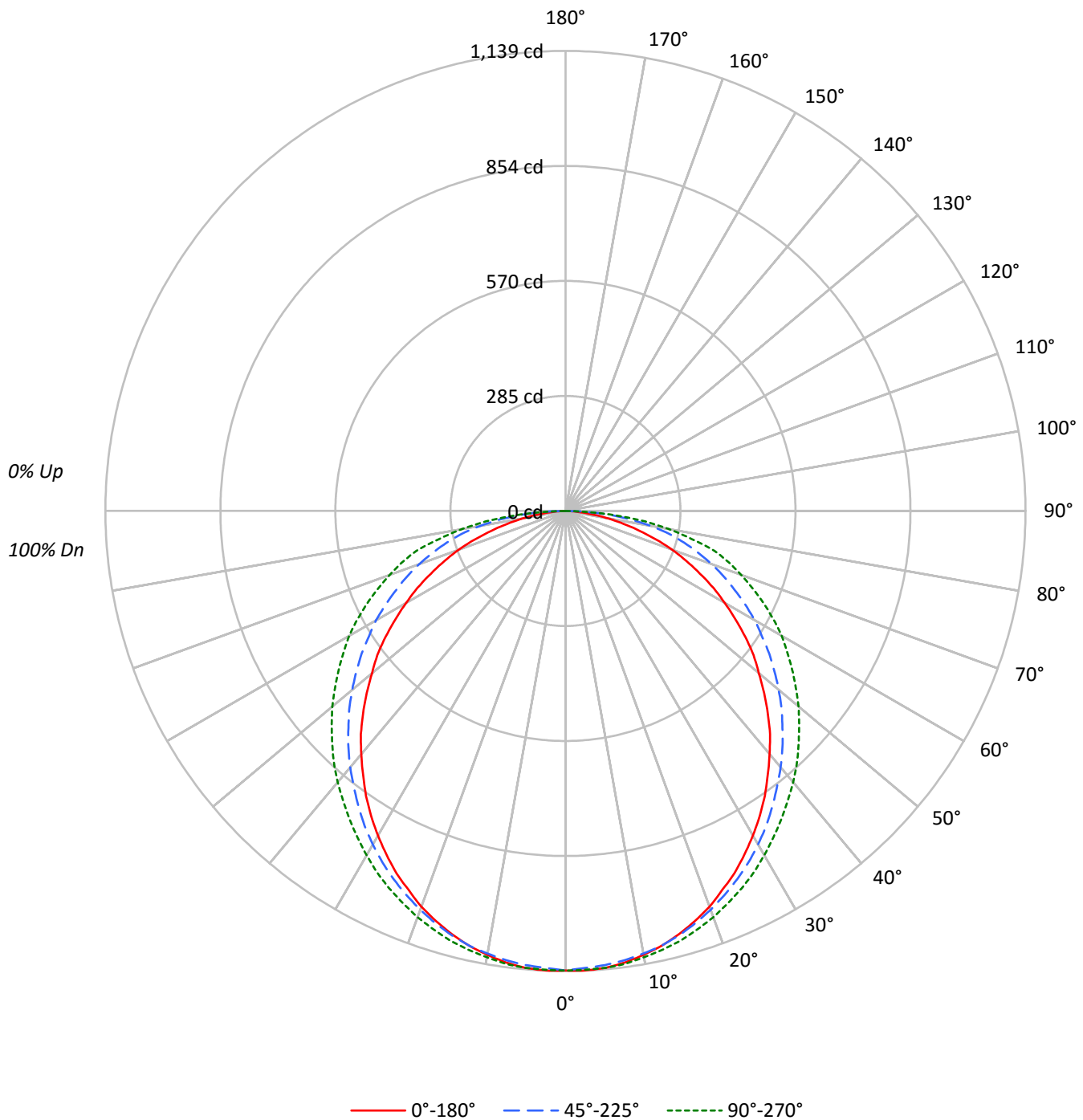
Input Watts (W): 30.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1531	1531	1531
5°	1534	1524	1534
10°	1525	1520	1533
15°	1511	1515	1534
20°	1493	1505	1532
25°	1470	1494	1531
30°	1442	1481	1529
35°	1414	1466	1530
40°	1381	1456	1540
45°	1348	1446	1553
50°	1308	1442	1577
55°	1275	1445	1608
60°	1226	1457	1663
65°	1170	1472	1724
70°	1108	1517	1819
75°	988	1583	1987
80°	842	1676	2031
85°	601	1661	1944



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.7	3.1
10°-20°	307.9	8.9
20°-30°	465.0	13.5
30°-40°	560.5	16.2
40°-50°	588.4	17.1
50°-60°	550.5	16.0
60°-70°	454.6	13.2
70°-80°	309.8	9.0
80°-90°	105.6	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°	880.6	25.5
0°-40°	1441.1	41.8
0°-60°	2580.0	74.8
0°-90°	3450.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3450.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1138	1138	1138	1138	1138	
5°	1136	1134	1129	1136	1136	108
15°	1085	1086	1087	1099	1101	306
25°	990	995	1006	1026	1031	456
35°	861	870	893	923	932	538
45°	708	723	760	801	816	546
55°	544	566	616	666	686	485
65°	367	398	462	521	541	364
75°	190	234	304	362	382	203
85°	39	77	108	121	126	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1137.8	1137.8	1137.8	1137.8	1137.8
2.5°	1138.9	1137.8	1132.1	1137.8	1136.6
5°	1135.5	1134.3	1128.6	1135.5	1135.5
7.5°	1127.5	1127.5	1121.8	1129.8	1130.9
10°	1116.0	1116.0	1112.6	1121.8	1121.8
12.5°	1102.3	1102.3	1102.3	1111.5	1112.6
15°	1085.1	1086.3	1087.4	1098.9	1101.2
17.5°	1064.5	1066.8	1070.2	1084.0	1086.3
20°	1042.8	1045.1	1050.8	1066.8	1070.2
22.5°	1015.3	1021.0	1029.0	1047.4	1050.8
25°	990.1	994.7	1006.1	1025.6	1031.3
27.5°	959.2	966.1	981.0	1001.6	1009.6
30°	928.3	935.2	953.5	977.5	984.4
32.5°	895.1	905.4	924.9	950.1	958.1
35°	860.8	869.9	892.8	922.6	931.7
37.5°	823.0	835.6	860.8	892.8	904.3
40°	786.4	800.1	828.7	863.1	876.8
42.5°	749.7	763.5	795.5	834.4	848.2
45°	708.5	723.4	760.0	801.3	816.1
47.5°	667.3	685.6	725.7	769.2	785.2
50°	625.0	645.6	689.1	734.9	753.2
52.5°	587.2	606.7	652.4	701.7	718.8
55°	543.7	565.5	615.8	666.2	685.6
57.5°	499.1	523.1	576.9	631.8	651.3
60°	455.6	481.9	541.4	596.4	618.1
62.5°	413.2	439.5	501.4	558.6	580.3
65°	367.4	398.3	462.4	520.8	541.4
67.5°	323.9	357.1	424.7	481.9	502.5
70°	281.6	313.6	385.7	441.8	462.4
72.5°	235.8	272.4	344.5	402.9	424.7
75°	190.0	233.5	304.5	361.7	382.3
77.5°	147.7	192.3	263.3	310.2	320.5
80°	108.7	154.5	216.3	249.5	262.1
82.5°	69.8	115.6	164.8	188.9	199.2
85°	38.9	76.7	107.6	121.3	125.9
87.5°	16.0	33.2	43.5	49.2	49.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)