

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: P310354

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CP250-W2A-U-6500K**

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: P310354
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-60HE-UNV-L82765-RDP-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 6500K 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: 3598.0 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

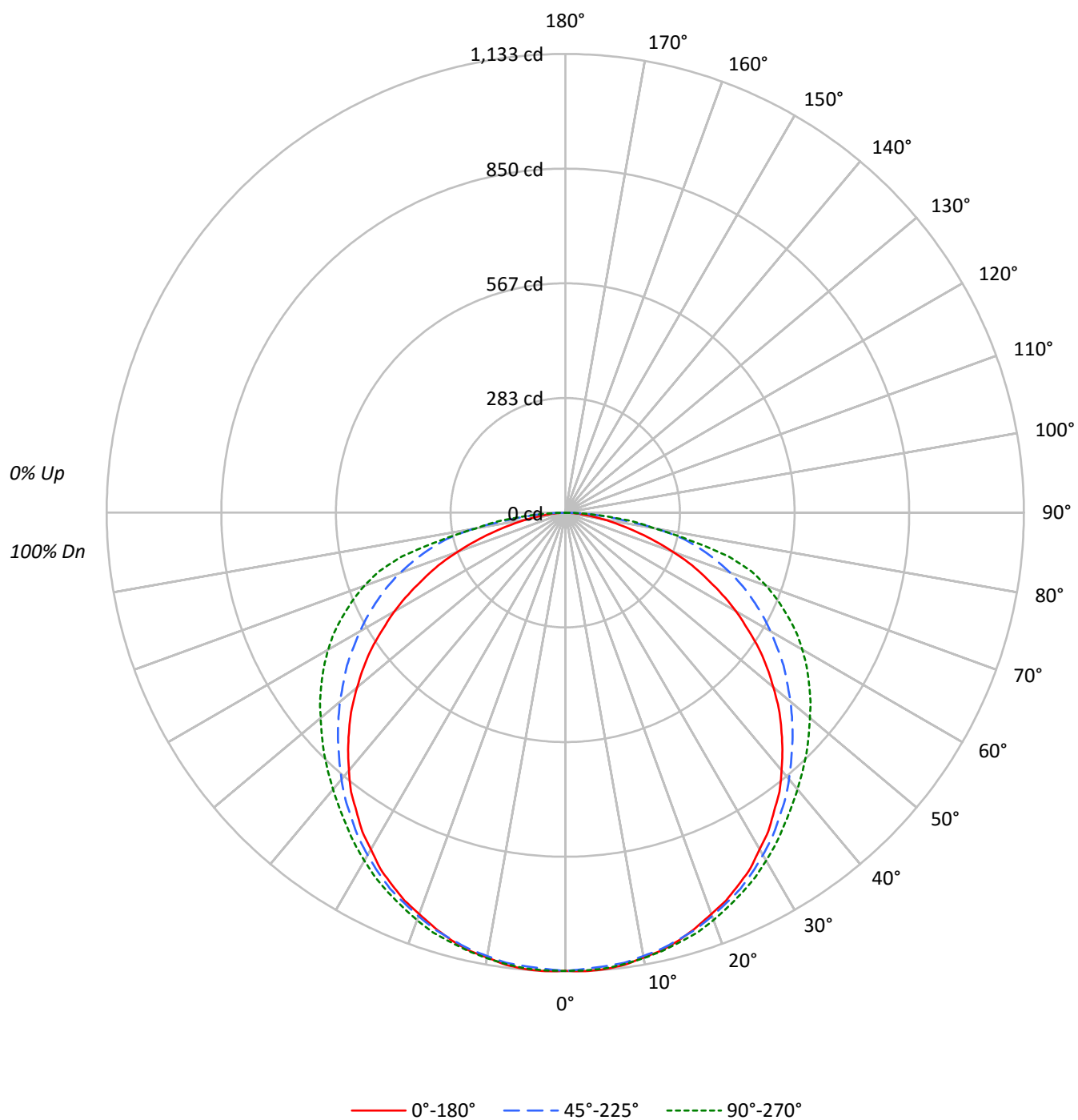
Input Watts (W): 49.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1522	1522	1522
5°	1528	1519	1526
10°	1524	1519	1526
15°	1521	1519	1529
20°	1510	1518	1533
25°	1505	1521	1537
30°	1492	1517	1542
35°	1477	1513	1548
40°	1461	1511	1567
45°	1436	1511	1603
50°	1405	1521	1651
55°	1369	1545	1725
60°	1311	1575	1820
65°	1227	1631	1932
70°	1116	1706	2078
75°	946	1800	2171
80°	747	1812	1757
85°	551	1377	1542



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	3.0
10°-20°	308.9	8.6
20°-30°	472.4	13.1
30°-40°	577.5	16.0
40°-50°	615.5	17.1
50°-60°	588.5	16.4
60°-70°	498.5	13.9
70°-80°	335.0	9.3
80°-90°	94.5	2.6
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°	888.6	24.7
0°-40°	1466.1	40.7
0°-60°	2670.0	74.2
0°-90°	3598.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3598.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1132	1132	1132	1132	1132	
5°	1132	1130	1124	1130	1130	108
15°	1092	1092	1090	1099	1098	308
25°	1014	1017	1024	1033	1035	467
35°	900	907	921	939	942	563
45°	755	767	794	828	842	582
55°	584	605	658	710	735	520
65°	386	425	512	580	607	383
75°	182	248	346	405	418	195
85°	36	73	89	96	100	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1131.5	1131.5	1131.5	1131.5	1131.5
2.5°	1133.3	1133.3	1127.9	1131.5	1131.5
5°	1131.5	1129.7	1124.3	1129.7	1129.7
7.5°	1126.1	1124.3	1120.8	1126.1	1124.3
10°	1115.4	1115.4	1111.8	1117.2	1117.2
12.5°	1106.5	1104.7	1102.9	1110.1	1108.3
15°	1092.2	1092.2	1090.4	1099.3	1097.6
17.5°	1074.4	1076.1	1077.9	1085.1	1086.9
20°	1054.7	1058.3	1060.1	1070.8	1070.8
22.5°	1036.9	1038.7	1042.2	1052.9	1052.9
25°	1013.7	1017.3	1024.4	1033.3	1035.1
27.5°	990.5	992.3	1001.2	1013.7	1015.5
30°	960.1	965.5	976.2	990.5	992.3
32.5°	933.4	938.7	951.2	965.5	969.1
35°	899.5	906.6	920.9	938.7	942.3
37.5°	869.1	874.5	892.3	912.0	917.3
40°	831.6	842.4	860.2	883.4	892.3
42.5°	794.2	804.9	826.3	856.6	867.3
45°	754.9	767.4	794.2	828.1	842.4
47.5°	715.6	729.9	760.3	799.5	815.6
50°	671.0	688.9	726.4	771.0	788.8
52.5°	628.2	649.6	690.7	740.6	763.8
55°	583.6	605.0	658.5	710.3	735.3
57.5°	533.6	562.2	621.1	680.0	706.7
60°	487.2	514.0	585.4	649.6	676.4
62.5°	437.2	472.9	549.7	617.5	644.3
65°	385.5	424.7	512.2	580.0	606.8
67.5°	339.1	381.9	474.7	542.5	569.3
70°	283.8	337.3	433.7	501.5	528.3
72.5°	232.0	290.9	390.8	456.9	481.9
75°	182.0	248.1	346.2	405.1	417.6
77.5°	135.6	205.2	299.8	324.8	315.9
80°	96.4	164.2	233.8	221.3	226.7
82.5°	62.5	124.9	144.6	164.2	169.5
85°	35.7	73.2	89.2	96.4	99.9
87.5°	16.1	26.8	35.7	35.7	33.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)