

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: P310353

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CP250-W2A-U-5700K**

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: P310353
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5700K 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: 73.4 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

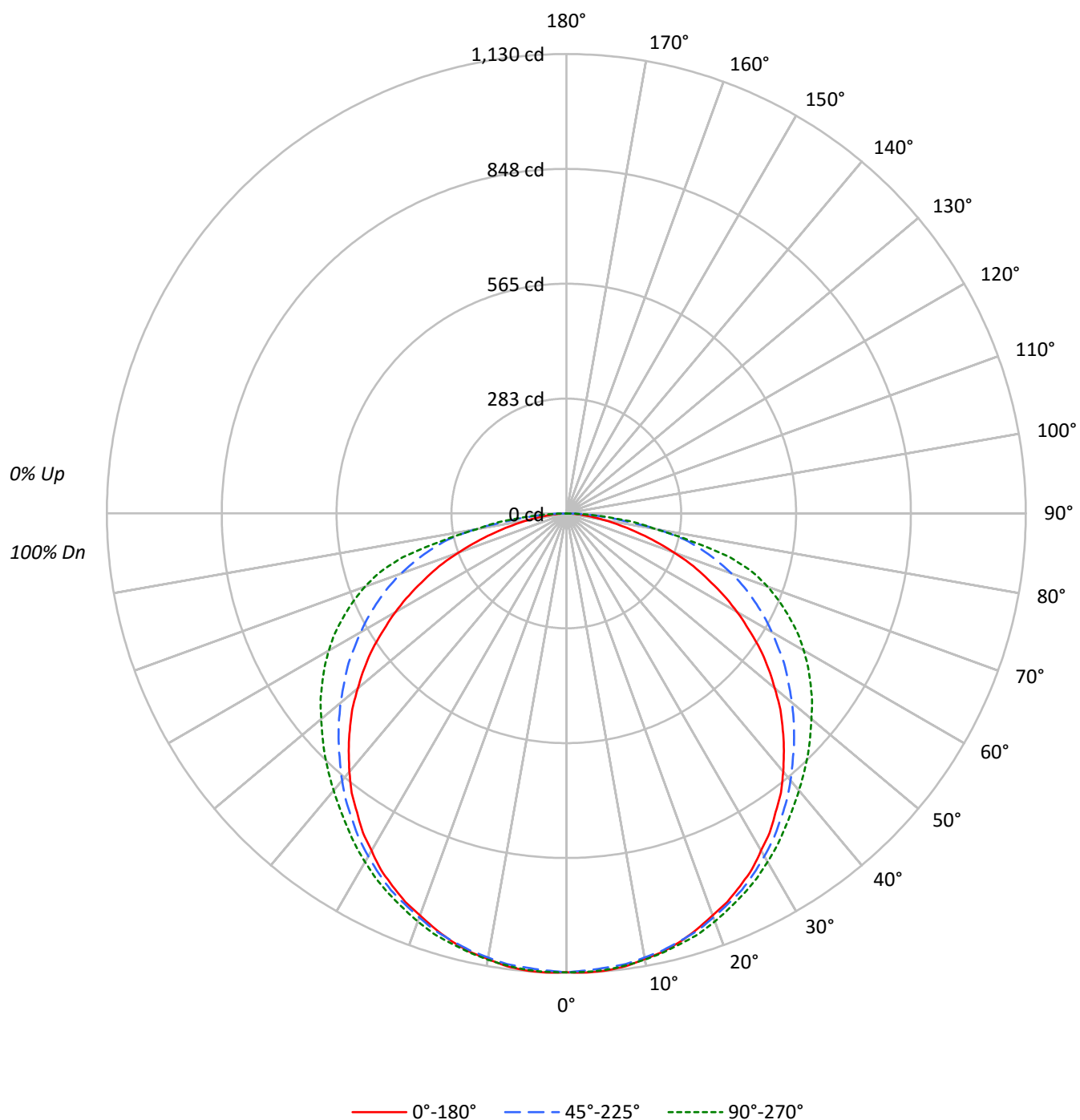
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1519	1519	1519
5°	1524	1515	1522
10°	1520	1515	1523
15°	1518	1515	1525
20°	1506	1514	1529
25°	1501	1517	1533
30°	1488	1513	1538
35°	1474	1509	1544
40°	1457	1507	1563
45°	1433	1507	1599
50°	1401	1517	1647
55°	1365	1541	1720
60°	1308	1571	1816
65°	1224	1627	1927
70°	1113	1702	2073
75°	944	1796	2166
80°	745	1807	1752
85°	550	1374	1539



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.1	3.0
10°-20°	308.1	8.6
20°-30°	471.2	13.1
30°-40°	576.0	16.0
40°-50°	613.9	17.1
50°-60°	587.0	16.4
60°-70°	497.2	13.9
70°-80°	334.2	9.3
80°-90°	94.3	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°	886.4	24.7
0°-40°	1462.4	40.7
0°-60°	2663.3	74.2
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°	1129	1129	1129	1129	1129	
5°	1129	1127	1122	1127	1127	107
15°	1090	1090	1088	1097	1095	307
25°	1011	1015	1022	1031	1032	466
35°	897	904	919	936	940	562
45°	753	766	792	826	840	581
55°	582	604	657	708	733	518
65°	384	424	511	579	605	382
75°	182	247	345	404	417	194
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°	1128.6	1128.6	1128.6	1128.6	1128.6
2.5°	1130.4	1130.4	1125.1	1128.6	1128.6
5°	1128.6	1126.9	1121.5	1126.9	1126.9
7.5°	1123.3	1121.5	1118.0	1123.3	1121.5
10°	1112.6	1112.6	1109.1	1114.4	1114.4
12.5°	1103.7	1101.9	1100.2	1107.3	1105.5
15°	1089.5	1089.5	1087.7	1096.6	1094.8
17.5°	1071.7	1073.5	1075.2	1082.4	1084.1
20°	1052.1	1055.7	1057.4	1068.1	1068.1
22.5°	1034.3	1036.1	1039.6	1050.3	1050.3
25°	1011.1	1014.7	1021.8	1030.7	1032.5
27.5°	988.0	989.8	998.7	1011.1	1012.9
30°	957.7	963.1	973.8	988.0	989.8
32.5°	931.0	936.4	948.8	963.1	966.6
35°	897.2	904.3	918.6	936.4	939.9
37.5°	867.0	872.3	890.1	909.7	915.0
40°	829.6	840.2	858.0	881.2	890.1
42.5°	792.2	802.9	824.2	854.5	865.2
45°	753.0	765.5	792.2	826.0	840.2
47.5°	713.9	728.1	758.4	797.5	813.5
50°	669.3	687.2	724.5	769.0	786.8
52.5°	626.6	648.0	688.9	738.8	761.9
55°	582.1	603.5	656.9	708.5	733.4
57.5°	532.3	560.8	619.5	678.3	705.0
60°	486.0	512.7	583.9	648.0	674.7
62.5°	436.1	471.7	548.3	615.9	642.6
65°	384.5	423.7	510.9	578.6	605.3
67.5°	338.2	381.0	473.5	541.2	567.9
70°	283.0	336.5	432.6	500.2	526.9
72.5°	231.4	290.2	389.9	455.7	480.7
75°	181.6	247.4	345.4	404.1	416.6
77.5°	135.3	204.7	299.1	324.0	315.1
80°	96.1	163.8	233.2	220.7	226.1
82.5°	62.3	124.6	144.2	163.8	169.1
85°	35.6	73.0	89.0	96.1	99.7
87.5°	16.0	26.7	35.6	35.6	33.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)