

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: P310316

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CA08-W2A-U-5500K**

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: P310316
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-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 5500K 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: 3857.0 lumens
Efficiency: N/A
Efficacy: 78.9 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

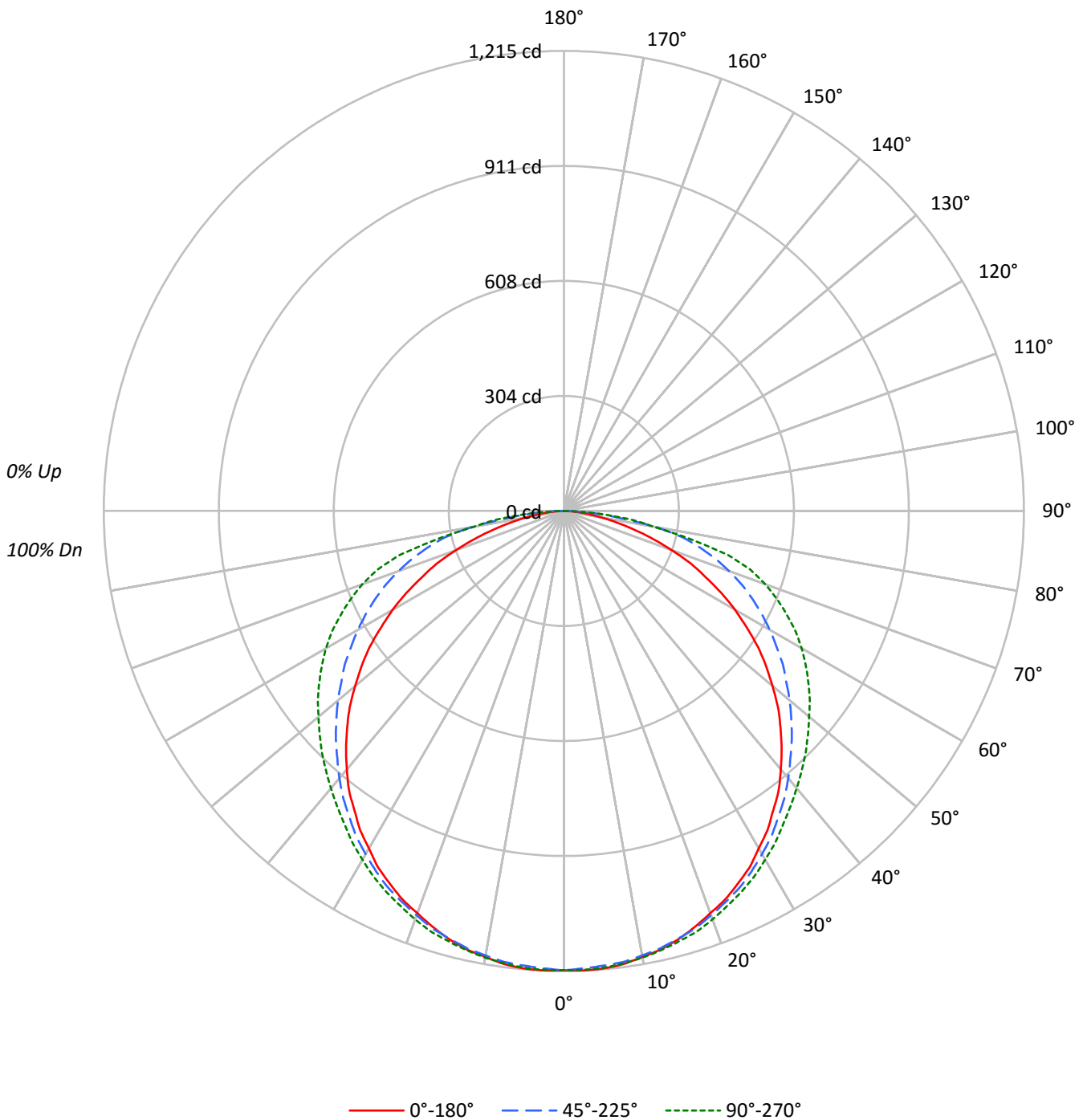
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1632	1632	1632
5°	1638	1628	1636
10°	1634	1628	1636
15°	1631	1628	1639
20°	1619	1627	1644
25°	1613	1630	1647
30°	1599	1626	1653
35°	1584	1622	1659
40°	1566	1620	1680
45°	1540	1620	1718
50°	1506	1630	1770
55°	1468	1656	1849
60°	1405	1689	1951
65°	1316	1748	2071
70°	1197	1829	2228
75°	1014	1929	2327
80°	800	1942	1883
85°	591	1477	1653



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.1	3.0
10°-20°	331.1	8.6
20°-30°	506.4	13.1
30°-40°	619.0	16.0
40°-50°	659.8	17.1
50°-60°	630.8	16.4
60°-70°	534.4	13.9
70°-80°	359.1	9.3
80°-90°	101.3	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°	952.6	24.7
0°-40°	1571.6	40.7
0°-60°	2862.2	74.2
0°-90°	3857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3857.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1213	1213	1213	1213	1213	
5°	1213	1211	1205	1211	1211	115
15°	1171	1171	1169	1178	1177	330
25°	1087	1090	1098	1108	1110	501
35°	964	972	987	1006	1010	604
45°	809	823	851	888	903	624
55°	626	648	706	761	788	557
65°	413	455	549	622	650	410
75°	195	266	371	434	448	209
85°	38	78	96	103	107	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1212.9	1212.9	1212.9	1212.9	1212.9
2.5°	1214.8	1214.8	1209.1	1212.9	1212.9
5°	1212.9	1211.0	1205.3	1211.0	1211.0
7.5°	1207.2	1205.3	1201.4	1207.2	1205.3
10°	1195.7	1195.7	1191.9	1197.6	1197.6
12.5°	1186.1	1184.2	1182.3	1190.0	1188.0
15°	1170.8	1170.8	1168.9	1178.5	1176.6
17.5°	1151.7	1153.6	1155.5	1163.2	1165.1
20°	1130.7	1134.5	1136.4	1147.9	1147.9
22.5°	1111.5	1113.4	1117.3	1128.7	1128.7
25°	1086.7	1090.5	1098.1	1107.7	1109.6
27.5°	1061.8	1063.7	1073.3	1086.7	1088.6
30°	1029.3	1035.0	1046.5	1061.8	1063.7
32.5°	1000.6	1006.3	1019.7	1035.0	1038.8
35°	964.2	971.9	987.2	1006.3	1010.1
37.5°	931.7	937.4	956.6	977.6	983.3
40°	891.5	903.0	922.1	947.0	956.6
42.5°	851.3	862.8	885.8	918.3	929.8
45°	809.2	822.6	851.3	887.7	903.0
47.5°	767.2	782.5	815.0	857.1	874.3
50°	719.3	738.5	778.6	826.5	845.6
52.5°	673.4	696.4	740.4	793.9	818.8
55°	625.6	648.5	705.9	761.4	788.2
57.5°	572.0	602.6	665.8	728.9	757.6
60°	522.3	551.0	627.5	696.4	725.1
62.5°	468.7	507.0	589.2	661.9	690.6
65°	413.2	455.3	549.1	621.8	650.5
67.5°	363.5	409.4	508.9	581.6	610.3
70°	304.2	361.6	464.9	537.6	566.3
72.5°	248.7	311.8	419.0	489.8	516.5
75°	195.1	265.9	371.1	434.3	447.7
77.5°	145.4	220.0	321.4	348.2	338.6
80°	103.3	176.0	250.6	237.2	243.0
82.5°	67.0	133.9	155.0	176.0	181.7
85°	38.3	78.4	95.7	103.3	107.1
87.5°	17.2	28.7	38.3	38.3	36.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)