

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: P310317

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CA08-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: P310317
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 3867.0 lumens
Efficiency: N/A
Efficacy: 79.1 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

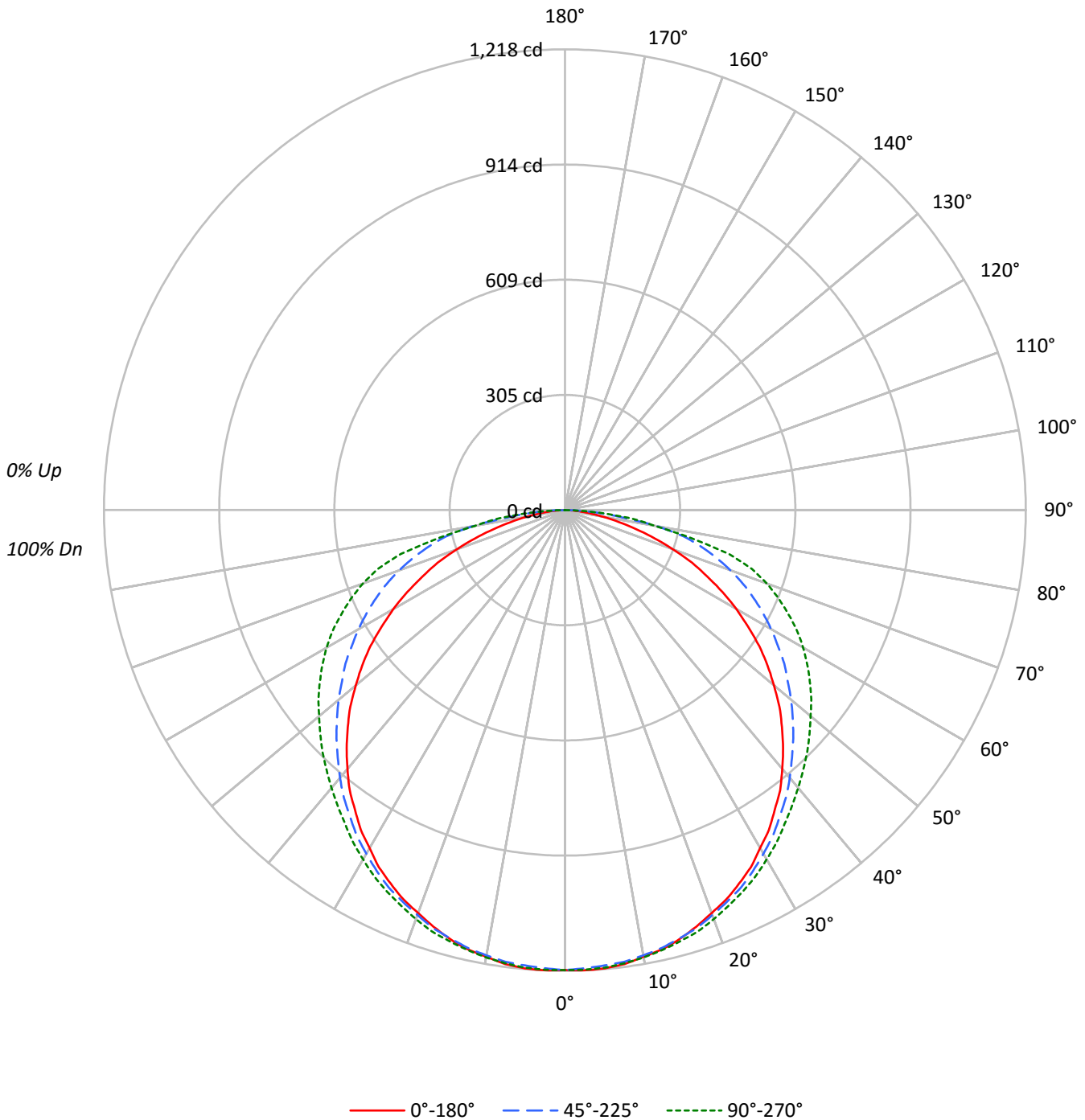
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1636	1636	1636
5°	1642	1632	1640
10°	1638	1633	1640
15°	1635	1632	1643
20°	1623	1631	1648
25°	1617	1635	1652
30°	1603	1630	1657
35°	1588	1626	1663
40°	1570	1624	1684
45°	1544	1624	1723
50°	1510	1634	1775
55°	1471	1660	1854
60°	1409	1693	1956
65°	1319	1753	2076
70°	1200	1834	2234
75°	1017	1934	2333
80°	803	1947	1888
85°	593	1480	1658



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.4	3.0
10°-20°	332.0	8.6
20°-30°	507.7	13.1
30°-40°	620.6	16.0
40°-50°	661.5	17.1
50°-60°	632.5	16.4
60°-70°	535.8	13.9
70°-80°	360.1	9.3
80°-90°	101.6	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°	955.0	24.7
0°-40°	1575.7	40.7
0°-60°	2869.6	74.2
0°-90°	3867.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3867.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1216	1216	1216	1216	1216	
5°	1216	1214	1208	1214	1214	116
15°	1174	1174	1172	1182	1180	331
25°	1090	1093	1101	1111	1112	502
35°	967	974	990	1009	1013	606
45°	811	825	854	890	905	626
55°	627	650	708	763	790	559
65°	414	456	550	623	652	411
75°	196	267	372	435	449	209
85°	38	79	96	104	107	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1216.1	1216.1	1216.1	1216.1	1216.1
2.5°	1218.0	1218.0	1212.2	1216.1	1216.1
5°	1216.1	1214.1	1208.4	1214.1	1214.1
7.5°	1210.3	1208.4	1204.6	1210.3	1208.4
10°	1198.8	1198.8	1195.0	1200.7	1200.7
12.5°	1189.2	1187.3	1185.4	1193.0	1191.1
15°	1173.9	1173.9	1171.9	1181.5	1179.6
17.5°	1154.7	1156.6	1158.5	1166.2	1168.1
20°	1133.6	1137.4	1139.3	1150.8	1150.8
22.5°	1114.4	1116.3	1120.2	1131.7	1131.7
25°	1089.5	1093.3	1101.0	1110.6	1112.5
27.5°	1064.5	1066.5	1076.0	1089.5	1091.4
30°	1031.9	1037.7	1049.2	1064.5	1066.5
32.5°	1003.2	1008.9	1022.3	1037.7	1041.5
35°	966.7	974.4	989.7	1008.9	1012.7
37.5°	934.1	939.9	959.0	980.1	985.9
40°	893.8	905.3	924.5	949.4	959.0
42.5°	853.5	865.1	888.1	920.7	932.2
45°	811.3	824.8	853.5	890.0	905.3
47.5°	769.1	784.5	817.1	859.3	876.6
50°	721.2	740.4	780.7	828.6	847.8
52.5°	675.2	698.2	742.3	796.0	820.9
55°	627.2	650.2	707.8	763.4	790.2
57.5°	573.5	604.2	667.5	730.8	759.6
60°	523.6	552.4	629.1	698.2	727.0
62.5°	469.9	508.3	590.8	663.7	692.4
65°	414.3	456.5	550.5	623.4	652.1
67.5°	364.4	410.5	510.2	583.1	611.9
70°	305.0	362.5	466.1	539.0	567.8
72.5°	249.4	312.6	420.1	491.0	517.9
75°	195.6	266.6	372.1	435.4	448.8
77.5°	145.8	220.6	322.2	349.1	339.5
80°	103.6	176.5	251.3	237.8	243.6
82.5°	67.1	134.3	155.4	176.5	182.2
85°	38.4	78.6	95.9	103.6	107.4
87.5°	17.3	28.8	38.4	38.4	36.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)