

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: P310326

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CA125-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: P310326
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-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" 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: 3853.0 lumens
Efficiency: N/A
Efficacy: 78.8 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

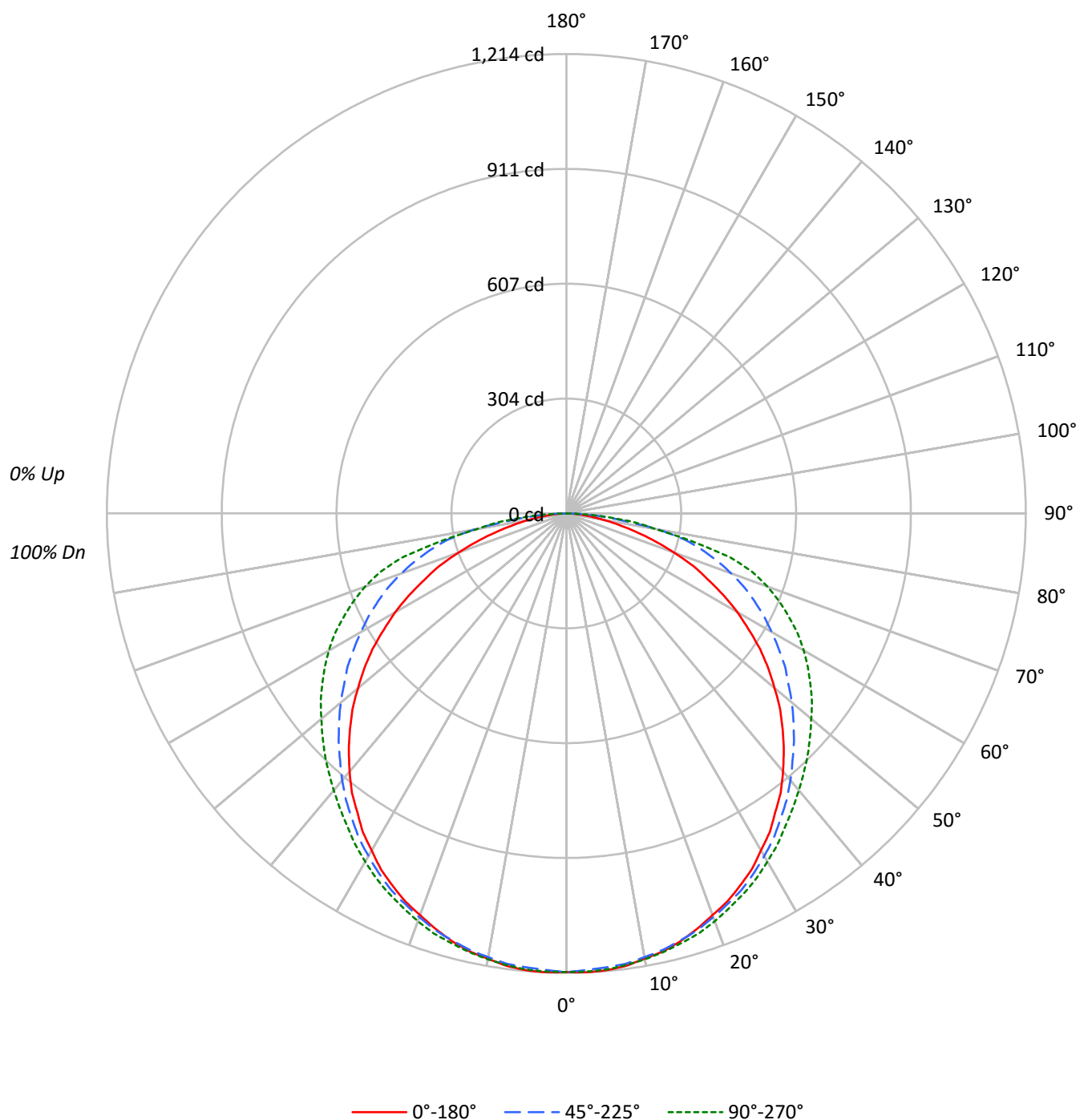
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1630	1630	1630
5°	1637	1626	1634
10°	1632	1627	1635
15°	1629	1627	1637
20°	1617	1625	1642
25°	1612	1629	1646
30°	1597	1624	1651
35°	1582	1620	1657
40°	1564	1618	1678
45°	1538	1618	1717
50°	1504	1628	1768
55°	1466	1654	1847
60°	1404	1687	1949
65°	1314	1746	2069
70°	1196	1827	2225
75°	1013	1928	2325
80°	800	1940	1881
85°	590	1476	1652



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.9	3.0
10°-20°	330.8	8.6
20°-30°	505.8	13.1
30°-40°	618.4	16.0
40°-50°	659.1	17.1
50°-60°	630.2	16.4
60°-70°	533.8	13.9
70°-80°	358.8	9.3
80°-90°	101.2	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°	951.6	24.7
0°-40°	1570.0	40.7
0°-60°	2859.2	74.2
0°-90°	3853.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3853.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1212	1212	1212	1212	1212	
5°	1212	1210	1204	1210	1210	115
15°	1170	1170	1168	1177	1175	330
25°	1086	1089	1097	1106	1108	500
35°	963	971	986	1005	1009	603
45°	808	822	850	887	902	624
55°	625	648	705	761	787	557
65°	413	455	548	621	650	410
75°	195	266	371	434	447	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°	1211.7	1211.7	1211.7	1211.7	1211.7
2.5°	1213.6	1213.6	1207.8	1211.7	1211.7
5°	1211.7	1209.7	1204.0	1209.7	1209.7
7.5°	1205.9	1204.0	1200.2	1205.9	1204.0
10°	1194.5	1194.5	1190.6	1196.4	1196.4
12.5°	1184.9	1183.0	1181.1	1188.7	1186.8
15°	1169.6	1169.6	1167.7	1177.3	1175.3
17.5°	1150.5	1152.4	1154.3	1162.0	1163.9
20°	1129.5	1133.3	1135.2	1146.7	1146.7
22.5°	1110.4	1112.3	1116.1	1127.6	1127.6
25°	1085.5	1089.3	1097.0	1106.5	1108.5
27.5°	1060.7	1062.6	1072.1	1085.5	1087.4
30°	1028.2	1033.9	1045.4	1060.7	1062.6
32.5°	999.5	1005.3	1018.6	1033.9	1037.7
35°	963.2	970.9	986.1	1005.3	1009.1
37.5°	930.7	936.5	955.6	976.6	982.3
40°	890.6	902.1	921.2	946.0	955.6
42.5°	850.5	861.9	884.9	917.3	928.8
45°	808.4	821.8	850.5	886.8	902.1
47.5°	766.4	781.7	814.1	856.2	873.4
50°	718.6	737.7	777.8	825.6	844.7
52.5°	672.7	695.7	739.6	793.1	818.0
55°	624.9	647.9	705.2	760.6	787.4
57.5°	571.4	602.0	665.1	728.1	756.8
60°	521.7	550.4	626.9	695.7	724.3
62.5°	468.2	506.5	588.6	661.3	689.9
65°	412.8	454.8	548.5	621.1	649.8
67.5°	363.1	409.0	508.4	581.0	609.7
70°	303.9	361.2	464.4	537.0	565.7
72.5°	248.4	311.5	418.5	489.3	516.0
75°	194.9	265.6	370.8	433.8	447.2
77.5°	145.2	219.8	321.1	347.8	338.3
80°	103.2	175.8	250.4	237.0	242.7
82.5°	66.9	133.8	154.8	175.8	181.6
85°	38.2	78.4	95.6	103.2	107.0
87.5°	17.2	28.7	38.2	38.2	36.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)