

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: P311676

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-S-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: P311676
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 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: 6020.0 lumens
Efficiency: N/A
Efficacy: 123.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

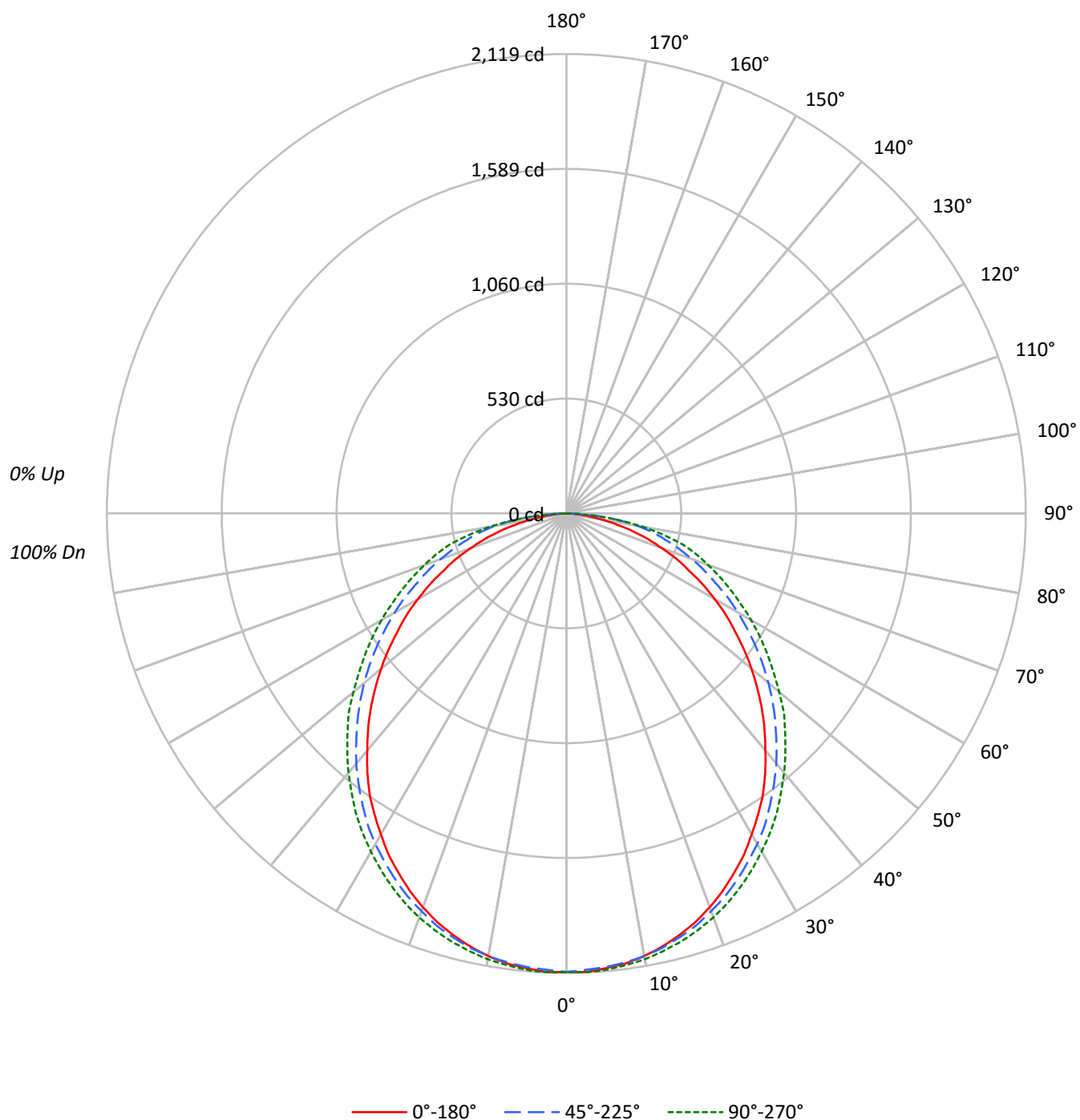
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2846	2846	2846
5°	2843	2836	2854
10°	2832	2832	2853
15°	2805	2818	2847
20°	2768	2795	2839
25°	2717	2768	2822
30°	2656	2736	2799
35°	2598	2692	2777
40°	2509	2647	2744
45°	2427	2594	2714
50°	2334	2546	2682
55°	2229	2499	2655
60°	2125	2460	2650
65°	1991	2417	2666
70°	1843	2430	2738
75°	1650	2475	2892
80°	1333	2623	2830
85°	1003	2302	2243



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.2	3.3
10°-20°	572.1	9.5
20°-30°	860.0	14.3
30°-40°	1024.4	17.0
40°-50°	1048.4	17.4
50°-60°	943.9	15.7
60°-70°	741.2	12.3
70°-80°	481.1	8.0
80°-90°	148.8	2.5
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°	1632.3	27.1
0°-40°	2656.7	44.1
0°-60°	4648.9	77.2
0°-90°	6020.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6020.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2115	2115	2115	2115	2115	
5°	2105	2109	2100	2111	2113	200
15°	2014	2019	2023	2040	2044	568
25°	1830	1845	1864	1895	1901	843
35°	1581	1600	1639	1679	1690	987
45°	1275	1306	1363	1415	1426	983
55°	950	992	1065	1120	1132	852
65°	625	673	759	822	838	622
75°	317	379	476	541	556	336
85°	65	120	149	145	145	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2114.9	2114.9	2114.9	2114.9	2114.9
2.5°	2116.8	2116.8	2107.2	2116.8	2118.7
5°	2105.3	2109.1	2099.6	2111.0	2113.0
7.5°	2093.8	2093.8	2088.1	2099.6	2101.5
10°	2072.8	2074.7	2072.8	2086.2	2088.1
12.5°	2046.0	2049.9	2051.8	2065.1	2067.1
15°	2013.5	2019.3	2023.1	2040.3	2044.1
17.5°	1977.2	1982.9	1992.5	2011.6	2015.4
20°	1933.2	1940.9	1952.3	1977.2	1982.9
22.5°	1885.4	1893.1	1912.2	1935.1	1944.7
25°	1830.0	1845.2	1864.4	1895.0	1900.7
27.5°	1774.5	1787.9	1812.7	1845.2	1852.9
30°	1709.5	1730.5	1761.1	1793.6	1801.3
32.5°	1646.4	1667.4	1703.7	1738.2	1747.7
35°	1581.4	1600.5	1638.7	1678.9	1690.4
37.5°	1506.8	1531.7	1573.7	1613.9	1625.3
40°	1428.4	1459.0	1506.8	1548.9	1562.2
42.5°	1353.8	1386.3	1434.1	1480.0	1495.3
45°	1275.4	1306.0	1363.4	1415.0	1426.5
47.5°	1195.1	1229.5	1290.7	1342.3	1361.5
50°	1114.8	1151.1	1216.1	1269.7	1281.2
52.5°	1034.5	1072.7	1141.6	1198.9	1204.7
55°	950.4	992.4	1065.1	1120.5	1132.0
57.5°	873.9	910.2	988.6	1046.0	1059.3
60°	789.7	829.9	914.0	967.6	984.8
62.5°	709.4	751.5	839.4	893.0	908.3
65°	625.3	673.1	759.1	822.2	837.5
67.5°	552.6	598.5	690.3	751.5	766.8
70°	468.5	520.1	617.6	680.7	696.0
72.5°	395.8	449.4	546.9	608.1	631.0
75°	317.4	378.6	476.1	541.1	556.4
77.5°	240.9	311.7	411.1	460.8	460.8
80°	172.1	246.7	338.5	361.4	365.2
82.5°	112.8	185.5	250.5	248.6	248.6
85°	65.0	120.5	149.1	145.3	145.3
87.5°	24.9	49.7	53.5	53.5	51.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)