

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: P311836

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CP250-W2A-U-5000K**

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: P311836
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: 24FCZ2-75HE-UNV-L82765-S-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 5000K 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: 6920.0 lumens
Efficiency: N/A
Efficacy: 107.6 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

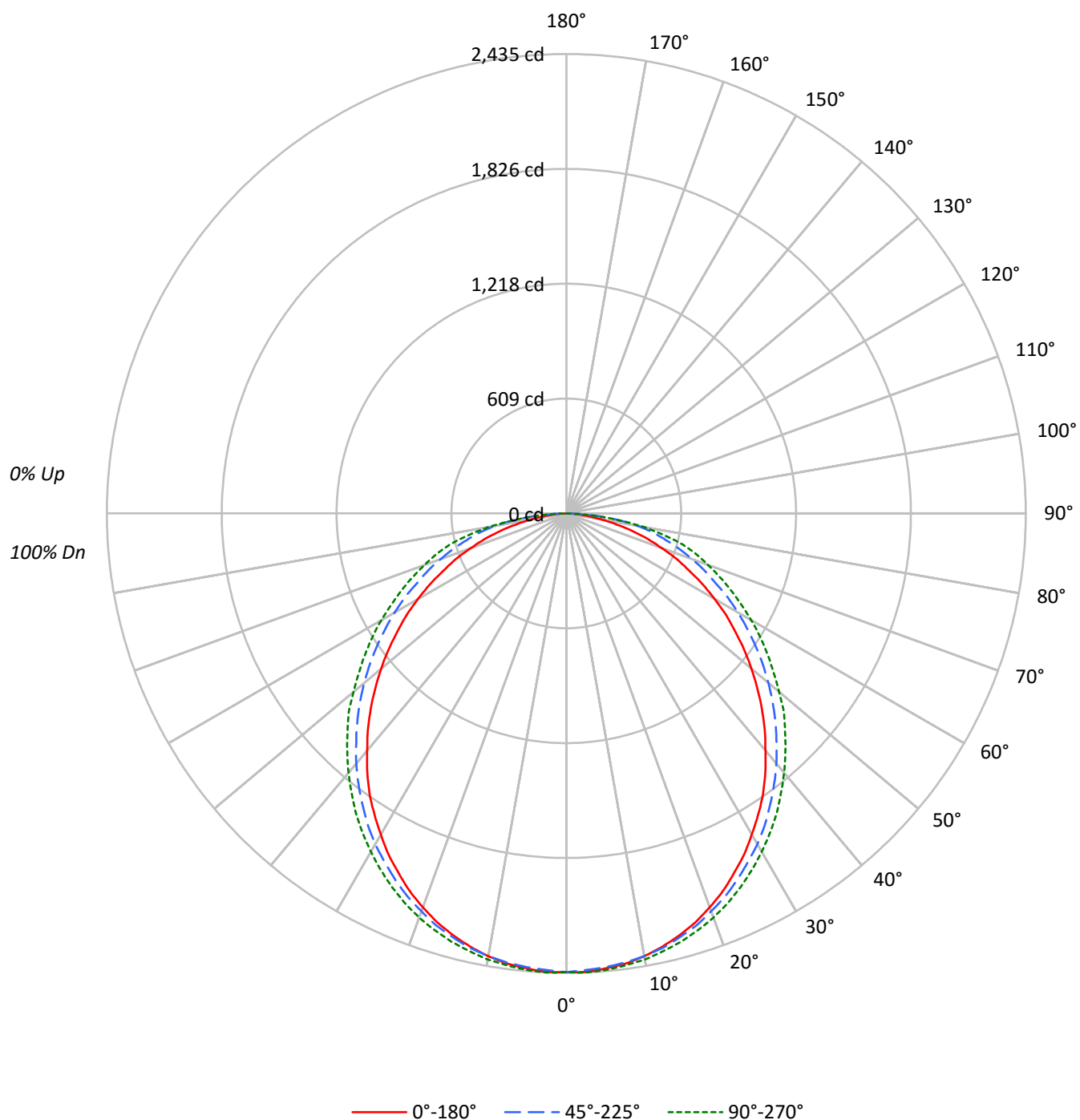
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3271	3271	3271
5°	3269	3260	3280
10°	3255	3255	3279
15°	3224	3239	3273
20°	3182	3213	3264
25°	3123	3182	3244
30°	3053	3145	3217
35°	2986	3094	3192
40°	2884	3042	3154
45°	2790	2982	3120
50°	2682	2926	3083
55°	2563	2872	3052
60°	2443	2827	3046
65°	2288	2778	3065
70°	2118	2793	3148
75°	1897	2845	3325
80°	1533	3015	3253
85°	1153	2646	2580



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.1	3.3
10°-20°	657.6	9.5
20°-30°	988.5	14.3
30°-40°	1177.5	17.0
40°-50°	1205.1	17.4
50°-60°	1085.0	15.7
60°-70°	852.0	12.3
70°-80°	553.0	8.0
80°-90°	171.0	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°	1876.3	27.1
0°-40°	3053.8	44.1
0°-60°	5343.9	77.2
0°-90°	6920.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6920.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2431	2431	2431	2431	2431	
5°	2420	2424	2414	2427	2429	230
15°	2314	2321	2326	2345	2350	653
25°	2104	2121	2143	2178	2185	969
35°	1818	1840	1884	1930	1943	1134
45°	1466	1501	1567	1627	1640	1130
55°	1092	1141	1224	1288	1301	979
65°	719	774	873	945	963	716
75°	365	435	547	622	640	386
85°	75	138	171	167	167	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2431.0	2431.0	2431.0	2431.0	2431.0
2.5°	2433.2	2433.2	2422.2	2433.2	2435.4
5°	2420.1	2424.4	2413.5	2426.6	2428.8
7.5°	2406.9	2406.9	2400.3	2413.5	2415.7
10°	2382.7	2384.9	2382.7	2398.1	2400.3
12.5°	2351.9	2356.3	2358.5	2373.9	2376.1
15°	2314.5	2321.1	2325.5	2345.3	2349.7
17.5°	2272.8	2279.4	2290.4	2312.3	2316.7
20°	2222.2	2231.0	2244.2	2272.8	2279.4
22.5°	2167.3	2176.1	2198.0	2224.4	2235.4
25°	2103.5	2121.1	2143.1	2178.3	2184.9
27.5°	2039.8	2055.2	2083.7	2121.1	2129.9
30°	1965.1	1989.2	2024.4	2061.8	2070.6
32.5°	1892.5	1916.7	1958.5	1998.0	2009.0
35°	1817.8	1839.8	1883.7	1929.9	1943.1
37.5°	1732.1	1760.6	1809.0	1855.2	1868.3
40°	1641.9	1677.1	1732.1	1780.4	1795.8
42.5°	1556.2	1593.6	1648.5	1701.3	1718.9
45°	1466.1	1501.3	1567.2	1626.6	1639.7
47.5°	1373.8	1413.3	1483.7	1543.0	1565.0
50°	1281.5	1323.2	1398.0	1459.5	1472.7
52.5°	1189.1	1233.1	1312.2	1378.2	1384.8
55°	1092.4	1140.8	1224.3	1288.1	1301.2
57.5°	1004.5	1046.3	1136.4	1202.3	1217.7
60°	907.8	954.0	1050.7	1112.2	1132.0
62.5°	815.5	863.8	964.9	1026.5	1044.1
65°	718.8	773.7	872.6	945.2	962.7
67.5°	635.2	688.0	793.5	863.8	881.4
70°	538.5	597.9	710.0	782.5	800.1
72.5°	455.0	516.5	628.6	699.0	725.4
75°	364.9	435.2	547.3	622.0	639.6
77.5°	277.0	358.3	472.6	529.7	529.7
80°	197.8	283.5	389.1	415.4	419.8
82.5°	129.7	213.2	287.9	285.7	285.7
85°	74.7	138.5	171.4	167.1	167.1
87.5°	28.6	57.1	61.5	61.5	59.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)