

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: P311816

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CP125-W2A-U-4000K**

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: P311816
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4000K 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: 7062.0 lumens
Efficiency: N/A
Efficacy: 111.2 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

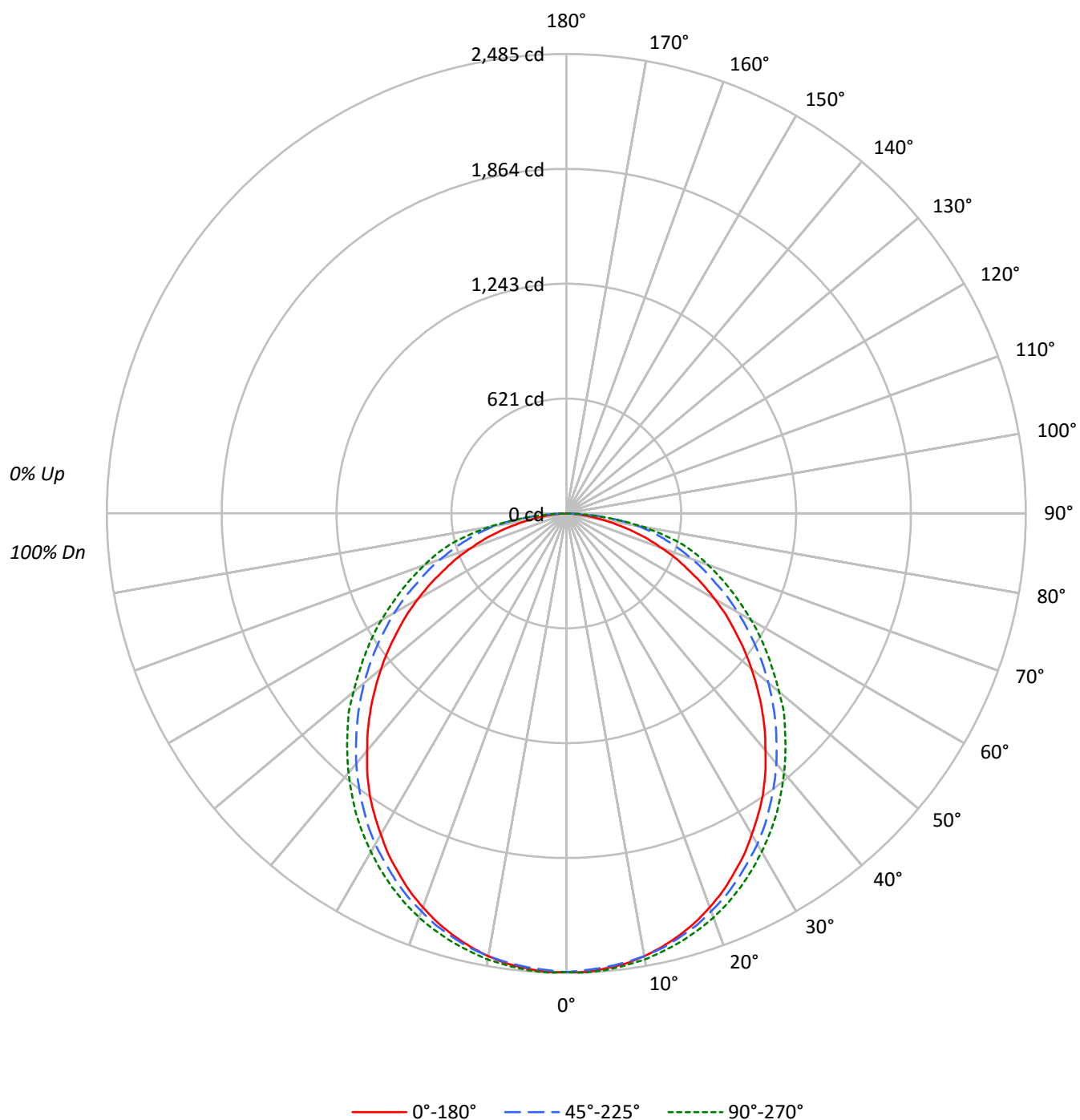
Input Watts (W): 63.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3338	3338	3338
5°	3336	3327	3348
10°	3322	3322	3347
15°	3290	3306	3340
20°	3247	3279	3331
25°	3187	3247	3310
30°	3116	3210	3283
35°	3047	3158	3257
40°	2943	3105	3219
45°	2847	3043	3184
50°	2737	2986	3146
55°	2615	2931	3115
60°	2493	2885	3109
65°	2335	2835	3128
70°	2162	2850	3212
75°	1936	2903	3394
80°	1564	3076	3319
85°	1178	2702	2632



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.9	3.3
10°-20°	671.1	9.5
20°-30°	1008.8	14.3
30°-40°	1201.7	17.0
40°-50°	1229.9	17.4
50°-60°	1107.2	15.7
60°-70°	869.5	12.3
70°-80°	564.3	8.0
80°-90°	174.5	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°	1914.8	27.1
0°-40°	3116.5	44.1
0°-60°	5453.6	77.2
0°-90°	7062.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7062.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2481	2481	2481	2481	2481	
5°	2470	2474	2463	2476	2479	235
15°	2362	2369	2373	2393	2398	666
25°	2147	2165	2187	2223	2230	989
35°	1855	1878	1922	1970	1983	1157
45°	1496	1532	1599	1660	1673	1154
55°	1115	1164	1249	1314	1328	999
65°	734	790	890	965	982	730
75°	372	444	558	635	653	394
85°	76	141	175	170	170	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2480.9	2480.9	2480.9	2480.9	2480.9
2.5°	2483.2	2483.2	2472.0	2483.2	2485.4
5°	2469.7	2474.2	2463.0	2476.4	2478.7
7.5°	2456.3	2456.3	2449.5	2463.0	2465.2
10°	2431.6	2433.8	2431.6	2447.3	2449.5
12.5°	2400.2	2404.7	2406.9	2422.6	2424.8
15°	2362.0	2368.8	2373.3	2393.4	2397.9
17.5°	2319.4	2326.1	2337.4	2359.8	2364.3
20°	2267.8	2276.8	2290.3	2319.4	2326.1
22.5°	2211.7	2220.7	2243.2	2270.1	2281.3
25°	2146.7	2164.6	2187.1	2223.0	2229.7
27.5°	2081.6	2097.3	2126.5	2164.6	2173.6
30°	2005.4	2030.1	2065.9	2104.1	2113.0
32.5°	1931.4	1956.0	1998.6	2039.0	2050.2
35°	1855.1	1877.5	1922.4	1969.5	1982.9
37.5°	1767.6	1796.8	1846.1	1893.2	1906.7
40°	1675.6	1711.5	1767.6	1817.0	1832.7
42.5°	1588.2	1626.3	1682.4	1736.2	1754.1
45°	1496.2	1532.1	1599.4	1659.9	1673.4
47.5°	1402.0	1442.3	1514.1	1574.7	1597.1
50°	1307.8	1350.4	1426.6	1489.5	1502.9
52.5°	1213.5	1258.4	1339.2	1406.5	1413.2
55°	1114.8	1164.2	1249.4	1314.5	1327.9
57.5°	1025.1	1067.7	1159.7	1227.0	1242.7
60°	926.4	973.5	1072.2	1135.0	1155.2
62.5°	832.2	881.6	984.7	1047.6	1065.5
65°	733.5	789.6	890.5	964.6	982.5
67.5°	648.3	702.1	809.8	881.6	899.5
70°	549.6	610.1	724.5	798.6	816.5
72.5°	464.3	527.1	641.5	713.3	740.2
75°	372.4	444.1	558.5	634.8	652.8
77.5°	282.6	365.6	482.3	540.6	540.6
80°	201.9	289.4	397.0	424.0	428.4
82.5°	132.3	217.6	293.9	291.6	291.6
85°	76.3	141.3	175.0	170.5	170.5
87.5°	29.2	58.3	62.8	62.8	60.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)