

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: P311818

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CP125-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: P311818
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 7285.0 lumens
Efficiency: N/A
Efficacy: 113.3 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

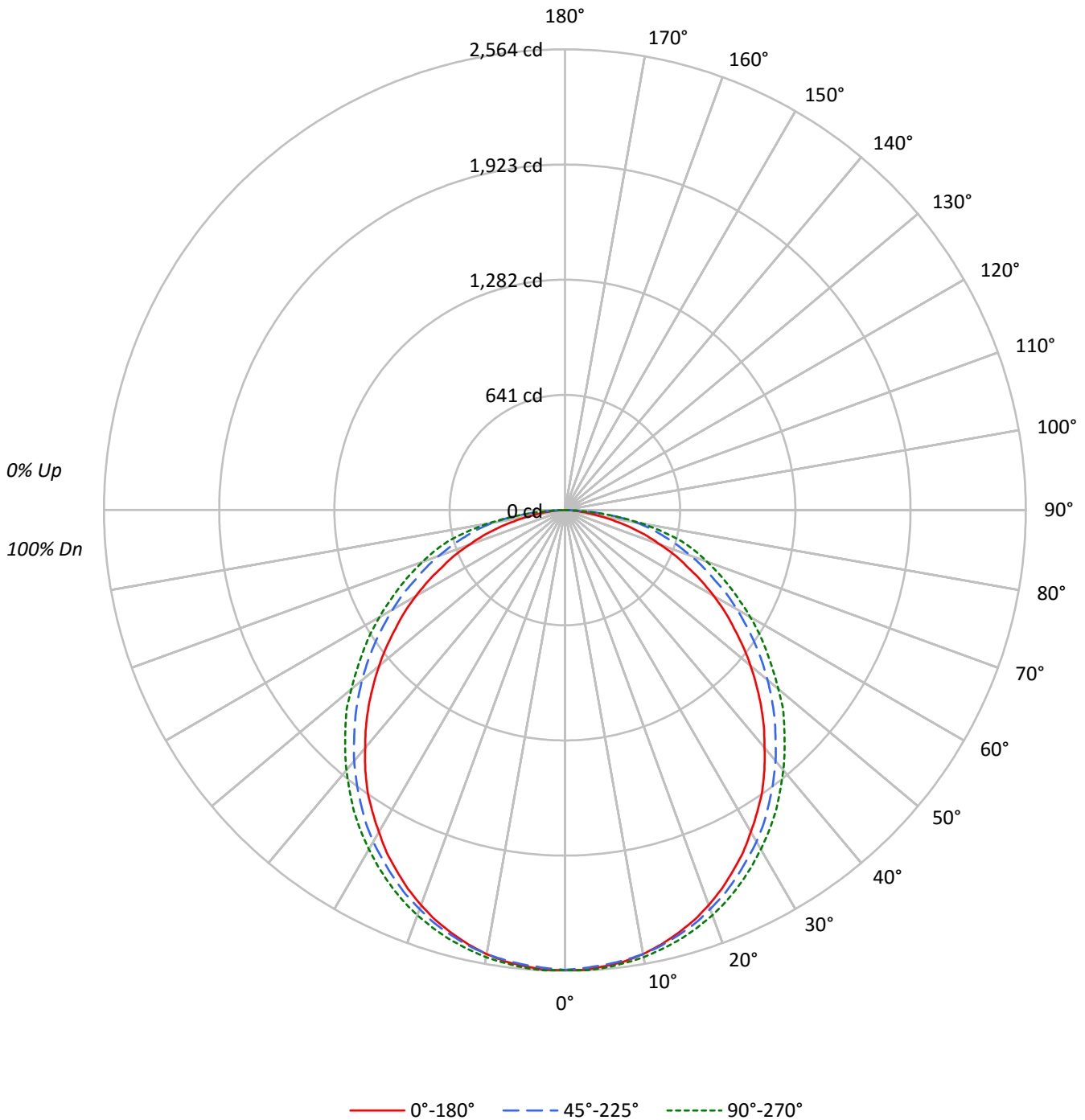
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3444	3444	3444
5°	3441	3432	3454
10°	3427	3427	3452
15°	3394	3410	3446
20°	3350	3383	3436
25°	3288	3349	3415
30°	3214	3311	3387
35°	3143	3257	3360
40°	3036	3203	3320
45°	2937	3139	3285
50°	2824	3081	3245
55°	2698	3023	3213
60°	2572	2976	3207
65°	2409	2925	3227
70°	2230	2940	3314
75°	1997	2995	3501
80°	1614	3174	3425
85°	1215	2787	2716



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.3	3.3
10°-20°	692.3	9.5
20°-30°	1040.7	14.3
30°-40°	1239.6	17.0
40°-50°	1268.7	17.4
50°-60°	1142.2	15.7
60°-70°	897.0	12.3
70°-80°	582.2	8.0
80°-90°	180.1	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°	1975.3	27.1
0°-40°	3214.9	44.1
0°-60°	5625.8	77.2
0°-90°	7285.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7285.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2559	2559	2559	2559	2559	
5°	2548	2552	2541	2555	2557	242
15°	2437	2444	2448	2469	2474	687
25°	2214	2233	2256	2293	2300	1020
35°	1914	1937	1983	2032	2046	1194
45°	1543	1580	1650	1712	1726	1190
55°	1150	1201	1289	1356	1370	1031
65°	757	814	919	995	1014	753
75°	384	458	576	655	673	406
85°	79	146	180	176	176	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2559.3	2559.3	2559.3	2559.3	2559.3
2.5°	2561.6	2561.6	2550.0	2561.6	2563.9
5°	2547.7	2552.3	2540.8	2554.6	2557.0
7.5°	2533.8	2533.8	2526.9	2540.8	2543.1
10°	2508.4	2510.7	2508.4	2524.6	2526.9
12.5°	2476.0	2480.6	2482.9	2499.1	2501.4
15°	2436.6	2443.6	2448.2	2469.0	2473.7
17.5°	2392.7	2399.6	2411.2	2434.3	2438.9
20°	2339.4	2348.7	2362.6	2392.7	2399.6
22.5°	2281.6	2290.8	2314.0	2341.8	2353.3
25°	2214.5	2233.0	2256.1	2293.2	2300.1
27.5°	2147.4	2163.6	2193.7	2233.0	2242.3
30°	2068.7	2094.2	2131.2	2170.5	2179.8
32.5°	1992.3	2017.8	2061.8	2103.4	2115.0
35°	1913.7	1936.8	1983.1	2031.7	2045.6
37.5°	1823.4	1853.5	1904.4	1953.0	1966.9
40°	1728.5	1765.6	1823.4	1874.3	1890.5
42.5°	1638.3	1677.6	1735.5	1791.0	1809.5
45°	1543.4	1580.5	1649.9	1712.3	1726.2
47.5°	1446.2	1487.9	1561.9	1624.4	1647.6
50°	1349.1	1393.0	1471.7	1536.5	1550.4
52.5°	1251.9	1298.1	1381.4	1450.9	1457.8
55°	1150.1	1201.0	1288.9	1356.0	1369.9
57.5°	1057.5	1101.5	1196.3	1265.8	1281.9
60°	955.7	1004.3	1106.1	1170.9	1191.7
62.5°	858.5	909.4	1015.8	1080.6	1099.1
65°	756.7	814.5	918.7	995.0	1013.5
67.5°	668.7	724.3	835.3	909.4	927.9
70°	566.9	629.4	747.4	823.8	842.3
72.5°	479.0	543.8	661.8	735.8	763.6
75°	384.1	458.2	576.2	654.9	673.4
77.5°	291.6	377.2	497.5	557.7	557.7
80°	208.3	298.5	409.6	437.3	442.0
82.5°	136.5	224.5	303.1	300.8	300.8
85°	78.7	145.8	180.5	175.9	175.9
87.5°	30.1	60.2	64.8	64.8	62.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)