

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: P314534

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-S-CP187-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: P314534
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-L83050-S-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" 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: 7183.0 lumens
Efficiency: N/A
Efficacy: 109.0 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

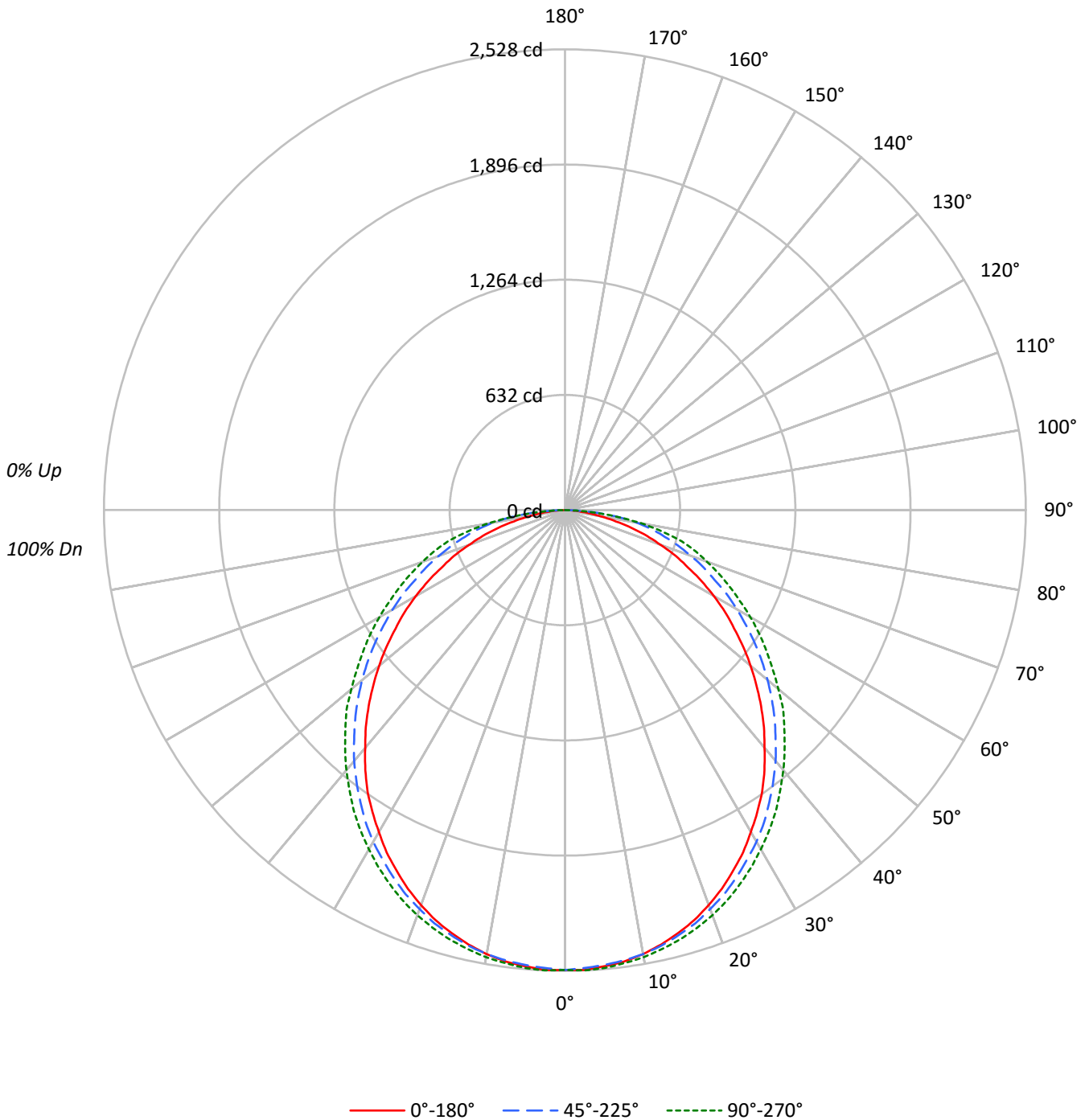
Input Watts (W): 65.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3395	3395	3395
5°	3393	3384	3405
10°	3379	3379	3404
15°	3347	3362	3397
20°	3303	3335	3388
25°	3242	3302	3367
30°	3169	3265	3339
35°	3099	3212	3313
40°	2993	3158	3274
45°	2896	3095	3239
50°	2784	3037	3200
55°	2660	2981	3168
60°	2536	2935	3162
65°	2375	2884	3181
70°	2199	2899	3267
75°	1969	2953	3451
80°	1591	3129	3377
85°	1198	2748	2677



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.9	3.3
10°-20°	682.6	9.5
20°-30°	1026.1	14.3
30°-40°	1222.3	17.0
40°-50°	1250.9	17.4
50°-60°	1126.2	15.7
60°-70°	884.4	12.3
70°-80°	574.0	8.0
80°-90°	177.5	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°	1947.6	27.1
0°-40°	3169.9	44.1
0°-60°	5547.0	77.2
0°-90°	7183.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7183.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2523	2523	2523	2523	2523	
5°	2512	2517	2505	2519	2521	239
15°	2402	2409	2414	2434	2439	677
25°	2184	2202	2224	2261	2268	1006
35°	1887	1910	1955	2003	2017	1177
45°	1522	1558	1627	1688	1702	1173
55°	1134	1184	1271	1337	1351	1017
65°	746	803	906	981	999	743
75°	379	452	568	646	664	401
85°	78	144	178	173	173	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2523.4	2523.4	2523.4	2523.4	2523.4
2.5°	2525.7	2525.7	2514.3	2525.7	2528.0
5°	2512.0	2516.6	2505.2	2518.9	2521.2
7.5°	2498.3	2498.3	2491.5	2505.2	2507.5
10°	2473.2	2475.5	2473.2	2489.2	2491.5
12.5°	2441.3	2445.9	2448.1	2464.1	2466.4
15°	2402.5	2409.4	2413.9	2434.5	2439.0
17.5°	2359.2	2366.0	2377.4	2400.2	2404.8
20°	2306.7	2315.8	2329.5	2359.2	2366.0
22.5°	2249.6	2258.8	2281.6	2309.0	2320.4
25°	2183.5	2201.7	2224.5	2261.1	2267.9
27.5°	2117.3	2133.3	2162.9	2201.7	2210.9
30°	2039.7	2064.8	2101.3	2140.1	2149.3
32.5°	1964.4	1989.5	2032.9	2074.0	2085.4
35°	1886.9	1909.7	1955.3	2003.2	2016.9
37.5°	1797.9	1827.6	1877.7	1925.7	1939.3
40°	1704.3	1740.9	1797.9	1848.1	1864.1
42.5°	1615.4	1654.2	1711.2	1765.9	1784.2
45°	1521.8	1558.3	1626.8	1688.4	1702.1
47.5°	1426.0	1467.1	1540.1	1601.7	1624.5
50°	1330.2	1373.5	1451.1	1515.0	1528.7
52.5°	1234.3	1280.0	1362.1	1430.6	1437.4
55°	1133.9	1184.1	1270.8	1337.0	1350.7
57.5°	1042.7	1086.0	1179.6	1248.0	1264.0
60°	942.3	990.2	1090.6	1154.5	1175.0
62.5°	846.5	896.7	1001.6	1065.5	1083.8
65°	746.1	803.1	905.8	981.1	999.3
67.5°	659.4	714.1	823.7	896.7	914.9
70°	559.0	620.6	737.0	812.2	830.5
72.5°	472.3	536.2	652.5	725.5	752.9
75°	378.7	451.8	568.1	645.7	663.9
77.5°	287.5	371.9	490.5	549.9	549.9
80°	205.3	294.3	403.8	431.2	435.8
82.5°	134.6	221.3	298.9	296.6	296.6
85°	77.6	143.7	178.0	173.4	173.4
87.5°	29.7	59.3	63.9	63.9	61.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)