

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: P311830

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CP187-W2A-U-6500K**

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: P311830
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-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (336) 6500K 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: 7082.0 lumens
Efficiency: N/A
Efficacy: 108.0 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

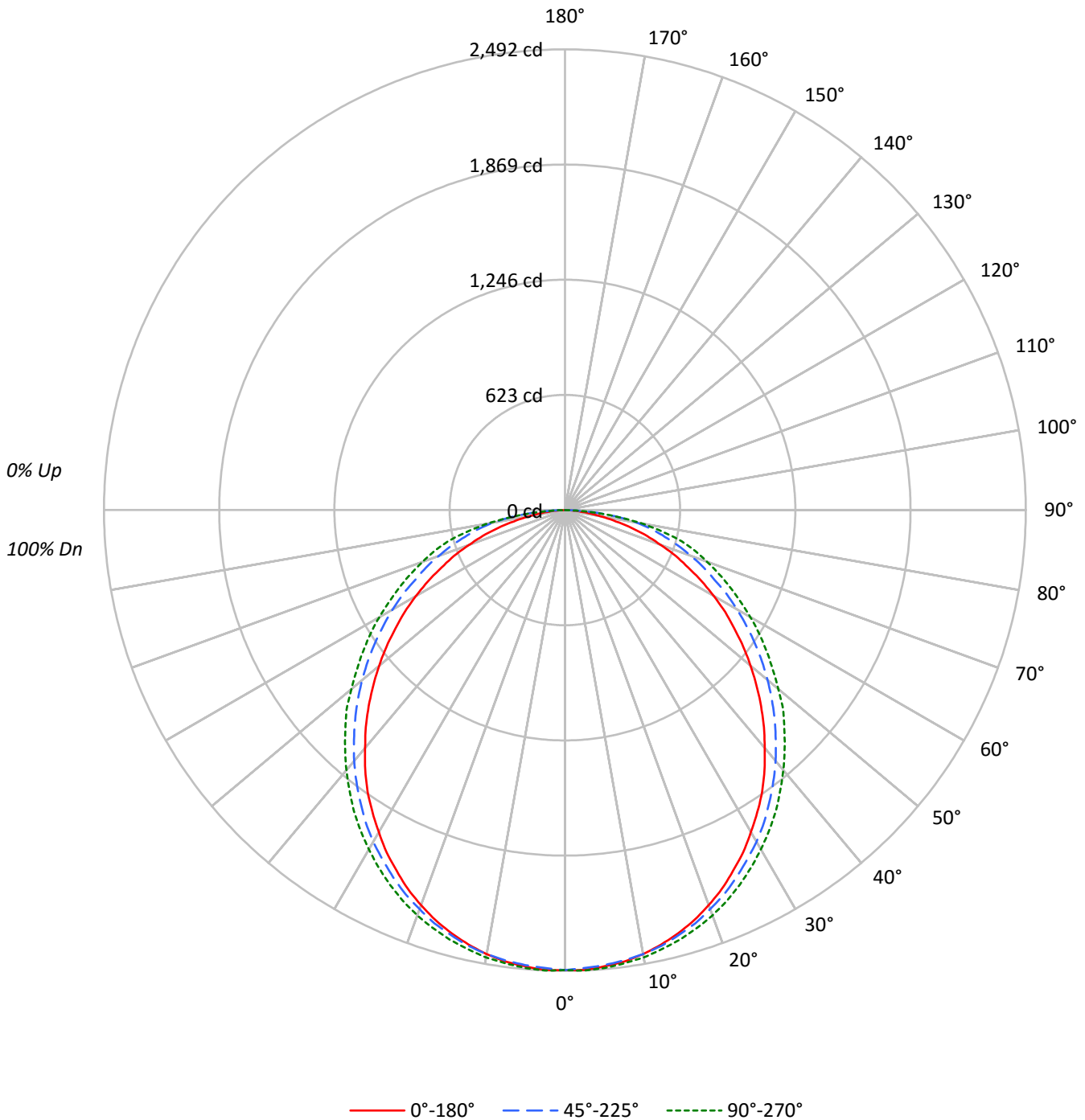
Input Watts (W): 65.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-75HE-UNV-L82765-S-CP187-W2A-U-6500K

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°	3348	3348	3348
5°	3345	3336	3357
10°	3332	3332	3356
15°	3299	3315	3350
20°	3256	3289	3340
25°	3196	3256	3320
30°	3125	3219	3292
35°	3056	3166	3266
40°	2951	3113	3228
45°	2855	3052	3193
50°	2745	2995	3155
55°	2623	2939	3124
60°	2500	2894	3117
65°	2342	2843	3137
70°	2168	2858	3221
75°	1941	2912	3403
80°	1569	3085	3329
85°	1181	2709	2640



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.5	3.3
10°-20°	673.0	9.5
20°-30°	1011.7	14.3
30°-40°	1205.1	17.0
40°-50°	1233.3	17.4
50°-60°	1110.4	15.7
60°-70°	872.0	12.3
70°-80°	565.9	8.0
80°-90°	175.0	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°	1920.2	27.1
0°-40°	3125.3	44.1
0°-60°	5469.0	77.2
0°-90°	7082.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7082.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2488	2488	2488	2488	2488	
5°	2477	2481	2470	2484	2486	235
15°	2369	2376	2380	2400	2405	668
25°	2153	2171	2193	2229	2236	992
35°	1860	1883	1928	1975	1989	1161
45°	1500	1536	1604	1665	1678	1157
55°	1118	1168	1253	1318	1332	1002
65°	736	792	893	967	985	732
75°	373	445	560	637	655	395
85°	76	142	176	171	171	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2488.0	2488.0	2488.0	2488.0	2488.0
2.5°	2490.2	2490.2	2479.0	2490.2	2492.5
5°	2476.7	2481.2	2470.0	2483.5	2485.7
7.5°	2463.2	2463.2	2456.5	2470.0	2472.2
10°	2438.5	2440.7	2438.5	2454.2	2456.5
12.5°	2407.0	2411.5	2413.7	2429.5	2431.7
15°	2368.7	2375.5	2380.0	2400.2	2404.7
17.5°	2326.0	2332.7	2344.0	2366.5	2371.0
20°	2274.2	2283.2	2296.7	2326.0	2332.7
22.5°	2218.0	2227.0	2249.5	2276.5	2287.7
25°	2152.8	2170.8	2193.3	2229.3	2236.0
27.5°	2087.5	2103.3	2132.5	2170.8	2179.8
30°	2011.1	2035.8	2071.8	2110.0	2119.0
32.5°	1936.8	1961.6	2004.3	2044.8	2056.0
35°	1860.3	1882.8	1927.8	1975.1	1988.6
37.5°	1772.6	1801.9	1851.3	1898.6	1912.1
40°	1680.4	1716.4	1772.6	1822.1	1837.8
42.5°	1592.6	1630.9	1687.1	1741.1	1759.1
45°	1500.4	1536.4	1603.9	1664.6	1678.1
47.5°	1405.9	1446.4	1518.4	1579.2	1601.6
50°	1311.5	1354.2	1430.7	1493.7	1507.2
52.5°	1217.0	1262.0	1343.0	1410.4	1417.2
55°	1118.0	1167.5	1253.0	1318.2	1331.7
57.5°	1028.0	1070.8	1163.0	1230.5	1246.2
60°	929.0	976.3	1075.3	1138.2	1158.5
62.5°	834.6	884.1	987.5	1050.5	1068.5
65°	735.6	791.8	893.1	967.3	985.3
67.5°	650.1	704.1	812.1	884.1	902.1
70°	551.1	611.9	726.6	800.8	818.8
72.5°	465.6	528.6	643.4	715.3	742.3
75°	373.4	445.4	560.1	636.6	654.6
77.5°	283.4	366.7	483.6	542.1	542.1
80°	202.5	290.2	398.2	425.2	429.7
82.5°	132.7	218.2	294.7	292.4	292.4
85°	76.5	141.7	175.5	171.0	171.0
87.5°	29.2	58.5	63.0	63.0	60.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)