

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: P314536

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-S-CP250-W2A-U-3500K**

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: P314536
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-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 3500K 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: 6721.0 lumens
Efficiency: N/A
Efficacy: 107.0 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

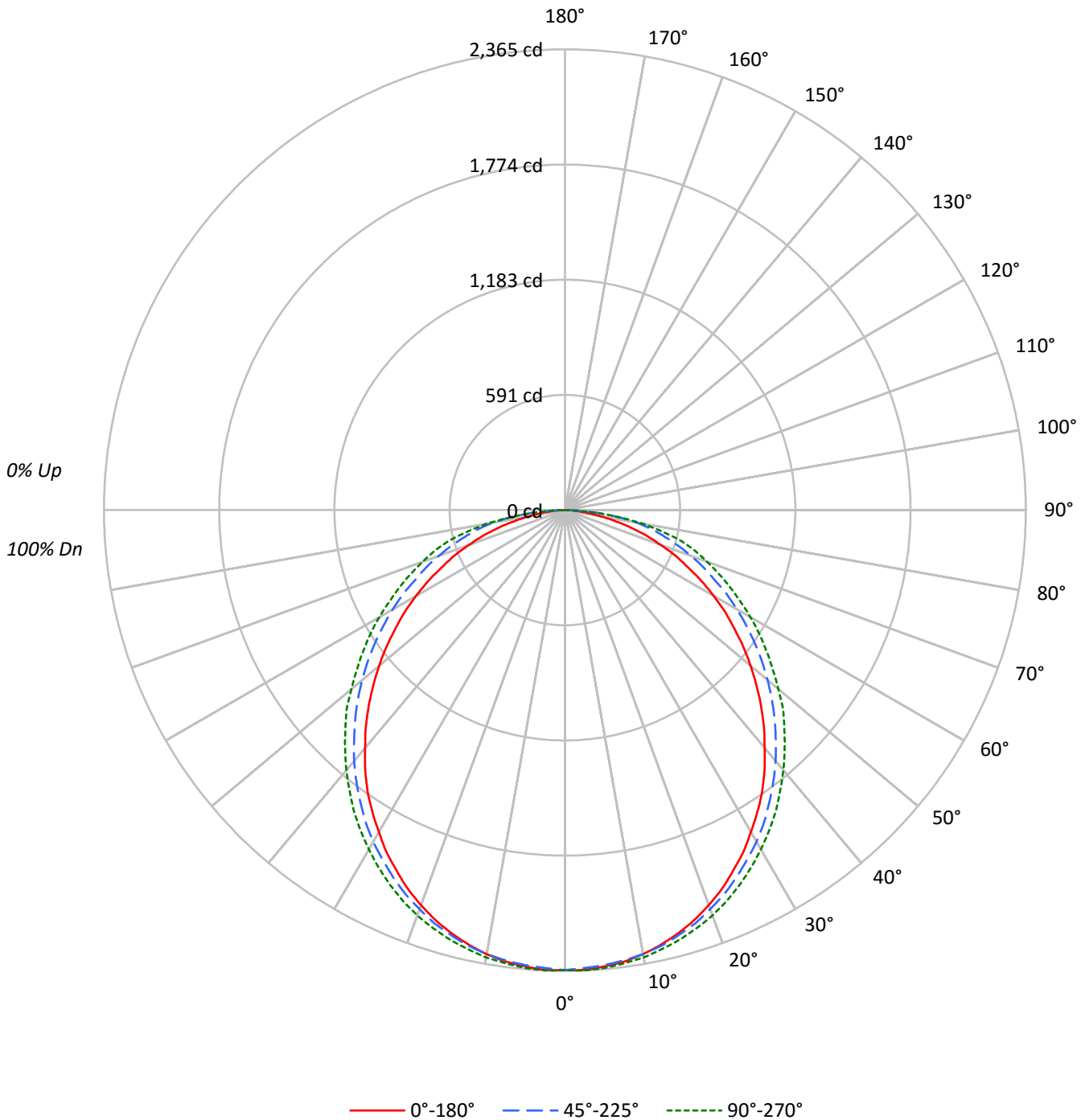
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-75HE-UNV-L83050-S-CP250-W2A-U-3500K

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°	3177	3177	3177
5°	3175	3166	3186
10°	3162	3162	3185
15°	3131	3146	3179
20°	3090	3121	3170
25°	3033	3090	3150
30°	2965	3055	3124
35°	2900	3005	3100
40°	2801	2955	3064
45°	2709	2896	3030
50°	2605	2842	2994
55°	2489	2789	2965
60°	2373	2746	2958
65°	2223	2698	2977
70°	2057	2713	3057
75°	1842	2764	3229
80°	1488	2928	3160
85°	1121	2570	2504



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	223.5	3.3
10°-20°	638.7	9.5
20°-30°	960.1	14.3
30°-40°	1143.7	17.0
40°-50°	1170.5	17.4
50°-60°	1053.8	15.7
60°-70°	827.6	12.3
70°-80°	537.1	8.0
80°-90°	166.1	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°	1822.3	27.1
0°-40°	2966.0	44.1
0°-60°	5190.2	77.2
0°-90°	6721.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6721.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2361	2361	2361	2361	2361	
5°	2350	2355	2344	2357	2359	223
15°	2248	2254	2259	2278	2282	634
25°	2043	2060	2082	2116	2122	941
35°	1766	1787	1830	1874	1887	1101
45°	1424	1458	1522	1580	1593	1098
55°	1061	1108	1189	1251	1264	951
65°	698	752	848	918	935	695
75°	354	423	532	604	621	375
85°	73	134	166	162	162	88
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2361.1	2361.1	2361.1	2361.1	2361.1
2.5°	2363.3	2363.3	2352.6	2363.3	2365.4
5°	2350.5	2354.7	2344.1	2356.9	2359.0
7.5°	2337.6	2337.6	2331.2	2344.1	2346.2
10°	2314.2	2316.3	2314.2	2329.1	2331.2
12.5°	2284.3	2288.5	2290.7	2305.6	2307.8
15°	2248.0	2254.4	2258.7	2277.9	2282.1
17.5°	2207.4	2213.8	2224.5	2245.8	2250.1
20°	2158.3	2166.9	2179.7	2207.4	2213.8
22.5°	2105.0	2113.5	2134.8	2160.5	2171.1
25°	2043.0	2060.1	2081.5	2115.6	2122.0
27.5°	1981.1	1996.1	2023.8	2060.1	2068.7
30°	1908.5	1932.0	1966.2	2002.5	2011.0
32.5°	1838.1	1861.6	1902.1	1940.6	1951.2
35°	1765.5	1786.9	1829.6	1874.4	1887.2
37.5°	1682.3	1710.0	1757.0	1801.8	1814.6
40°	1594.7	1628.9	1682.3	1729.2	1744.2
42.5°	1511.5	1547.8	1601.1	1652.4	1669.4
45°	1423.9	1458.1	1522.1	1579.8	1592.6
47.5°	1334.3	1372.7	1441.0	1498.7	1520.0
50°	1244.6	1285.2	1357.8	1417.5	1430.3
52.5°	1154.9	1197.6	1274.5	1338.5	1344.9
55°	1061.0	1108.0	1189.1	1251.0	1263.8
57.5°	975.6	1016.2	1103.7	1167.8	1182.7
60°	881.7	926.5	1020.5	1080.2	1099.4
62.5°	792.0	839.0	937.2	997.0	1014.0
65°	698.1	751.5	847.5	918.0	935.1
67.5°	617.0	668.2	770.7	839.0	856.1
70°	523.0	580.7	689.6	760.0	777.1
72.5°	441.9	501.7	610.6	678.9	704.5
75°	354.4	422.7	531.6	604.2	621.2
77.5°	269.0	348.0	459.0	514.5	514.5
80°	192.1	275.4	377.9	403.5	407.8
82.5°	126.0	207.1	279.7	277.5	277.5
85°	72.6	134.5	166.5	162.2	162.2
87.5°	27.8	55.5	59.8	59.8	57.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)