

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: P314516

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-S-CA08-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: P314516
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-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 7241.0 lumens
Efficiency: N/A
Efficacy: 115.3 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

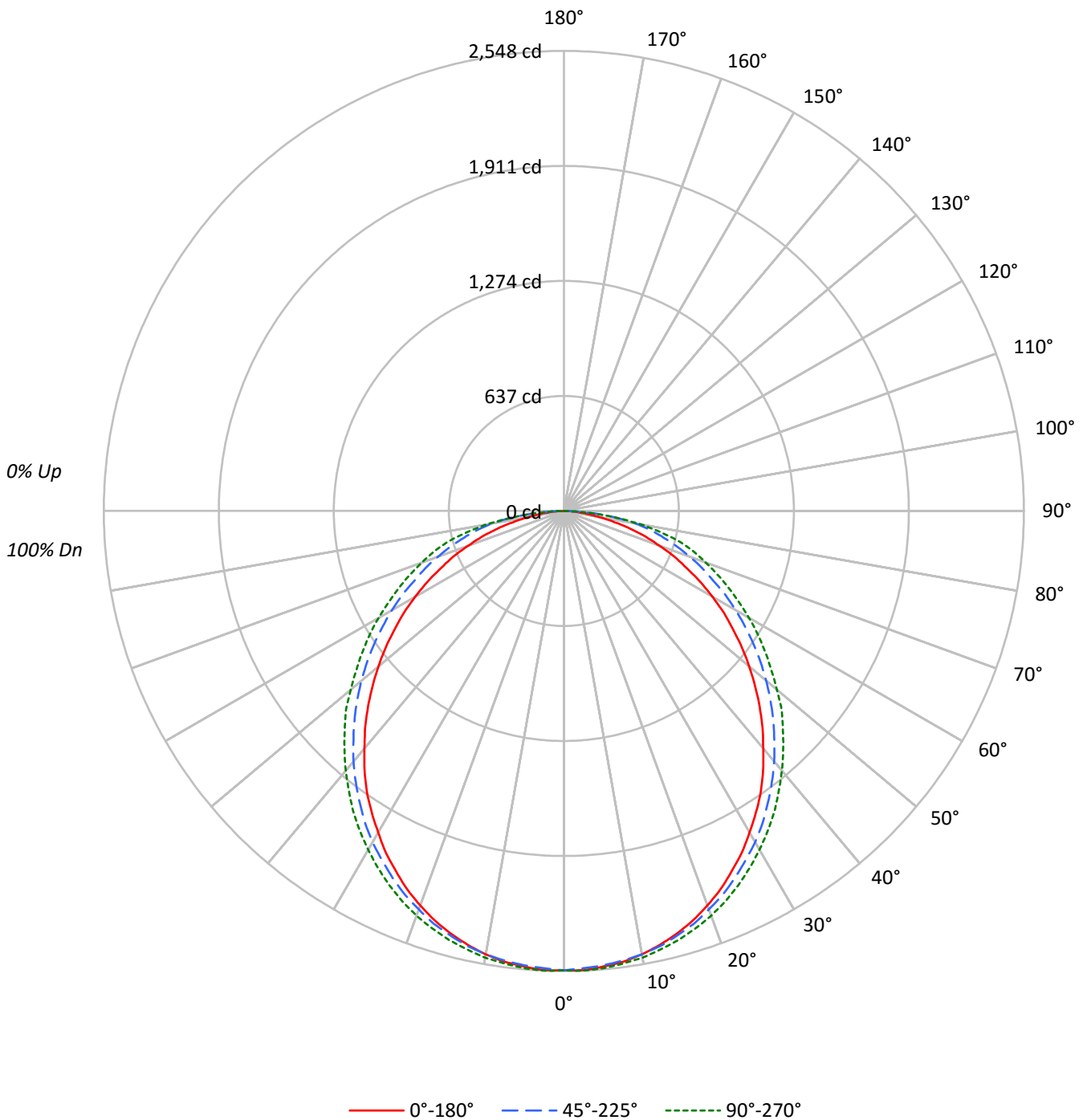
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	3423	3423	3423
5°	3420	3411	3433
10°	3406	3406	3431
15°	3374	3390	3425
20°	3329	3362	3415
25°	3268	3329	3394
30°	3195	3291	3366
35°	3124	3238	3340
40°	3018	3183	3300
45°	2919	3120	3265
50°	2807	3062	3226
55°	2681	3005	3194
60°	2556	2958	3187
65°	2394	2907	3207
70°	2217	2923	3294
75°	1985	2977	3479
80°	1604	3154	3404
85°	1207	2770	2699



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.8	3.3
10°-20°	688.1	9.5
20°-30°	1034.4	14.3
30°-40°	1232.1	17.0
40°-50°	1261.0	17.4
50°-60°	1135.3	15.7
60°-70°	891.6	12.3
70°-80°	578.6	8.0
80°-90°	179.0	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°	1963.3	27.1
0°-40°	3195.5	44.1
0°-60°	5591.8	77.2
0°-90°	7241.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7241.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2544	2544	2544	2544	2544	
5°	2532	2537	2525	2539	2542	241
15°	2422	2429	2433	2454	2459	683
25°	2201	2220	2242	2279	2286	1014
35°	1902	1925	1971	2019	2033	1187
45°	1534	1571	1640	1702	1716	1183
55°	1143	1194	1281	1348	1362	1025
65°	752	810	913	989	1007	749
75°	382	455	573	651	669	404
85°	78	145	179	175	175	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2543.8	2543.8	2543.8	2543.8	2543.8
2.5°	2546.1	2546.1	2534.6	2546.1	2548.4
5°	2532.3	2536.9	2525.4	2539.2	2541.5
7.5°	2518.5	2518.5	2511.6	2525.4	2527.7
10°	2493.2	2495.5	2493.2	2509.3	2511.6
12.5°	2461.0	2465.6	2467.9	2484.0	2486.3
15°	2421.9	2428.8	2433.4	2454.1	2458.7
17.5°	2378.2	2385.1	2396.6	2419.6	2424.2
20°	2325.3	2334.5	2348.3	2378.2	2385.1
22.5°	2267.8	2277.0	2300.0	2327.6	2339.1
25°	2201.1	2219.5	2242.5	2279.3	2286.2
27.5°	2134.4	2150.5	2180.4	2219.5	2228.7
30°	2056.2	2081.5	2118.3	2157.4	2166.6
32.5°	1980.3	2005.6	2049.3	2090.7	2102.2
35°	1902.1	1925.1	1971.1	2019.4	2033.2
37.5°	1812.4	1842.3	1892.9	1941.2	1955.0
40°	1718.1	1754.9	1812.4	1863.0	1879.1
42.5°	1628.4	1667.5	1725.0	1780.2	1798.6
45°	1534.1	1570.9	1639.9	1702.0	1715.8
47.5°	1437.5	1478.9	1552.5	1614.6	1637.6
50°	1340.9	1384.6	1462.8	1527.2	1541.0
52.5°	1244.3	1290.3	1373.1	1442.1	1449.0
55°	1143.1	1193.7	1281.1	1347.8	1361.6
57.5°	1051.1	1094.8	1189.1	1258.1	1274.2
60°	949.9	998.2	1099.4	1163.8	1184.5
62.5°	853.3	903.9	1009.7	1074.1	1092.5
65°	752.1	809.6	913.1	989.0	1007.4
67.5°	664.7	719.9	830.3	903.9	922.3
70°	563.5	625.6	742.9	818.8	837.2
72.5°	476.1	540.5	657.8	731.4	759.0
75°	381.8	455.4	572.7	650.9	669.3
77.5°	289.8	374.9	494.5	554.3	554.3
80°	207.0	296.7	407.1	434.7	439.3
82.5°	135.7	223.1	301.3	299.0	299.0
85°	78.2	144.9	179.4	174.8	174.8
87.5°	29.9	59.8	64.4	64.4	62.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)