

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: P311803

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CA08-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: P311803
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-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 7569.0 lumens
Efficiency: N/A
Efficacy: 115.4 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

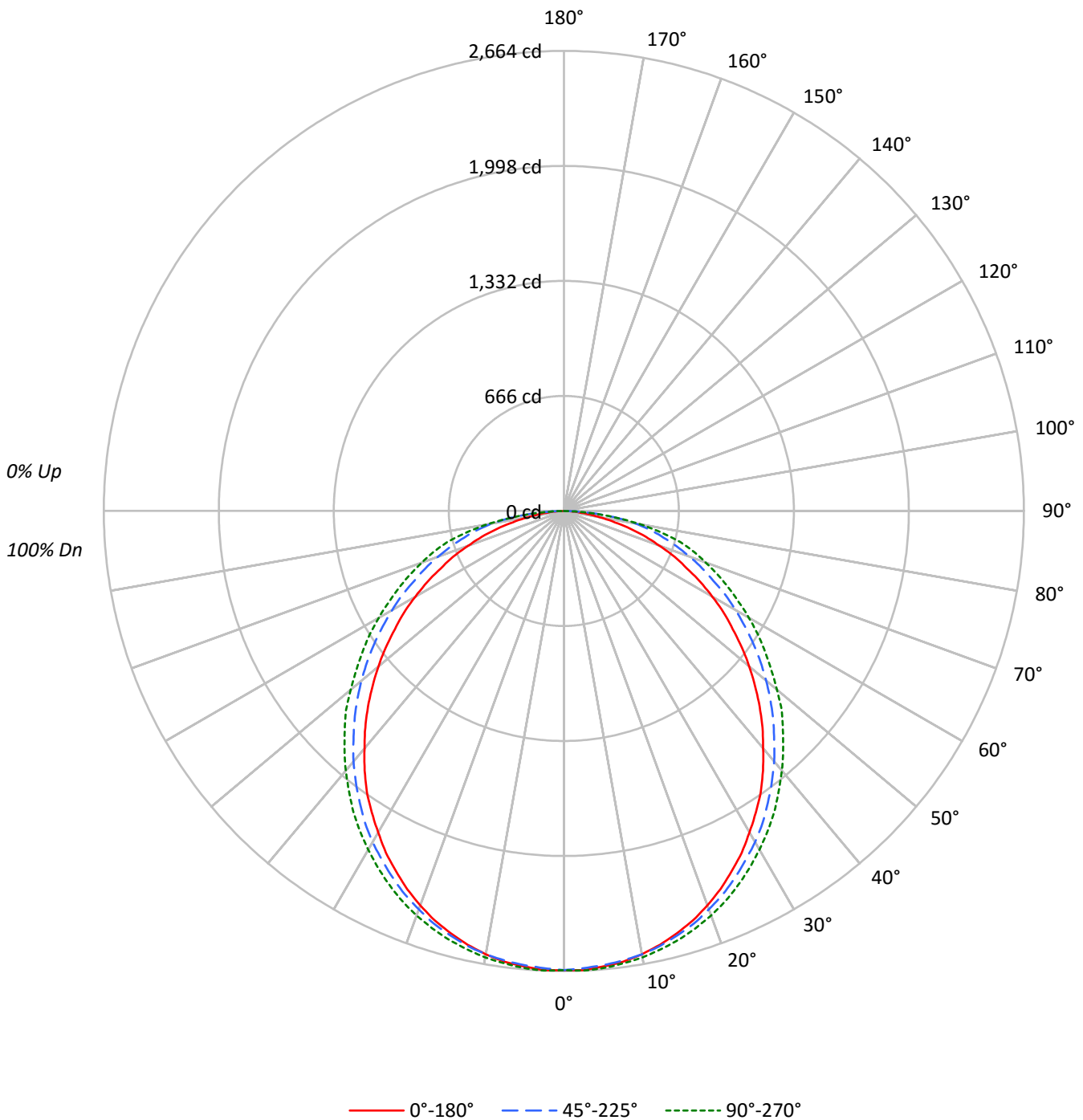
Input Watts (W): 65.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	3578	3578	3578
5°	3575	3565	3588
10°	3561	3561	3587
15°	3526	3543	3580
20°	3480	3515	3570
25°	3416	3480	3548
30°	3339	3440	3519
35°	3266	3384	3491
40°	3154	3328	3450
45°	3051	3262	3413
50°	2934	3201	3372
55°	2803	3141	3339
60°	2672	3092	3332
65°	2503	3039	3352
70°	2317	3055	3443
75°	2075	3112	3637
80°	1677	3297	3558
85°	1261	2895	2820



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	251.7	3.3
10°-20°	719.3	9.5
20°-30°	1081.3	14.3
30°-40°	1288.0	17.0
40°-50°	1318.1	17.4
50°-60°	1186.7	15.7
60°-70°	932.0	12.3
70°-80°	604.9	8.0
80°-90°	187.1	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°	2052.3	27.1
0°-40°	3340.2	44.1
0°-60°	5845.1	77.2
0°-90°	7569.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7569.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2659	2659	2659	2659	2659	
5°	2647	2652	2640	2654	2657	252
15°	2532	2539	2544	2565	2570	714
25°	2301	2320	2344	2383	2390	1060
35°	1988	2012	2060	2111	2125	1240
45°	1604	1642	1714	1779	1794	1236
55°	1195	1248	1339	1409	1423	1071
65°	786	846	954	1034	1053	783
75°	399	476	599	680	700	422
85°	82	152	188	183	183	99
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2659.0	2659.0	2659.0	2659.0	2659.0
2.5°	2661.4	2661.4	2649.4	2661.4	2663.8
5°	2647.0	2651.8	2639.8	2654.2	2656.6
7.5°	2632.6	2632.6	2625.4	2639.8	2642.2
10°	2606.1	2608.6	2606.1	2623.0	2625.4
12.5°	2572.5	2577.3	2579.7	2596.5	2598.9
15°	2531.6	2538.8	2543.6	2565.3	2570.1
17.5°	2485.9	2493.1	2505.2	2529.2	2534.0
20°	2430.6	2440.3	2454.7	2485.9	2493.1
22.5°	2370.5	2380.2	2404.2	2433.0	2445.1
25°	2300.8	2320.0	2344.1	2382.6	2389.8
27.5°	2231.1	2247.9	2279.2	2320.0	2329.7
30°	2149.3	2175.8	2214.3	2255.1	2264.8
32.5°	2070.0	2096.5	2142.1	2185.4	2197.4
35°	1988.3	2012.3	2060.4	2110.9	2125.3
37.5°	1894.5	1925.8	1978.7	2029.1	2043.6
40°	1795.9	1834.4	1894.5	1947.4	1964.2
42.5°	1702.2	1743.0	1803.1	1860.8	1880.1
45°	1603.6	1642.1	1714.2	1779.1	1793.5
47.5°	1502.6	1545.9	1622.8	1687.7	1711.8
50°	1401.6	1447.3	1529.1	1596.4	1610.8
52.5°	1300.7	1348.8	1435.3	1507.4	1514.6
55°	1194.9	1247.8	1339.1	1408.9	1423.3
57.5°	1098.7	1144.4	1243.0	1315.1	1331.9
60°	992.9	1043.4	1149.2	1216.5	1238.2
62.5°	892.0	944.8	1055.4	1122.8	1142.0
65°	786.2	846.3	954.5	1033.8	1053.0
67.5°	694.8	752.5	867.9	944.8	964.1
70°	589.0	653.9	776.6	855.9	875.1
72.5°	497.7	565.0	687.6	764.5	793.4
75°	399.1	476.0	598.6	680.4	699.6
77.5°	302.9	391.9	516.9	579.4	579.4
80°	216.4	310.1	425.5	454.4	459.2
82.5°	141.8	233.2	314.9	312.5	312.5
85°	81.7	151.5	187.5	182.7	182.7
87.5°	31.3	62.5	67.3	67.3	64.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)