

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: P314164

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CP250-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: P314164
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 6780.0 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

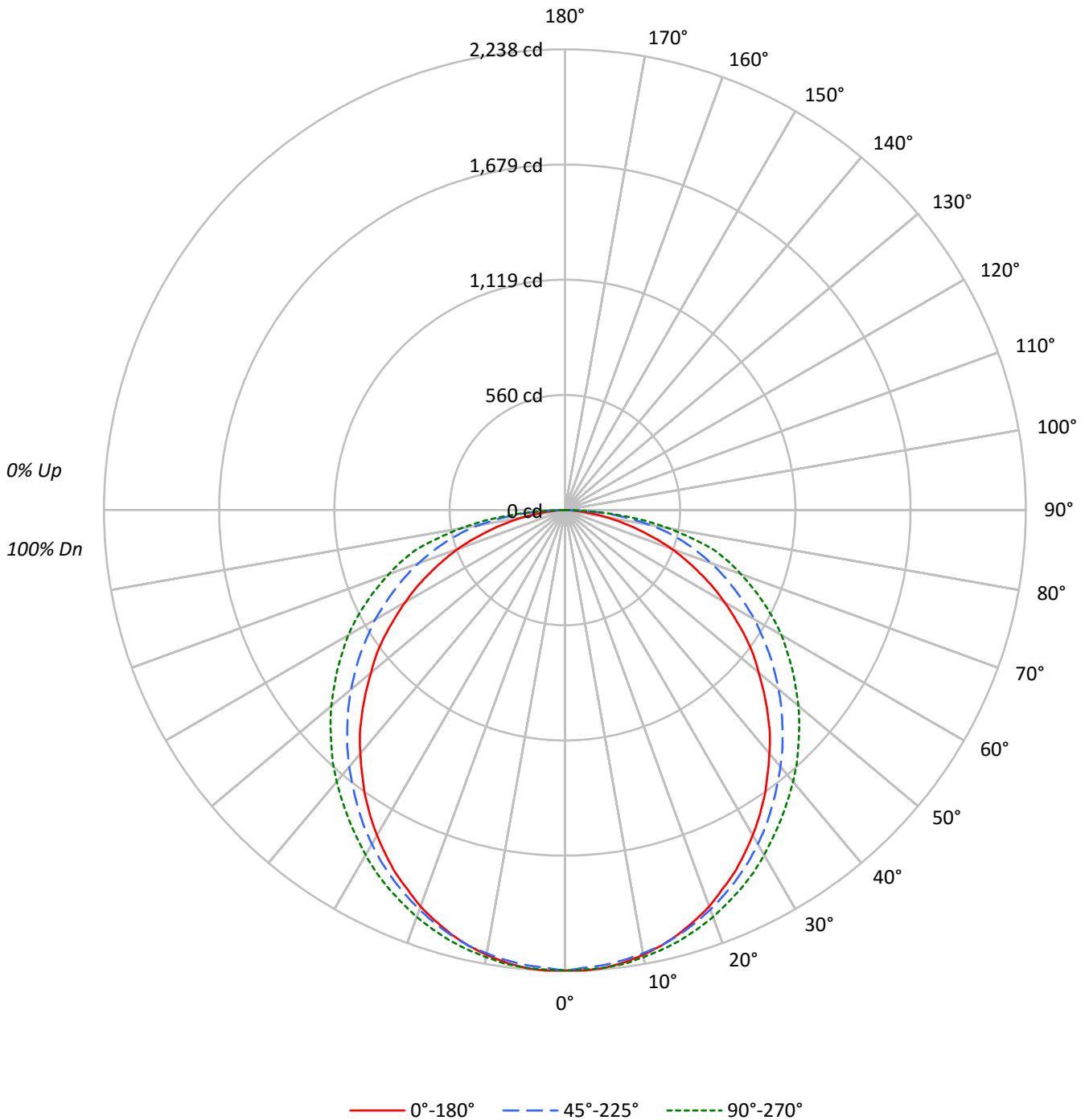
Input Watts (W): 65.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3009	3009	3009
5°	3014	2996	3014
10°	2996	2987	3012
15°	2970	2977	3014
20°	2934	2957	3012
25°	2889	2935	3009
30°	2834	2911	3006
35°	2779	2882	3008
40°	2714	2860	3026
45°	2649	2842	3052
50°	2571	2835	3098
55°	2506	2839	3161
60°	2409	2863	3269
65°	2299	2893	3387
70°	2177	2982	3575
75°	1941	3111	3906
80°	1656	3295	3991
85°	1181	3265	3819



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.6	3.1
10°-20°	605.1	8.9
20°-30°	913.9	13.5
30°-40°	1101.5	16.2
40°-50°	1156.3	17.1
50°-60°	1081.8	16.0
60°-70°	893.4	13.2
70°-80°	608.8	9.0
80°-90°	207.6	3.1
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°	1730.6	25.5
0°-40°	2832.1	41.8
0°-60°	5070.2	74.8
0°-90°	6780.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6780.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2236	2236	2236	2236	2236	
5°	2232	2229	2218	2232	2232	212
15°	2132	2135	2137	2160	2164	601
25°	1946	1955	1977	2016	2027	895
35°	1692	1710	1755	1813	1831	1057
45°	1392	1422	1494	1575	1604	1074
55°	1068	1111	1210	1309	1347	954
65°	722	783	909	1024	1064	716
75°	373	459	598	711	751	398
85°	76	151	212	238	247	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2236.0	2236.0	2236.0	2236.0	2236.0
2.5°	2238.2	2236.0	2224.7	2236.0	2233.7
5°	2231.5	2229.2	2218.0	2231.5	2231.5
7.5°	2215.7	2215.7	2204.5	2220.2	2222.5
10°	2193.2	2193.2	2186.5	2204.5	2204.5
12.5°	2166.3	2166.3	2166.3	2184.2	2186.5
15°	2132.5	2134.8	2137.0	2159.5	2164.0
17.5°	2092.0	2096.5	2103.3	2130.3	2134.8
20°	2049.3	2053.8	2065.0	2096.5	2103.3
22.5°	1995.3	2006.5	2022.3	2058.3	2065.0
25°	1945.8	1954.8	1977.3	2015.5	2026.8
27.5°	1885.1	1898.6	1927.8	1968.3	1984.0
30°	1824.3	1837.8	1873.8	1921.1	1934.6
32.5°	1759.1	1779.3	1817.6	1867.1	1882.8
35°	1691.6	1709.6	1754.6	1813.1	1831.1
37.5°	1617.4	1642.1	1691.6	1754.6	1777.1
40°	1545.4	1572.4	1628.6	1696.1	1723.1
42.5°	1473.4	1500.4	1563.4	1639.9	1666.9
45°	1392.4	1421.7	1493.7	1574.6	1603.9
47.5°	1311.4	1347.4	1426.2	1511.7	1543.1
50°	1228.2	1268.7	1354.2	1444.2	1480.2
52.5°	1154.0	1192.2	1282.2	1378.9	1412.7
55°	1068.5	1111.2	1210.2	1309.2	1347.4
57.5°	980.8	1028.0	1133.7	1241.7	1280.0
60°	895.3	947.0	1064.0	1172.0	1214.7
62.5°	812.1	863.8	985.3	1097.7	1140.5
65°	722.1	782.8	908.8	1023.5	1064.0
67.5°	636.6	701.8	834.6	947.0	987.5
70°	553.4	616.4	758.1	868.3	908.8
72.5°	463.4	535.4	677.1	791.8	834.6
75°	373.4	458.9	598.4	710.8	751.3
77.5°	290.2	377.9	517.4	609.6	629.9
80°	213.7	303.7	425.2	490.4	515.1
82.5°	137.2	227.2	323.9	371.2	391.4
85°	76.5	150.7	211.5	238.4	247.4
87.5°	31.5	65.2	85.5	96.7	96.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)