

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: P309808

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-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: P309808
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 4739.0 lumens
Efficiency: N/A
Efficacy: 75.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

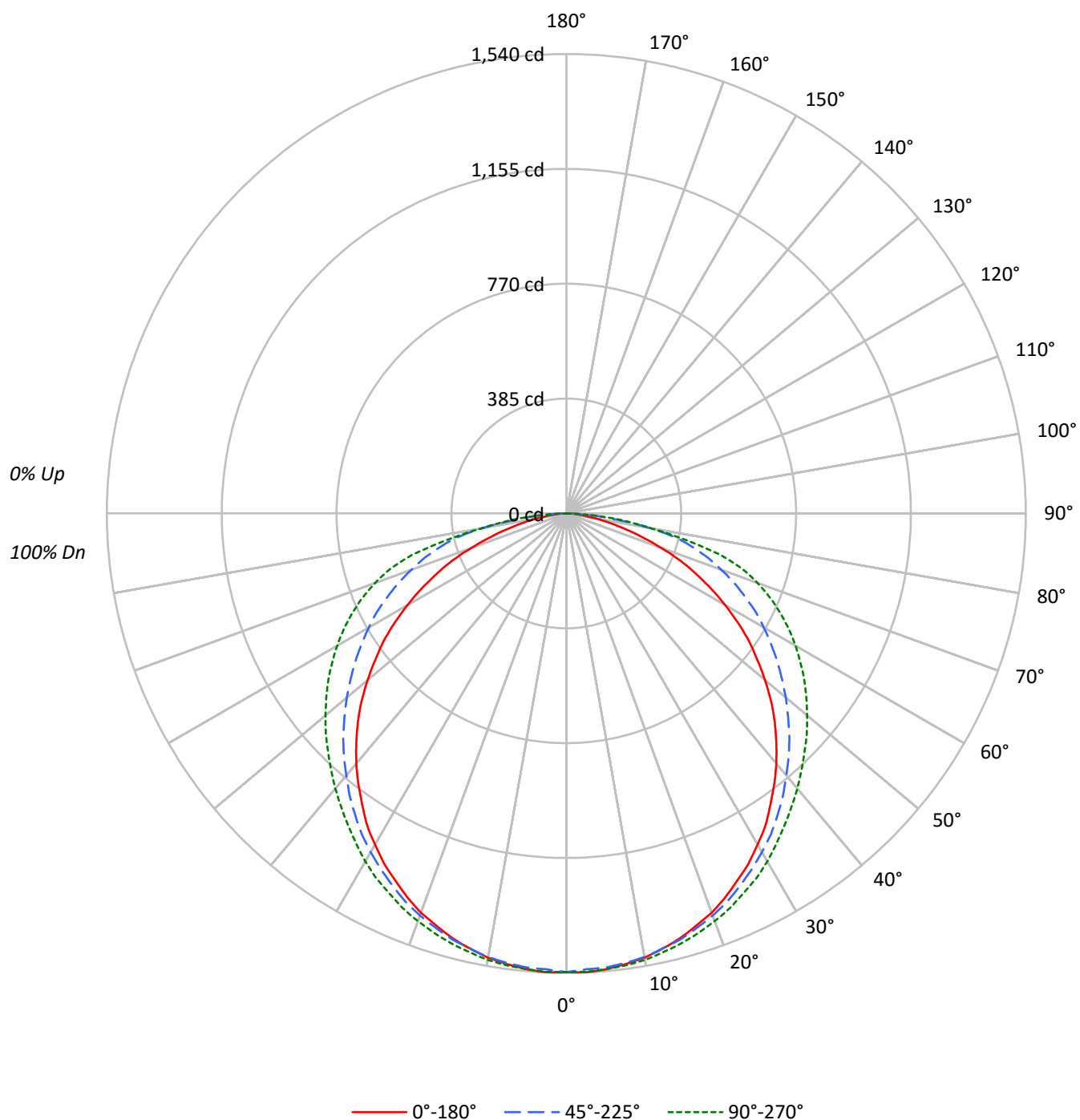
Input Watts (W): 63.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2069	2069	2069
5°	2071	2063	2071
10°	2065	2063	2076
15°	2053	2059	2078
20°	2040	2054	2082
25°	2015	2044	2085
30°	1991	2037	2093
35°	1959	2027	2095
40°	1923	2014	2115
45°	1880	2012	2148
50°	1819	2010	2205
55°	1755	2024	2285
60°	1655	2055	2386
65°	1528	2103	2520
70°	1335	2177	2685
75°	1083	2289	2774
80°	800	2245	2245
85°	613	1653	1868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.7	3.1
10°-20°	418.3	8.8
20°-30°	636.8	13.4
30°-40°	773.2	16.3
40°-50°	816.9	17.2
50°-60°	770.8	16.3
60°-70°	640.9	13.5
70°-80°	421.6	8.9
80°-90°	114.9	2.4
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°	1200.7	25.3
0°-40°	1973.9	41.7
0°-60°	3561.6	75.2
0°-90°	4739.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4739.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1538	1538	1538	1538	1538	
5°	1534	1534	1528	1534	1534	146
15°	1474	1476	1478	1492	1492	416
25°	1357	1365	1377	1401	1405	626
35°	1192	1206	1234	1266	1276	746
45°	988	1008	1058	1109	1129	761
55°	748	780	863	944	974	666
65°	480	536	661	758	792	475
75°	208	304	440	522	534	224
85°	40	87	107	119	121	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1537.6	1537.6	1537.6	1537.6	1537.6
2.5°	1539.6	1537.6	1529.6	1537.6	1537.6
5°	1533.6	1533.6	1527.7	1533.6	1533.6
7.5°	1523.7	1523.7	1519.7	1527.7	1527.7
10°	1511.8	1511.8	1509.8	1519.7	1519.7
12.5°	1493.9	1495.9	1493.9	1505.8	1505.8
15°	1474.1	1476.1	1478.1	1491.9	1491.9
17.5°	1448.3	1452.3	1456.2	1472.1	1474.1
20°	1424.5	1426.5	1434.4	1452.3	1454.2
22.5°	1392.7	1398.7	1408.6	1426.5	1432.4
25°	1357.0	1365.0	1376.9	1400.7	1404.6
27.5°	1323.3	1329.3	1345.1	1370.9	1378.9
30°	1281.6	1291.6	1311.4	1337.2	1347.1
32.5°	1242.0	1251.9	1275.7	1303.5	1311.4
35°	1192.4	1206.3	1234.0	1265.8	1275.7
37.5°	1144.7	1158.6	1192.4	1228.1	1240.0
40°	1095.1	1111.0	1146.7	1188.4	1204.3
42.5°	1041.6	1063.4	1103.1	1148.7	1166.6
45°	988.0	1007.9	1057.5	1109.0	1128.9
47.5°	930.5	954.3	1007.9	1069.4	1093.2
50°	869.0	898.7	960.2	1027.7	1053.5
52.5°	807.5	841.2	910.6	986.0	1013.8
55°	748.0	779.7	863.0	944.4	974.1
57.5°	682.5	722.2	813.4	900.7	930.5
60°	615.0	658.7	763.8	855.1	886.8
62.5°	547.6	597.2	716.2	807.5	841.2
65°	480.1	535.7	660.7	757.9	791.6
67.5°	414.6	476.2	609.1	706.3	740.0
70°	339.3	416.6	553.5	648.8	682.5
72.5°	269.8	359.1	500.0	589.2	619.0
75°	208.3	303.5	440.4	521.8	533.7
77.5°	152.8	248.0	378.9	406.7	408.7
80°	103.2	198.4	289.7	285.7	289.7
82.5°	67.5	148.8	182.5	204.3	206.3
85°	39.7	87.3	107.1	119.0	121.0
87.5°	19.8	29.8	37.7	39.7	43.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)