

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: P309807

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CP250-W2A-U-3000K**

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: P309807
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-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 3000K 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: 4581.0 lumens
Efficiency: N/A
Efficacy: 73.4 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

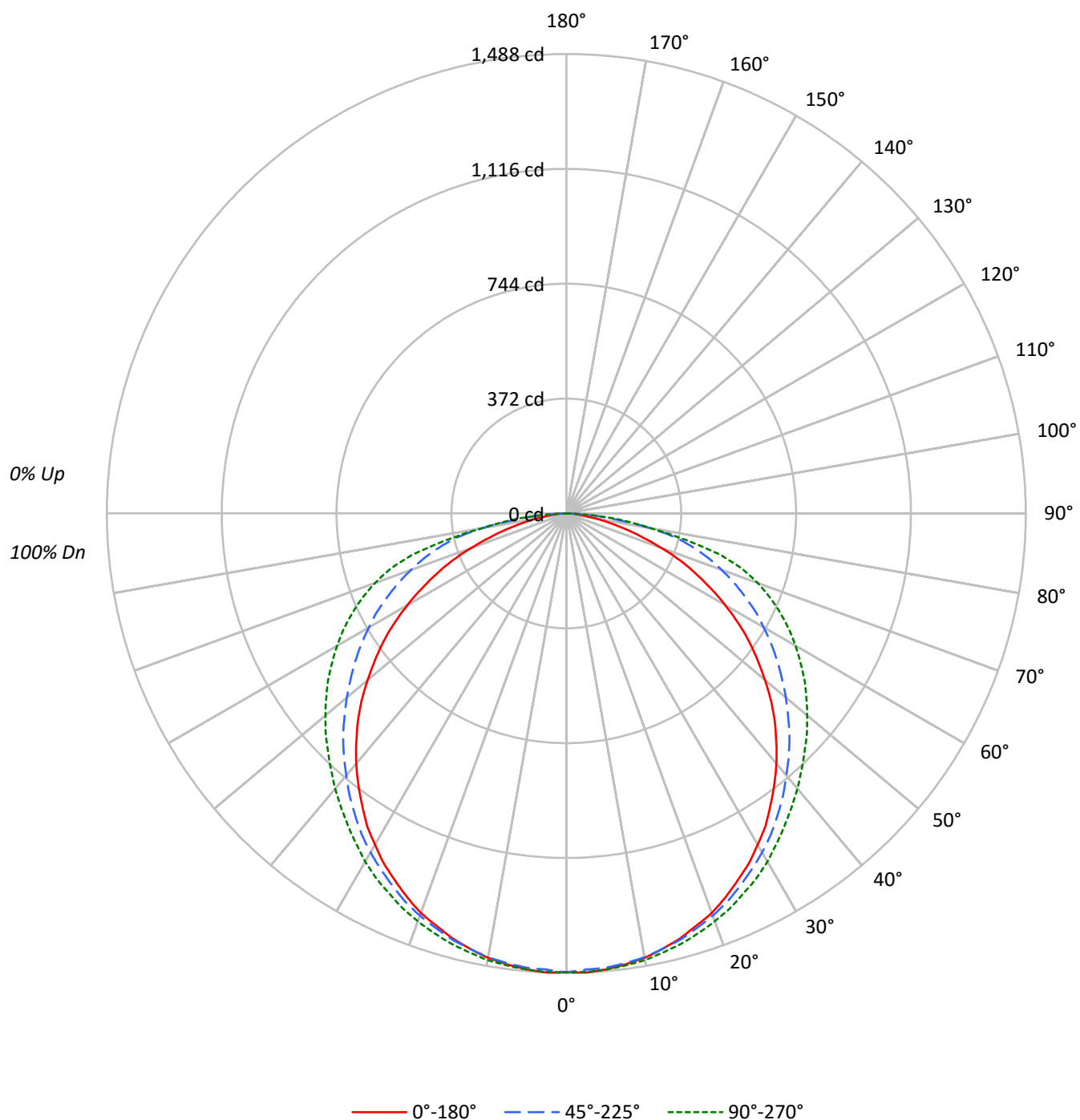
Input Watts (W): 62.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2000	2000	2000
5°	2002	1994	2002
10°	1997	1994	2007
15°	1985	1990	2009
20°	1972	1985	2013
25°	1947	1976	2016
30°	1925	1970	2023
35°	1893	1959	2026
40°	1859	1947	2045
45°	1817	1945	2076
50°	1758	1943	2132
55°	1696	1957	2209
60°	1600	1987	2307
65°	1478	2033	2436
70°	1290	2105	2595
75°	1047	2214	2682
80°	773	2170	2170
85°	593	1599	1806



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.8	3.1
10°-20°	404.3	8.8
20°-30°	615.5	13.4
30°-40°	747.4	16.3
40°-50°	789.6	17.2
50°-60°	745.1	16.3
60°-70°	619.5	13.5
70°-80°	407.6	8.9
80°-90°	111.1	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°	1160.7	25.3
0°-40°	1908.1	41.7
0°-60°	3442.8	75.2
0°-90°	4581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4581.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1486	1486	1486	1486	1486	
5°	1482	1482	1477	1482	1482	141
15°	1425	1427	1429	1442	1442	402
25°	1312	1320	1331	1354	1358	605
35°	1153	1166	1193	1224	1233	722
45°	955	974	1022	1072	1091	736
55°	723	754	834	913	942	644
65°	464	518	639	733	765	459
75°	201	293	426	504	516	217
85°	38	84	104	115	117	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1486.3	1486.3	1486.3	1486.3	1486.3
2.5°	1488.2	1486.3	1478.6	1486.3	1486.3
5°	1482.5	1482.5	1476.7	1482.5	1482.5
7.5°	1472.9	1472.9	1469.0	1476.7	1476.7
10°	1461.4	1461.4	1459.5	1469.0	1469.0
12.5°	1444.1	1446.0	1444.1	1455.6	1455.6
15°	1424.9	1426.9	1428.8	1442.2	1442.2
17.5°	1400.0	1403.8	1407.7	1423.0	1424.9
20°	1377.0	1378.9	1386.6	1403.8	1405.8
22.5°	1346.3	1352.1	1361.7	1378.9	1384.7
25°	1311.8	1319.5	1331.0	1354.0	1357.8
27.5°	1279.2	1284.9	1300.3	1325.2	1332.9
30°	1238.9	1248.5	1267.7	1292.6	1302.2
32.5°	1200.6	1210.1	1233.2	1260.0	1267.7
35°	1152.6	1166.0	1192.9	1223.6	1233.2
37.5°	1106.6	1120.0	1152.6	1187.1	1198.6
40°	1058.6	1074.0	1108.5	1148.8	1164.1
42.5°	1006.9	1028.0	1066.3	1110.4	1127.7
45°	955.1	974.3	1022.2	1072.1	1091.2
47.5°	899.5	922.5	974.3	1033.7	1056.7
50°	840.0	868.8	928.2	993.4	1018.4
52.5°	780.6	813.2	880.3	953.2	980.0
55°	723.0	753.7	834.3	912.9	941.6
57.5°	659.7	698.1	786.3	870.7	899.5
60°	594.5	636.7	738.4	826.6	857.3
62.5°	529.3	577.3	692.3	780.6	813.2
65°	464.1	517.8	638.6	732.6	765.2
67.5°	400.8	460.3	588.8	682.7	715.3
70°	327.9	402.7	535.1	627.1	659.7
72.5°	260.8	347.1	483.3	569.6	598.4
75°	201.4	293.4	425.8	504.4	515.9
77.5°	147.7	239.7	366.3	393.2	395.1
80°	99.7	191.8	280.0	276.2	280.0
82.5°	65.2	143.8	176.4	197.5	199.5
85°	38.4	84.4	103.6	115.1	117.0
87.5°	19.2	28.8	36.4	38.4	42.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)