

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: P313747

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-RDP-CA125-W2A-U-4000K**

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: P313747
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-70HE-UNV-L83050-RDP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 4536.0 lumens
Efficiency: N/A
Efficacy: 76.9 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

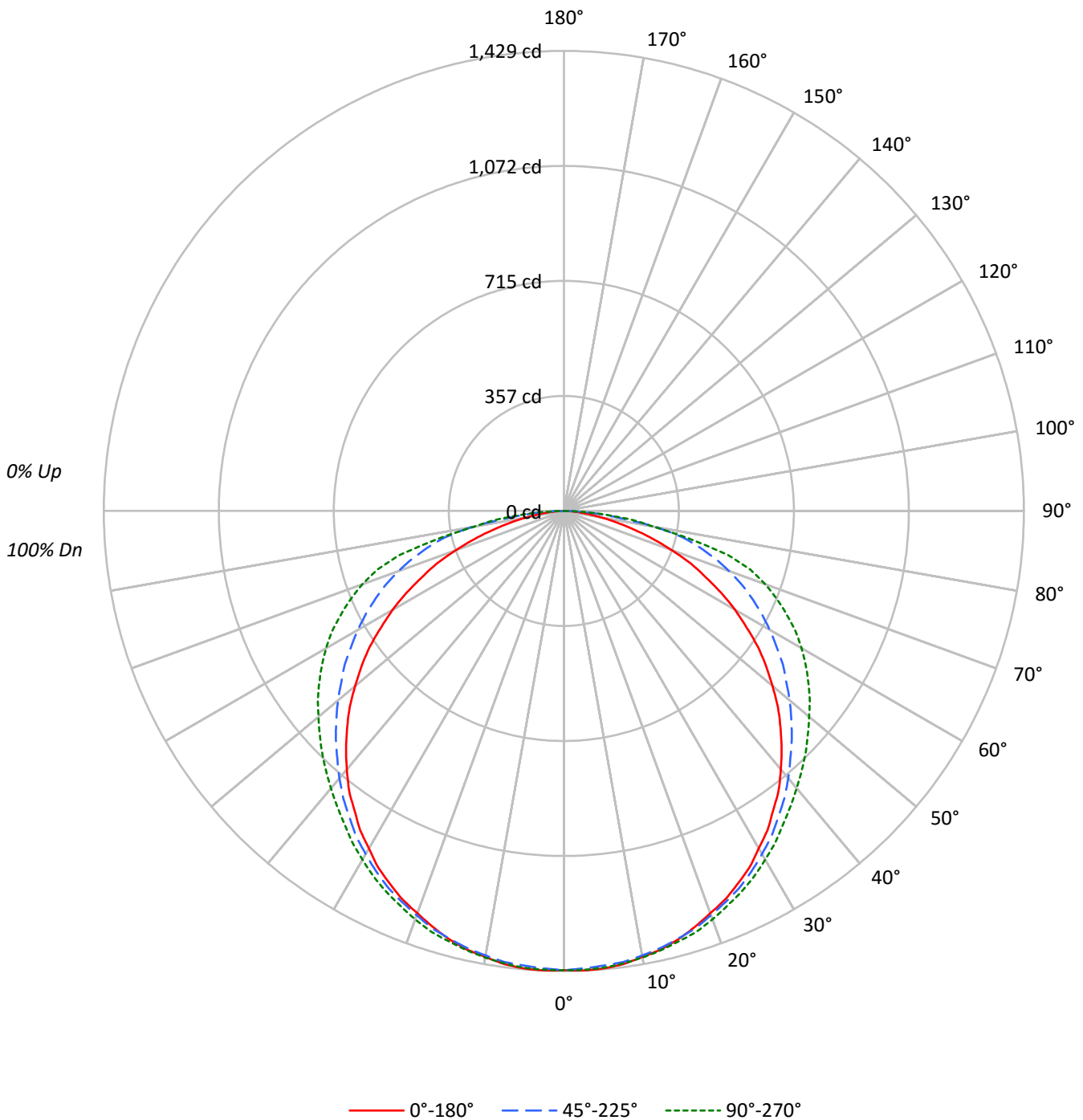
Input Watts (W): 59
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1919	1919	1919
5°	1927	1914	1924
10°	1921	1915	1924
15°	1918	1915	1927
20°	1904	1914	1933
25°	1897	1917	1937
30°	1881	1912	1943
35°	1863	1907	1951
40°	1842	1905	1976
45°	1811	1905	2021
50°	1771	1917	2082
55°	1726	1947	2175
60°	1653	1986	2295
65°	1547	2056	2436
70°	1407	2151	2620
75°	1193	2269	2737
80°	941	2283	2214
85°	695	1737	1945



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.3	3.0
10°-20°	389.4	8.6
20°-30°	595.5	13.1
30°-40°	728.0	16.0
40°-50°	775.9	17.1
50°-60°	741.9	16.4
60°-70°	628.5	13.9
70°-80°	422.4	9.3
80°-90°	119.1	2.6
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°	1120.2	24.7
0°-40°	1848.3	40.7
0°-60°	3366.0	74.2
0°-90°	4536.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4536.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1426	1426	1426	1426	1426	
5°	1426	1424	1417	1424	1424	136
15°	1377	1377	1375	1386	1384	388
25°	1278	1282	1291	1303	1305	589
35°	1134	1143	1161	1184	1188	710
45°	952	968	1001	1044	1062	734
55°	736	763	830	896	927	655
65°	486	536	646	731	765	482
75°	230	313	436	511	526	246
85°	45	92	112	122	126	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1426.4	1426.4	1426.4	1426.4	1426.4
2.5°	1428.7	1428.7	1421.9	1426.4	1426.4
5°	1426.4	1424.2	1417.4	1424.2	1424.2
7.5°	1419.7	1417.4	1412.9	1419.7	1417.4
10°	1406.2	1406.2	1401.7	1408.4	1408.4
12.5°	1394.9	1392.7	1390.4	1399.4	1397.2
15°	1376.9	1376.9	1374.7	1385.9	1383.7
17.5°	1354.4	1356.7	1358.9	1367.9	1370.2
20°	1329.7	1334.2	1336.4	1349.9	1349.9
22.5°	1307.2	1309.4	1313.9	1327.4	1327.4
25°	1277.9	1282.4	1291.4	1302.7	1304.9
27.5°	1248.7	1250.9	1262.2	1277.9	1280.2
30°	1210.5	1217.2	1230.7	1248.7	1250.9
32.5°	1176.7	1183.5	1199.2	1217.2	1221.7
35°	1134.0	1143.0	1161.0	1183.5	1188.0
37.5°	1095.7	1102.5	1125.0	1149.7	1156.5
40°	1048.5	1062.0	1084.5	1113.7	1125.0
42.5°	1001.2	1014.7	1041.7	1080.0	1093.5
45°	951.7	967.5	1001.2	1044.0	1062.0
47.5°	902.2	920.2	958.5	1008.0	1028.2
50°	846.0	868.5	915.7	972.0	994.5
52.5°	792.0	819.0	870.7	933.7	963.0
55°	735.7	762.7	830.2	895.5	927.0
57.5°	672.7	708.7	783.0	857.2	891.0
60°	614.2	648.0	738.0	819.0	852.7
62.5°	551.2	596.2	693.0	778.5	812.2
65°	486.0	535.5	645.7	731.2	765.0
67.5°	427.5	481.5	598.5	684.0	717.7
70°	357.7	425.2	546.7	632.2	666.0
72.5°	292.5	366.7	492.7	576.0	607.5
75°	229.5	312.7	436.5	510.7	526.5
77.5°	171.0	258.7	378.0	409.5	398.2
80°	121.5	207.0	294.7	279.0	285.7
82.5°	78.7	157.5	182.2	207.0	213.7
85°	45.0	92.2	112.5	121.5	126.0
87.5°	20.2	33.7	45.0	45.0	42.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)