

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: P313527

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-RDP-CP125-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: P313527
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: 24FCZ2-40HE-UNV-L83050-RDP-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 2569.0 lumens
Efficiency: N/A
Efficacy: 82.6 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

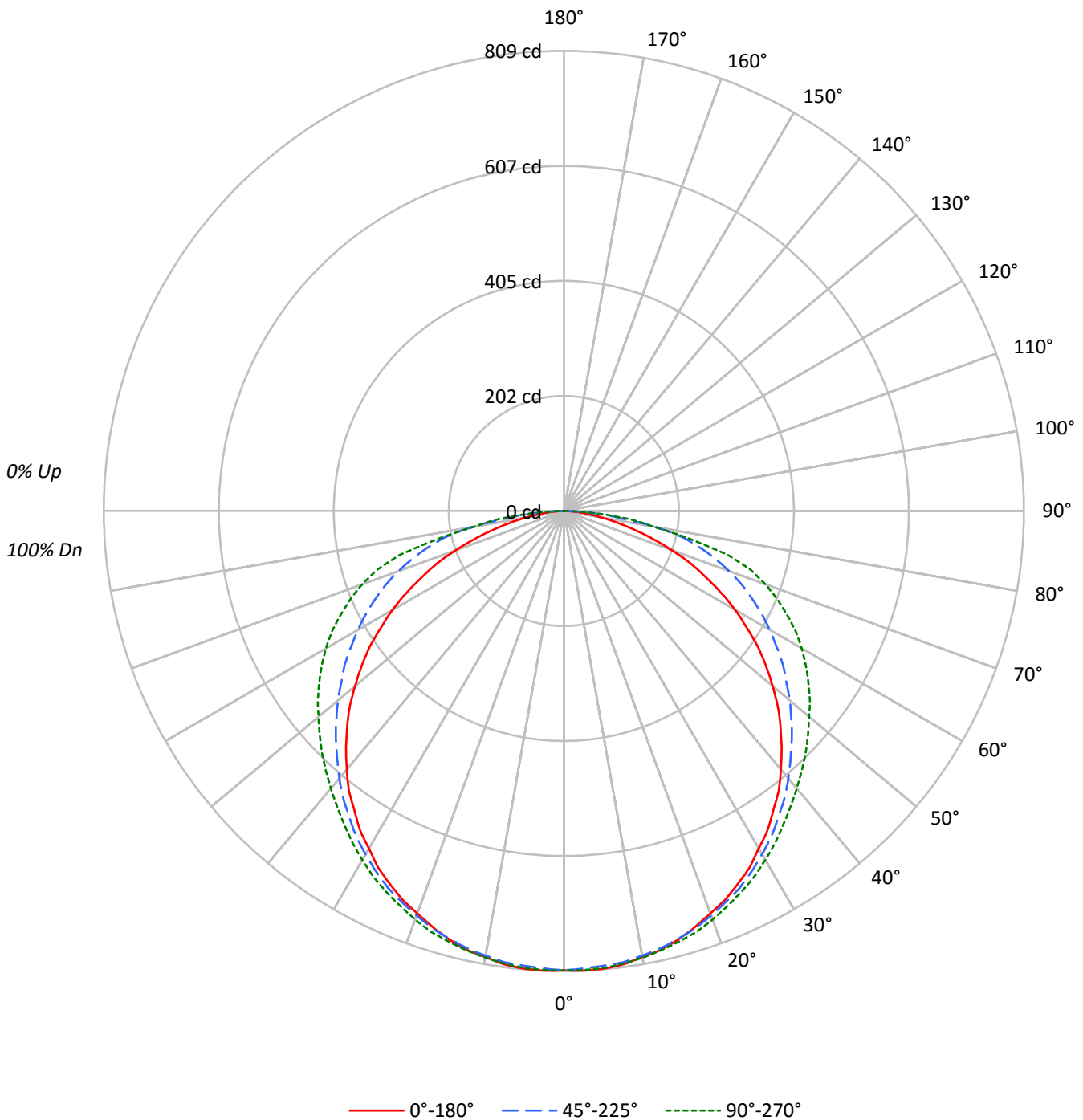
Input Watts (W): 31.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1087	1087	1087
5°	1091	1084	1089
10°	1088	1085	1090
15°	1086	1085	1092
20°	1078	1084	1095
25°	1075	1086	1097
30°	1065	1083	1101
35°	1055	1080	1105
40°	1043	1079	1119
45°	1026	1079	1144
50°	1003	1086	1179
55°	977	1103	1232
60°	936	1125	1299
65°	876	1164	1379
70°	797	1218	1484
75°	676	1285	1550
80°	533	1293	1254
85°	394	983	1102



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.6	3.0
10°-20°	220.6	8.6
20°-30°	337.3	13.1
30°-40°	412.3	16.0
40°-50°	439.4	17.1
50°-60°	420.2	16.4
60°-70°	355.9	13.9
70°-80°	239.2	9.3
80°-90°	67.5	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°	634.5	24.7
0°-40°	1046.8	40.7
0°-60°	1906.4	74.2
0°-90°	2569.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2569.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	808	808	808	808	808	
5°	808	807	803	807	807	77
15°	780	780	779	785	784	220
25°	724	726	731	738	739	334
35°	642	647	658	670	673	402
45°	539	548	567	591	601	416
55°	417	432	470	507	525	371
65°	275	303	366	414	433	273
75°	130	177	247	289	298	139
85°	26	52	64	69	71	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	807.9	807.9	807.9	807.9	807.9
2.5°	809.2	809.2	805.3	807.9	807.9
5°	807.9	806.6	802.8	806.6	806.6
7.5°	804.1	802.8	800.2	804.1	802.8
10°	796.4	796.4	793.9	797.7	797.7
12.5°	790.0	788.8	787.5	792.6	791.3
15°	779.8	779.8	778.6	784.9	783.7
17.5°	767.1	768.4	769.6	774.7	776.0
20°	753.1	755.6	756.9	764.6	764.6
22.5°	740.3	741.6	744.2	751.8	751.8
25°	723.8	726.3	731.4	737.8	739.1
27.5°	707.2	708.5	714.9	723.8	725.1
30°	685.5	689.4	697.0	707.2	708.5
32.5°	666.4	670.3	679.2	689.4	691.9
35°	642.2	647.3	657.5	670.3	672.8
37.5°	620.6	624.4	637.1	651.1	655.0
40°	593.8	601.4	614.2	630.8	637.1
42.5°	567.0	574.7	590.0	611.6	619.3
45°	539.0	547.9	567.0	591.3	601.4
47.5°	511.0	521.2	542.8	570.9	582.3
50°	479.1	491.9	518.6	550.5	563.2
52.5°	448.5	463.8	493.1	528.8	545.4
55°	416.7	432.0	470.2	507.2	525.0
57.5°	381.0	401.4	443.4	485.5	504.6
60°	347.9	367.0	418.0	463.8	482.9
62.5°	312.2	337.7	392.5	440.9	460.0
65°	275.2	303.3	365.7	414.1	433.2
67.5°	242.1	272.7	339.0	387.4	406.5
70°	202.6	240.8	309.6	358.1	377.2
72.5°	165.7	207.7	279.1	326.2	344.0
75°	130.0	177.1	247.2	289.3	298.2
77.5°	96.8	146.5	214.1	231.9	225.5
80°	68.8	117.2	166.9	158.0	161.8
82.5°	44.6	89.2	103.2	117.2	121.1
85°	25.5	52.2	63.7	68.8	71.4
87.5°	11.5	19.1	25.5	25.5	24.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)