

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: P310007

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-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: P310007
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-L82765-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: 2491.0 lumens
Efficiency: N/A
Efficacy: 80.9 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

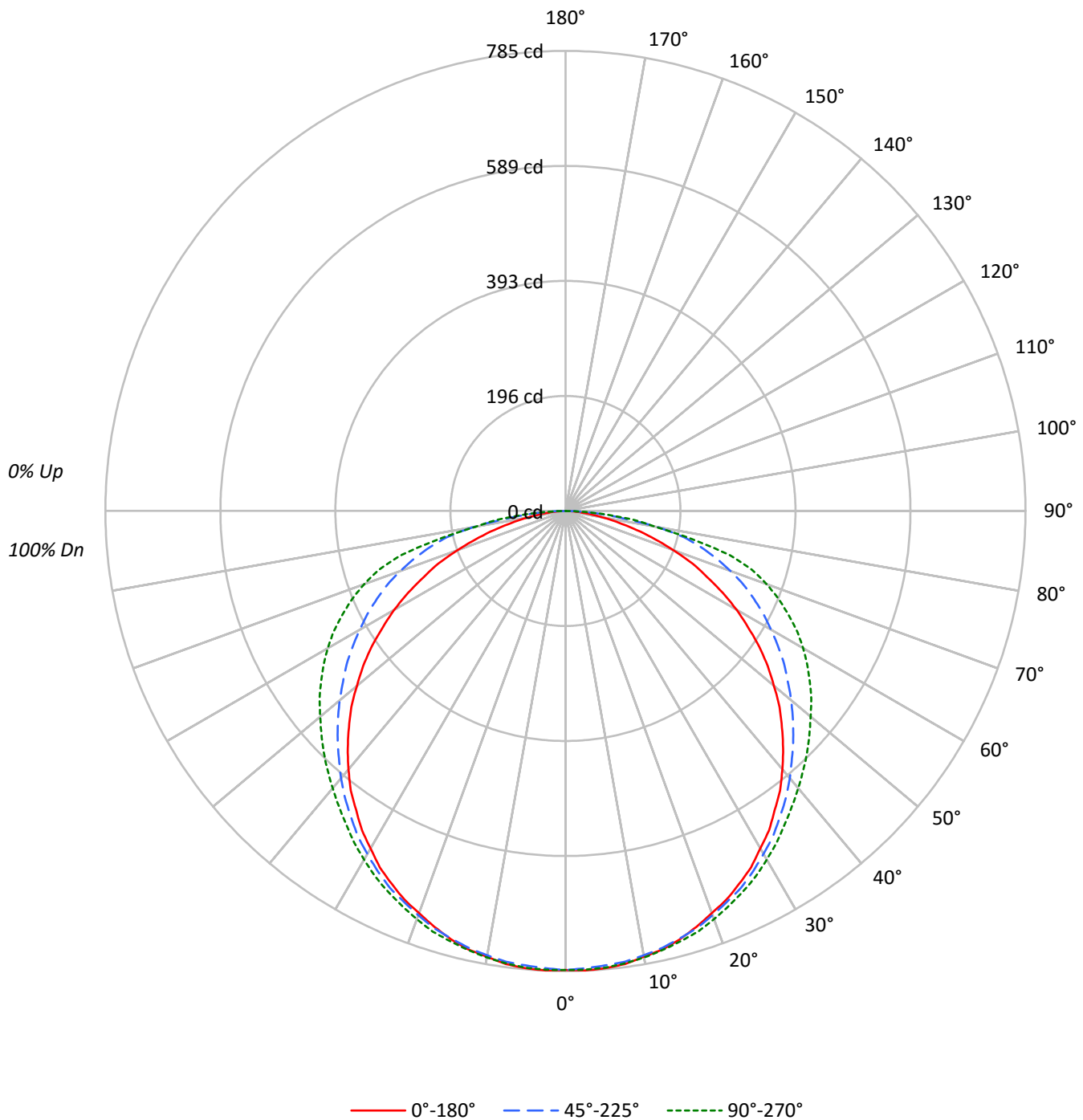
Input Watts (W): 30.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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°	1054	1054	1054
5°	1058	1051	1056
10°	1055	1052	1057
15°	1053	1052	1059
20°	1046	1051	1061
25°	1042	1053	1064
30°	1033	1050	1067
35°	1023	1047	1072
40°	1011	1046	1085
45°	994	1046	1110
50°	973	1053	1143
55°	948	1069	1194
60°	908	1091	1260
65°	850	1129	1337
70°	773	1181	1439
75°	655	1246	1503
80°	517	1254	1216
85°	381	954	1068



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	3.0
10°-20°	213.9	8.6
20°-30°	327.0	13.1
30°-40°	399.8	16.0
40°-50°	426.1	17.1
50°-60°	407.4	16.4
60°-70°	345.1	13.9
70°-80°	232.0	9.3
80°-90°	65.4	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°	615.2	24.7
0°-40°	1015.0	40.7
0°-60°	1848.5	74.2
0°-90°	2491.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2491.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	783	783	783	783	783	
5°	783	782	778	782	782	74
15°	756	756	755	761	760	213
25°	702	704	709	715	717	323
35°	623	628	638	650	652	390
45°	523	531	550	573	583	403
55°	404	419	456	492	509	360
65°	267	294	355	402	420	265
75°	126	172	240	280	289	135
85°	25	51	62	67	69	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	783.3	783.3	783.3	783.3	783.3
2.5°	784.6	784.6	780.9	783.3	783.3
5°	783.3	782.1	778.4	782.1	782.1
7.5°	779.6	778.4	775.9	779.6	778.4
10°	772.2	772.2	769.8	773.5	773.5
12.5°	766.1	764.8	763.6	768.5	767.3
15°	756.2	756.2	754.9	761.1	759.9
17.5°	743.8	745.0	746.3	751.2	752.5
20°	730.2	732.7	733.9	741.3	741.3
22.5°	717.9	719.1	721.6	729.0	729.0
25°	701.8	704.3	709.2	715.4	716.6
27.5°	685.7	687.0	693.2	701.8	703.0
30°	664.7	668.4	675.9	685.7	687.0
32.5°	646.2	649.9	658.6	668.4	670.9
35°	622.7	627.7	637.6	649.9	652.4
37.5°	601.7	605.4	617.8	631.4	635.1
40°	575.8	583.2	595.5	611.6	617.8
42.5°	549.8	557.2	572.1	593.1	600.5
45°	522.6	531.3	549.8	573.3	583.2
47.5°	495.5	505.3	526.4	553.5	564.7
50°	464.6	476.9	502.9	533.8	546.1
52.5°	434.9	449.7	478.2	512.8	528.8
55°	404.0	418.9	455.9	491.8	509.1
57.5°	369.4	389.2	430.0	470.8	489.3
60°	337.3	355.8	405.3	449.7	468.3
62.5°	302.7	327.4	380.6	427.5	446.0
65°	266.9	294.1	354.6	401.6	420.1
67.5°	234.8	264.4	328.7	375.6	394.1
70°	196.5	233.5	300.2	347.2	365.7
72.5°	160.6	201.4	270.6	316.3	333.6
75°	126.0	171.7	239.7	280.5	289.1
77.5°	93.9	142.1	207.6	224.9	218.7
80°	66.7	113.7	161.9	153.2	156.9
82.5°	43.2	86.5	100.1	113.7	117.4
85°	24.7	50.7	61.8	66.7	69.2
87.5°	11.1	18.5	24.7	24.7	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)