

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: P309348

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CP187-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: P309348
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: 24FCZ2-40HE-UNV-L82765-HRP-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" 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: 2495.0 lumens
Efficiency: N/A
Efficacy: 82.6 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

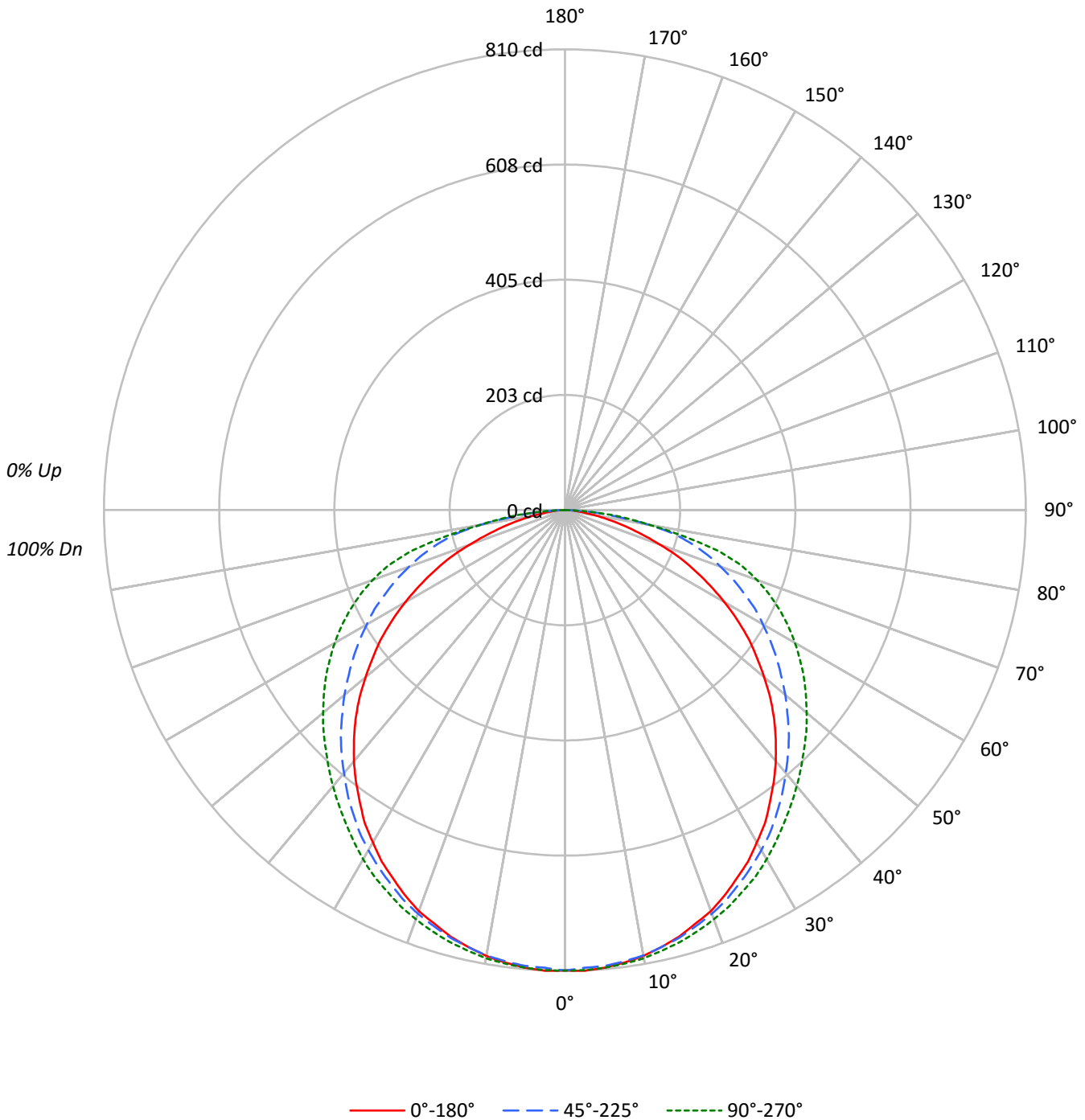
Input Watts (W): 30.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	101	96	93	96	93	90	92	90	87	89	86	84	82				
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67				
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56				
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48				
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41				
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28				
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25				
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1089	1089	1089
5°	1090	1086	1090
10°	1087	1086	1093
15°	1081	1084	1094
20°	1074	1081	1096
25°	1061	1076	1098
30°	1048	1073	1102
35°	1031	1067	1103
40°	1013	1060	1114
45°	990	1059	1131
50°	958	1058	1161
55°	924	1066	1203
60°	871	1082	1256
65°	805	1107	1327
70°	703	1146	1413
75°	570	1206	1461
80°	421	1182	1182
85°	323	871	983



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	3.1
10°-20°	220.2	8.8
20°-30°	335.2	13.4
30°-40°	407.1	16.3
40°-50°	430.1	17.2
50°-60°	405.8	16.3
60°-70°	337.4	13.5
70°-80°	222.0	8.9
80°-90°	60.5	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°	632.1	25.3
0°-40°	1039.2	41.7
0°-60°	1875.1	75.2
0°-90°	2495.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2495.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	810	810	810	810	810	
5°	807	807	804	807	807	77
15°	776	777	778	786	786	219
25°	714	719	725	737	740	330
35°	628	635	650	666	672	393
45°	520	531	557	584	594	401
55°	394	410	454	497	513	351
65°	253	282	348	399	417	250
75°	110	160	232	275	281	118
85°	21	46	56	63	64	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	809.5	809.5	809.5	809.5	809.5
2.5°	810.5	809.5	805.3	809.5	809.5
5°	807.4	807.4	804.3	807.4	807.4
7.5°	802.2	802.2	800.1	804.3	804.3
10°	795.9	795.9	794.9	800.1	800.1
12.5°	786.5	787.6	786.5	792.8	792.8
15°	776.1	777.1	778.2	785.5	785.5
17.5°	762.5	764.6	766.7	775.0	776.1
20°	750.0	751.0	755.2	764.6	765.6
22.5°	733.3	736.4	741.6	751.0	754.1
25°	714.5	718.6	724.9	737.4	739.5
27.5°	696.7	699.8	708.2	721.8	725.9
30°	674.8	680.0	690.4	704.0	709.2
32.5°	653.9	659.1	671.6	686.3	690.4
35°	627.8	635.1	649.7	666.4	671.6
37.5°	602.7	610.0	627.8	646.6	652.8
40°	576.6	584.9	603.7	625.7	634.0
42.5°	548.4	559.9	580.8	604.8	614.2
45°	520.2	530.6	556.7	583.9	594.3
47.5°	489.9	502.4	530.6	563.0	575.5
50°	457.5	473.2	505.5	541.1	554.6
52.5°	425.1	442.9	479.4	519.1	533.8
55°	393.8	410.5	454.4	497.2	512.9
57.5°	359.3	380.2	428.3	474.2	489.9
60°	323.8	346.8	402.1	450.2	466.9
62.5°	288.3	314.4	377.1	425.1	442.9
65°	252.8	282.0	347.8	399.0	416.8
67.5°	218.3	250.7	320.7	371.8	389.6
70°	178.6	219.3	291.4	341.6	359.3
72.5°	142.1	189.1	263.2	310.2	325.9
75°	109.7	159.8	231.9	274.7	281.0
77.5°	80.4	130.6	199.5	214.1	215.2
80°	54.3	104.5	152.5	150.4	152.5
82.5°	35.5	78.3	96.1	107.6	108.6
85°	20.9	46.0	56.4	62.7	63.7
87.5°	10.4	15.7	19.8	20.9	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)