

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: P308088

Luminaire Tested: **22FCZ2-20HE-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: P308088
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L82765-HRP-CP187-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" POLYCARB SHEET
Light Source: (168) 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: 1335.0 lumens
Efficiency: N/A
Efficacy: 80.4 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

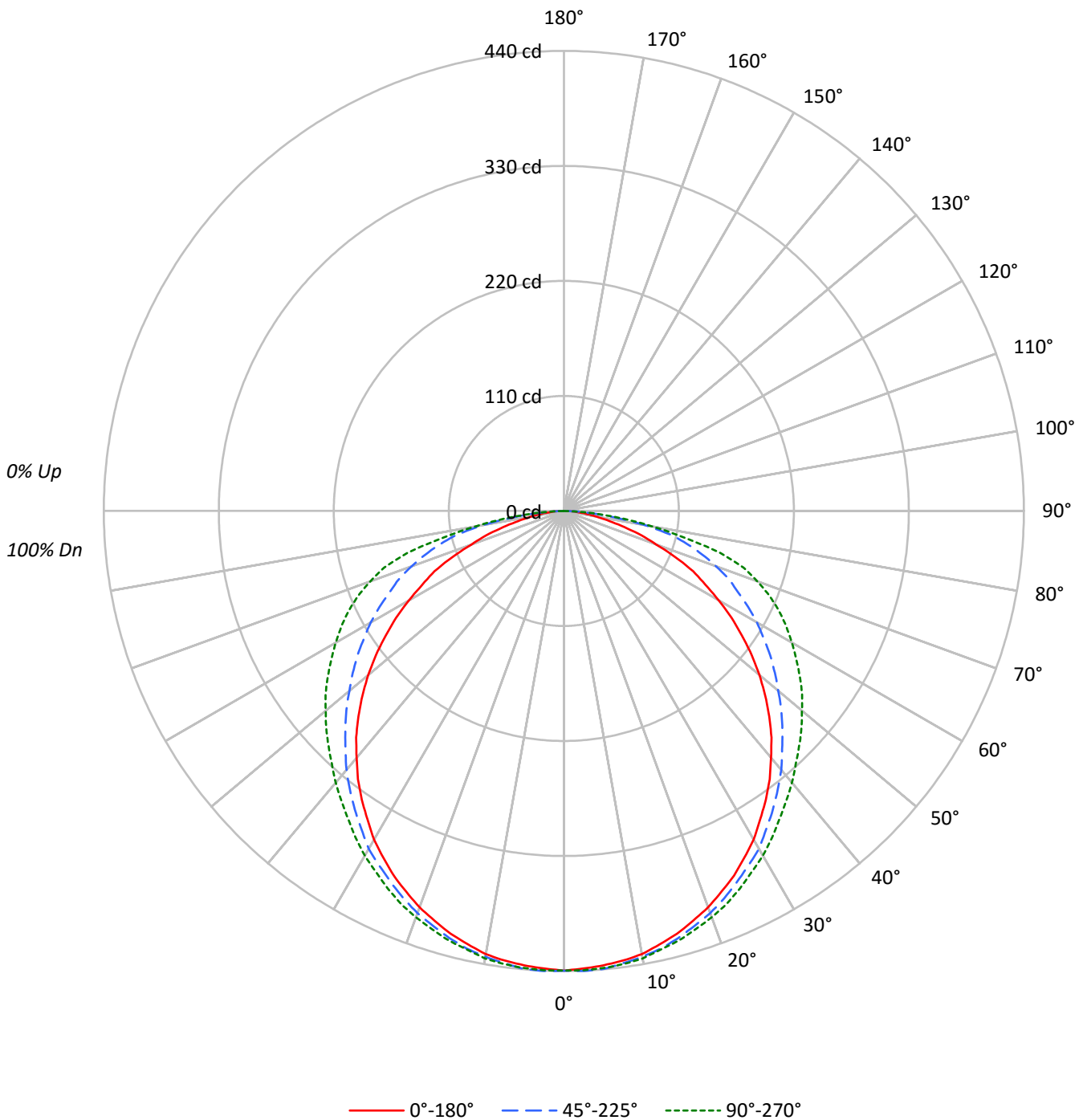
Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1183	1183	1183
5°	1178	1187	1185
10°	1176	1183	1187
15°	1166	1178	1185
20°	1155	1172	1184
25°	1143	1163	1183
30°	1128	1159	1183
35°	1107	1145	1181
40°	1083	1136	1192
45°	1058	1125	1211
50°	1022	1121	1245
55°	976	1130	1292
60°	920	1147	1355
65°	869	1169	1448
70°	742	1220	1551
75°	622	1269	1612
80°	508	1227	1344
85°	442	911	988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.7	3.1
10°-20°	119.2	8.9
20°-30°	180.6	13.5
30°-40°	218.1	16.3
40°-50°	229.2	17.2
50°-60°	215.6	16.2
60°-70°	179.8	13.5
70°-80°	119.1	8.9
80°-90°	31.8	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°	341.5	25.6
0°-40°	559.6	41.9
0°-60°	1004.3	75.2
0°-90°	1335.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1335.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	440	440	440	440	440	
5°	436	437	440	440	439	41
15°	418	420	423	424	425	118
25°	385	387	392	397	398	177
35°	337	340	349	356	360	211
45°	278	282	296	311	318	214
55°	208	217	241	265	275	186
65°	136	148	184	214	227	133
75°	60	83	122	147	155	65
85°	14	22	30	32	32	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	439.6	439.6	439.6	439.6	439.6
2.5°	437.9	438.8	440.4	440.4	439.6
5°	436.2	437.1	439.6	439.6	438.8
7.5°	433.7	434.5	436.2	437.9	437.1
10°	430.3	431.2	432.9	434.5	434.5
12.5°	424.4	425.3	428.7	429.5	429.5
15°	418.5	420.2	422.8	424.4	425.3
17.5°	411.0	412.7	416.0	419.4	419.4
20°	403.4	405.1	409.3	412.7	413.5
22.5°	394.1	396.7	400.9	405.1	406.8
25°	384.9	387.4	391.6	396.7	398.3
27.5°	373.9	376.4	382.3	388.2	389.1
30°	363.0	365.5	373.1	378.1	380.7
32.5°	349.5	352.9	360.4	368.0	370.5
35°	336.9	340.2	348.6	356.2	359.6
37.5°	323.4	326.8	336.0	345.3	349.5
40°	308.2	312.4	323.4	333.5	339.4
42.5°	293.9	298.1	309.1	322.5	328.4
45°	277.9	282.1	295.6	310.8	318.3
47.5°	261.1	266.1	282.1	300.6	308.2
50°	244.2	250.1	267.8	288.9	297.3
52.5°	226.5	234.1	254.3	277.1	287.2
55°	208.0	217.3	240.9	265.3	275.4
57.5°	190.3	198.7	226.5	252.6	263.6
60°	171.0	181.9	213.1	240.0	251.8
62.5°	152.4	164.2	198.7	227.4	240.0
65°	136.4	148.2	183.6	213.9	227.4
67.5°	115.4	131.4	171.0	199.6	213.1
70°	94.3	116.2	155.0	184.4	197.1
72.5°	78.3	99.4	139.0	168.4	180.2
75°	59.8	83.4	122.1	147.4	155.0
77.5°	44.6	69.1	104.4	117.1	117.9
80°	32.8	53.1	79.2	83.4	86.7
82.5°	22.7	37.1	51.4	56.4	58.1
85°	14.3	21.9	29.5	32.0	32.0
87.5°	7.6	8.4	10.1	10.1	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)