

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: P310488

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CP250-W2A-U-5700K**

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: P310488
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: 24FCZ2-75HE-UNV-L82765-RDP-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5700K 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: 4485.0 lumens
Efficiency: N/A
Efficacy: 69.4 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

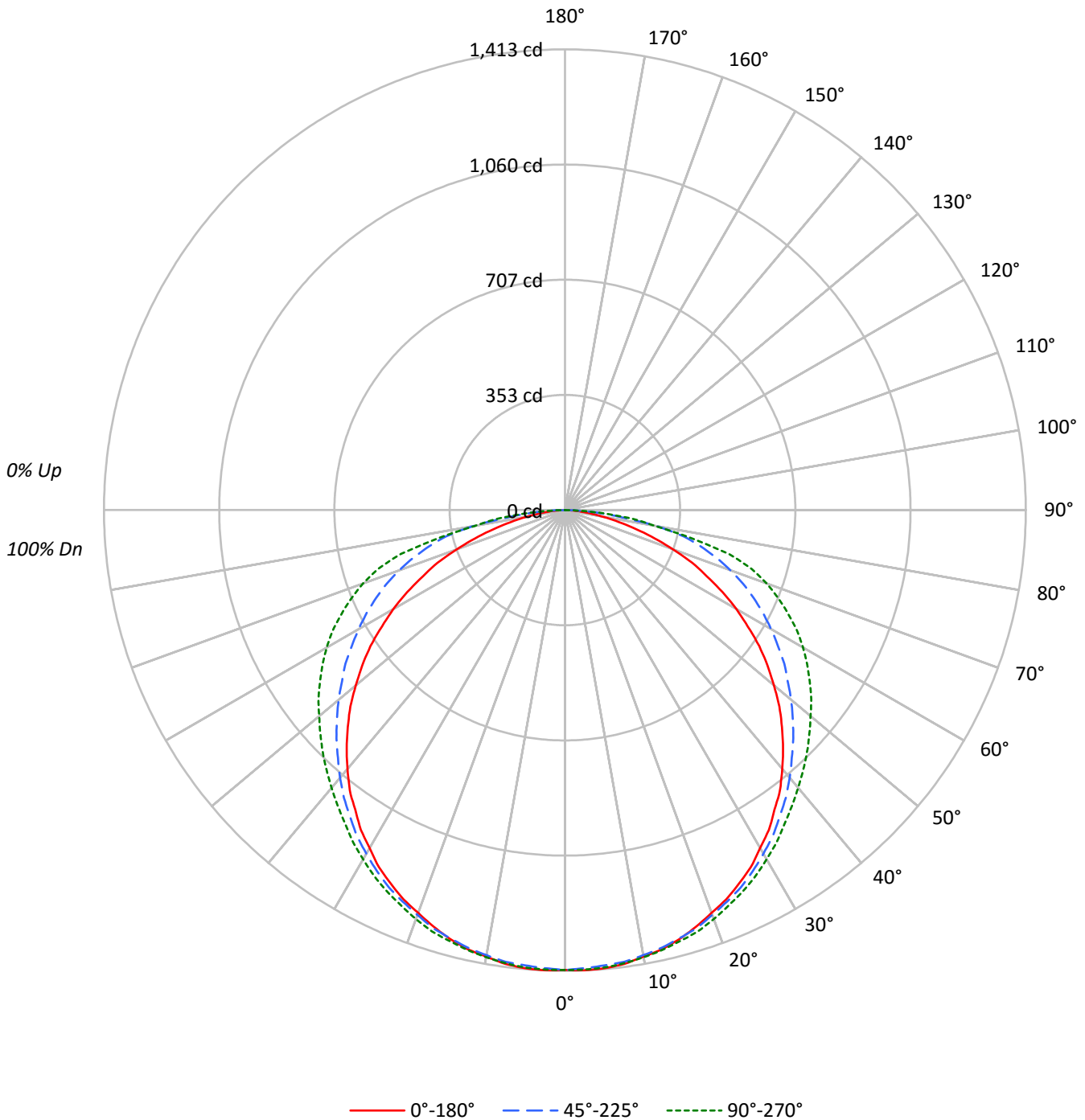
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1898	1898	1898
5°	1905	1893	1902
10°	1900	1893	1903
15°	1897	1893	1906
20°	1882	1892	1911
25°	1876	1896	1916
30°	1859	1891	1922
35°	1842	1885	1929
40°	1821	1883	1954
45°	1791	1884	1998
50°	1751	1895	2058
55°	1706	1926	2150
60°	1634	1964	2269
65°	1530	2033	2408
70°	1391	2127	2591
75°	1180	2244	2706
80°	931	2258	2189
85°	687	1717	1924



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.8	3.0
10°-20°	385.0	8.6
20°-30°	588.8	13.1
30°-40°	719.8	16.0
40°-50°	767.2	17.1
50°-60°	733.5	16.4
60°-70°	621.4	13.9
70°-80°	417.6	9.3
80°-90°	117.8	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°	1107.7	24.7
0°-40°	1827.5	40.7
0°-60°	3328.2	74.2
0°-90°	4485.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4485.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1410	1410	1410	1410	1410	
5°	1410	1408	1402	1408	1408	134
15°	1362	1362	1359	1370	1368	384
25°	1264	1268	1277	1288	1290	582
35°	1121	1130	1148	1170	1175	702
45°	941	957	990	1032	1050	726
55°	727	754	821	885	916	648
65°	480	530	638	723	756	477
75°	227	309	432	505	521	243
85°	44	91	111	120	125	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1410.4	1410.4	1410.4	1410.4	1410.4
2.5°	1412.6	1412.6	1406.0	1410.4	1410.4
5°	1410.4	1408.2	1401.5	1408.2	1408.2
7.5°	1403.7	1401.5	1397.1	1403.7	1401.5
10°	1390.4	1390.4	1385.9	1392.6	1392.6
12.5°	1379.3	1377.0	1374.8	1383.7	1381.5
15°	1361.5	1361.5	1359.2	1370.4	1368.1
17.5°	1339.2	1341.4	1343.7	1352.6	1354.8
20°	1314.7	1319.2	1321.4	1334.8	1334.8
22.5°	1292.5	1294.7	1299.2	1312.5	1312.5
25°	1263.6	1268.0	1276.9	1288.1	1290.3
27.5°	1234.7	1236.9	1248.0	1263.6	1265.8
30°	1196.8	1203.5	1216.9	1234.7	1236.9
32.5°	1163.5	1170.1	1185.7	1203.5	1208.0
35°	1121.2	1130.1	1147.9	1170.1	1174.6
37.5°	1083.4	1090.1	1112.3	1136.8	1143.5
40°	1036.7	1050.0	1072.3	1101.2	1112.3
42.5°	990.0	1003.3	1030.0	1067.8	1081.2
45°	941.0	956.6	990.0	1032.2	1050.0
47.5°	892.1	909.9	947.7	996.6	1016.6
50°	836.5	858.7	905.4	961.0	983.3
52.5°	783.1	809.8	860.9	923.2	952.1
55°	727.4	754.1	820.9	885.4	916.5
57.5°	665.2	700.8	774.2	847.6	880.9
60°	607.3	640.7	729.7	809.8	843.1
62.5°	545.0	589.5	685.2	769.7	803.1
65°	480.5	529.5	638.5	723.0	756.4
67.5°	422.7	476.1	591.7	676.3	709.7
70°	353.7	420.5	540.6	625.1	658.5
72.5°	289.2	362.6	487.2	569.5	600.6
75°	226.9	309.2	431.6	505.0	520.6
77.5°	169.1	255.8	373.7	404.9	393.8
80°	120.1	204.7	291.4	275.9	282.5
82.5°	77.9	155.7	180.2	204.7	211.3
85°	44.5	91.2	111.2	120.1	124.6
87.5°	20.0	33.4	44.5	44.5	42.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)