

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P581331

Luminaire Tested: **HC460D010-HM44560840-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581331
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC460D010-HM44560840-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5996.9 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

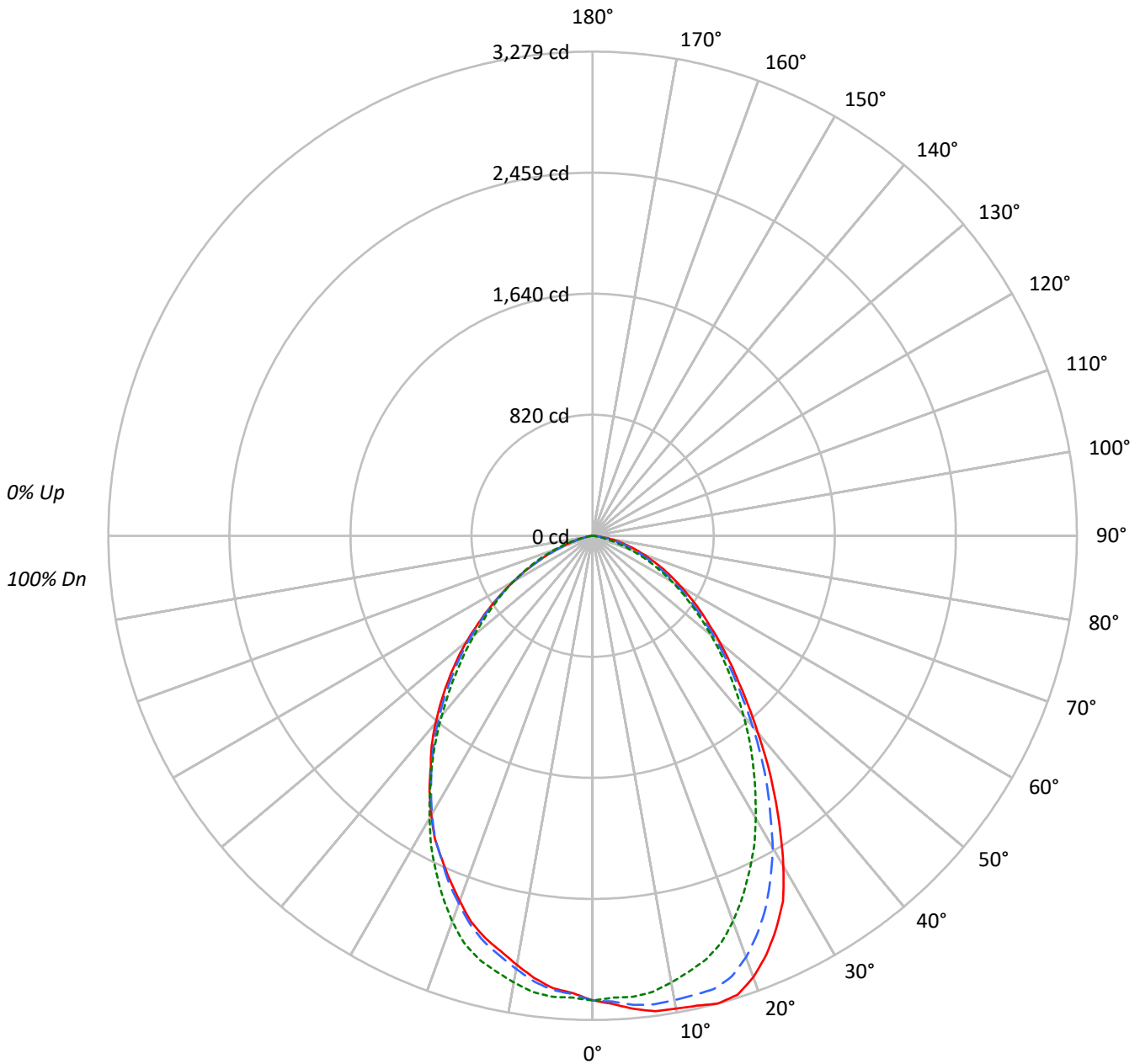
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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				100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77				77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67				67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59				59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52				52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47				47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35				35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	388082	388082	388082
5°	398269	388116	380848
10°	407283	384763	369583
15°	418743	379311	359850
20°	417596	364763	345271
25°	400002	341494	328728
30°	367961	314522	311175
35°	323681	285434	287783
40°	280056	255517	266208
45°	243392	227030	240671
50°	215993	200239	213748
55°	191628	175672	183241
60°	170661	152357	152357
65°	151709	126609	118641
70°	131056	95858	84570
75°	109897	63336	52137
80°	83249	30544	27702
85°	44155	11039	11039



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.0	5.0
10°-20°	844.7	14.1
20°-30°	1191.3	19.9
30°-40°	1230.7	20.5
40°-50°	1043.2	17.4
50°-60°	759.1	12.7
60°-70°	443.5	7.4
70°-80°	164.8	2.7
80°-90°	21.6	0.4
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°	2334.0	38.9
0°-40°	3564.7	59.4
0°-60°	5367.0	89.5
0°-90°	5996.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5996.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3146	3146	3146	3146	3146	
5°	3217	3189	3135	3088	3076	308
15°	3279	3178	2970	2845	2818	922
25°	2939	2775	2509	2419	2415	1344
35°	2150	2056	1896	1899	1911	1343
45°	1395	1356	1302	1348	1380	1086
55°	891	848	817	844	852	801
65°	520	477	434	406	406	516
75°	231	192	133	106	109	248
85°	31	20	8	8	8	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	3146.3	3146.3	3146.3	3146.3	3146.3	3146.3	3146.3	3146.3	3146.3
2.5°	3173.6	3165.8	3157.9	3146.3	3130.7	3118.9	3107.2	3099.4	3099.4
5°	3216.6	3204.9	3189.3	3161.9	3134.6	3111.1	3087.7	3075.9	3075.9
7.5°	3247.9	3232.3	3201.0	3161.9	3115.0	3079.9	3044.7	3029.0	3021.2
10°	3251.8	3236.1	3193.1	3134.6	3072.0	3017.3	2978.3	2954.8	2950.8
12.5°	3259.6	3240.1	3185.4	3103.2	3021.2	2954.8	2911.8	2888.4	2880.5
15°	3279.2	3251.8	3177.6	3072.0	2970.4	2892.2	2845.4	2825.8	2818.0
17.5°	3259.6	3220.6	3130.7	3005.6	2892.2	2806.2	2759.3	2739.8	2739.8
20°	3181.4	3142.4	3036.8	2900.1	2778.9	2696.8	2649.9	2638.2	2630.4
22.5°	3072.0	3029.0	2915.7	2771.0	2649.9	2575.7	2544.4	2528.8	2524.8
25°	2939.1	2896.1	2775.0	2626.4	2509.2	2446.6	2419.3	2419.3	2415.4
27.5°	2790.6	2735.9	2610.9	2481.8	2368.5	2321.6	2309.9	2309.9	2313.8
30°	2583.5	2544.4	2438.8	2313.8	2208.3	2177.0	2177.0	2184.8	2184.8
32.5°	2360.7	2333.4	2239.5	2130.1	2048.0	2028.5	2036.3	2051.9	2055.8
35°	2149.6	2118.4	2055.8	1958.1	1895.6	1887.8	1899.4	1911.2	1911.2
37.5°	1942.5	1911.2	1868.2	1790.0	1743.2	1747.0	1762.7	1778.3	1790.0
40°	1739.3	1715.8	1684.6	1622.0	1586.9	1602.4	1622.0	1637.6	1653.3
42.5°	1559.5	1536.0	1512.5	1465.6	1442.3	1461.8	1485.2	1500.8	1516.5
45°	1395.3	1379.7	1356.2	1317.2	1301.5	1321.0	1348.4	1364.1	1379.7
47.5°	1254.6	1246.8	1215.5	1180.3	1172.6	1192.1	1215.5	1235.0	1246.8
50°	1125.6	1113.9	1086.5	1051.4	1043.5	1074.9	1090.4	1102.2	1113.9
52.5°	1000.5	988.8	957.6	926.3	926.3	949.8	961.5	965.3	977.1
55°	891.1	879.4	848.1	824.7	816.9	836.4	844.2	844.2	852.1
57.5°	789.5	777.8	746.5	719.1	715.3	727.0	727.0	727.0	730.8
60°	691.8	680.1	648.8	625.4	617.6	621.4	617.6	613.6	617.6
62.5°	601.9	590.2	558.9	531.5	523.7	523.7	512.0	508.1	512.0
65°	519.8	500.3	476.8	449.5	433.8	422.1	406.5	406.5	406.5
67.5°	437.8	422.1	394.8	367.4	347.9	328.4	304.9	312.7	316.6
70°	363.4	351.7	320.5	293.2	265.8	242.3	222.8	230.6	234.5
72.5°	297.0	281.4	254.0	222.8	199.3	168.1	156.3	164.1	164.1
75°	230.6	215.0	191.5	160.3	132.9	105.6	105.6	109.4	109.4
77.5°	172.0	156.3	132.9	105.6	82.1	62.5	66.4	66.4	66.4
80°	117.2	105.6	86.0	62.5	43.0	35.2	35.2	35.2	39.0
82.5°	66.4	58.7	46.9	31.2	19.5	19.5	19.5	19.5	19.5
85°	31.2	23.5	19.5	11.7	7.8	7.8	7.8	7.8	7.8
87.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)