

Scaled data based on original data using
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge or
Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: SHAPER

Report Number: 253P310

Luminaire Tested: **1220-XX-36-MH/3/150-T5C/1/40**

Issue Date: 3/3/2020

Test Information

Test Method: LM-46-04
Report Number: 253P310
Test Lab: METALUX LABORATORIES
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 1220-XX-36-MH/3/150-T5C/1/40
Description: SHAPER 36 INCH 1220 SERIES DIRECT/INDIRECT INDOOR PENDANT FIXTURE
WITH DEEP DIFFUSING BOWL AND 4" APERTURE
Light Source: THREE 150 WATT T5 CERAMIC METAL HALIDE AND ONE 40 WATTS T5 CIRCLINE
(3)CDM150MH -14000 LUMENS AND (1)TL5C40W/830 - 3300 LUMENS
Ballast/Driver: -

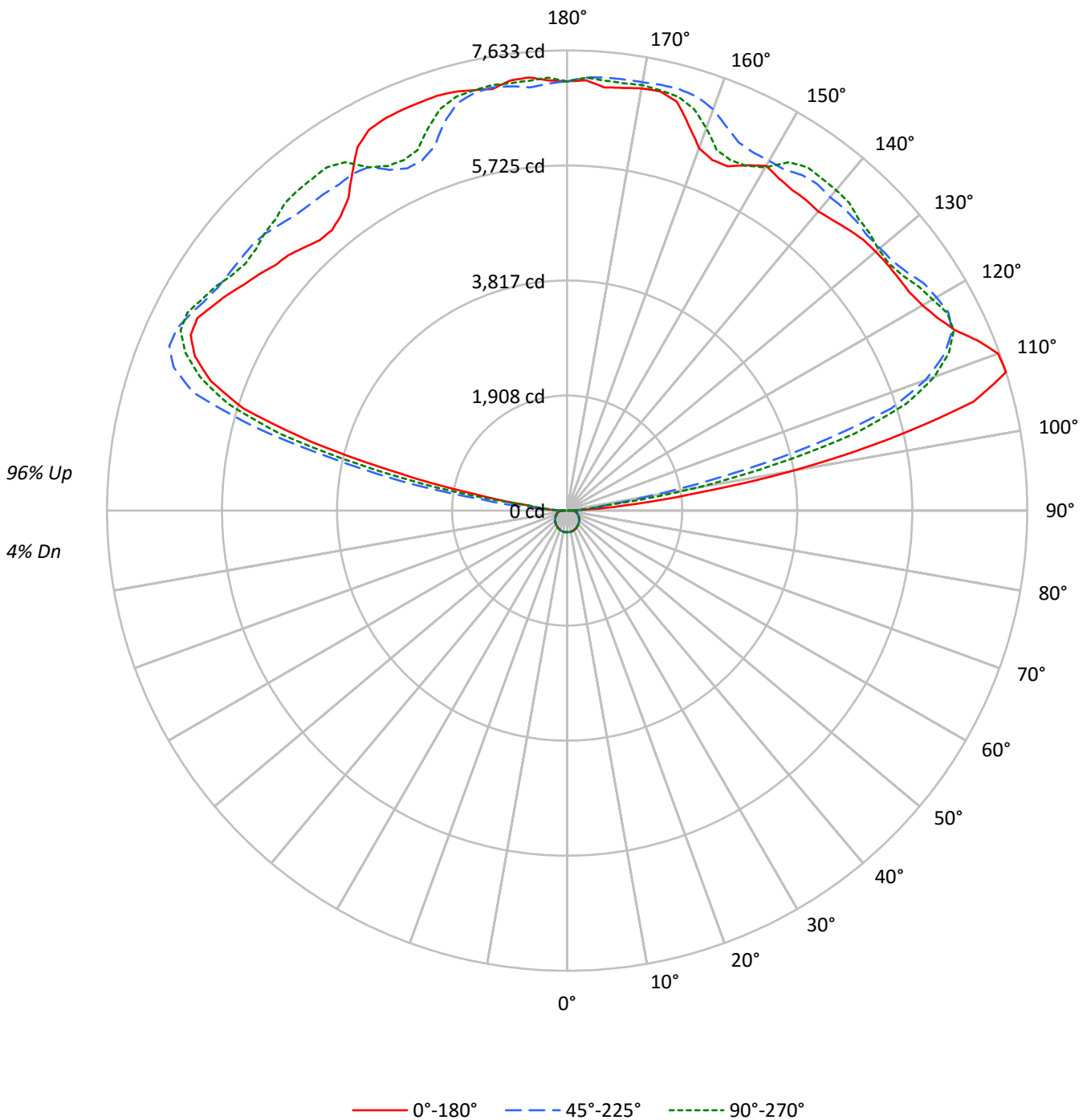
Summary

Lumens per Lamp: 45300 (1 lamp)
Luminaire Lumens: 35395.4 lumens
Efficiency: 78.1%
Efficacy: 823.1 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.32 / 1.48
Luminous Opening: Vertical Cylinder (Dia: 3' x H: 1.08')
CIE Type: Indirect

Input Watts (W): 43
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	75	75	75	75	65	65	65	65	45	45	45	27	27	27	11	11	11	3
1	68	65	62	60	59	56	54	52	39	38	36	24	23	22	9	9	9	2
2	62	57	52	48	53	49	45	42	34	32	30	21	19	18	8	8	7	2
3	56	50	44	40	48	43	38	35	30	27	25	18	17	15	7	7	6	2
4	51	44	38	34	44	38	33	29	26	23	21	16	14	13	6	6	5	1
5	47	39	33	28	40	33	29	25	23	20	18	14	12	11	6	5	4	1
6	43	34	29	24	37	30	25	21	21	18	15	13	11	10	5	4	4	1
7	40	31	25	21	34	27	22	18	19	16	13	11	10	8	5	4	3	1
8	37	28	22	18	31	24	19	16	17	14	12	10	9	7	4	3	3	1
9	34	25	20	16	29	22	17	14	15	12	10	9	8	6	4	3	3	1
10	32	23	18	14	27	20	15	12	14	11	9	9	7	6	3	3	2	1

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	548	548	548
5°	528	528	528
10°	509	509	509
15°	491	491	491
20°	475	475	475
25°	458	458	458
30°	442	442	442
35°	429	429	429
40°	417	417	417
45°	407	407	407
50°	396	396	396
55°	388	388	388
60°	381	381	381
65°	376	376	376
70°	372	372	372
75°	370	370	370
80°	372	372	372
85°	374	374	374



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	34.2	0.1	0.1
10°-20°	98.9	0.3	0.2
20°-30°	152.5	0.4	0.3
30°-40°	191.2	0.5	0.4
40°-50°	212.8	0.6	0.5
50°-60°	217.0	0.6	0.5
60°-70°	205.2	0.6	0.5
70°-80°	180.8	0.5	0.4
80°-90°	134.2	0.4	0.3
90°-100°	776.1	2.2	1.7
100°-110°	5033.6	14.2	11.1
110°-120°	6924.6	19.6	15.3
120°-130°	6123.2	17.3	13.5
130°-140°	5187.1	14.7	11.5
140°-150°	4197.0	11.9	9.3
150°-160°	3052.1	8.6	6.7
160°-170°	1992.9	5.6	4.4
170°-180°	681.8	1.9	1.5
0°-30°	285.6	0.8	0.6
0°-40°	476.8	1.3	1.1
0°-60°	906.7	2.6	2.0
0°-90°	1426.9	4.0	3.1
90°-120°	12734.3	36.0	28.1
90°-150°	28241.6	79.8	62.3
90°-180°	33968.0	96.0	75.0
0°-180°	35395.4	100.0	78.1

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	360	360	360	360	360	
5°	359	359	359	359	359	34
15°	350	350	350	350	350	99
25°	331	331	331	331	331	153
35°	305	305	305	305	305	191
45°	276	276	276	276	276	213
55°	242	242	242	242	242	217
65°	207	207	207	207	207	205
75°	171	171	171	171	171	181
85°	134	134	134	134	134	113
90°	53	27	10	31	46	63
95°	924	396	310	797	452	1357
105°	6976	4274	4930	5379	4367	6800
115°	7092	7047	7074	7141	6889	7100
125°	6714	6887	6796	6851	6540	6033
135°	6594	6788	6837	6721	6171	5105
145°	6496	6794	6952	6602	6325	4093
155°	6299	6736	6413	6265	7169	2960
165°	7025	7232	7108	7003	7192	1945
175°	7047	7210	7159	7044	7211	676
180°	7119	7119	7119	7119	7119	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	360	360	360	360	360	360	360	360	360
2.5°	360	360	360	360	360	360	360	360	360
5°	359	359	359	359	359	359	359	359	359
7.5°	358	358	358	358	358	358	358	358	358
10°	356	356	356	356	356	356	356	356	356
12.5°	353	353	353	353	353	353	353	353	353
15°	350	350	350	350	350	350	350	350	350
17.5°	346	346	346	346	346	346	346	346	346
20°	342	342	342	342	342	342	342	342	342
22.5°	336	336	336	336	336	336	336	336	336
25°	331	331	331	331	331	331	331	331	331
27.5°	324	324	324	324	324	324	324	324	324
30°	318	318	318	318	318	318	318	318	318
32.5°	312	312	312	312	312	312	312	312	312
35°	305	305	305	305	305	305	305	305	305
37.5°	298	298	298	298	298	298	298	298	298
40°	291	291	291	291	291	291	291	291	291
42.5°	283	283	283	283	283	283	283	283	283
45°	276	276	276	276	276	276	276	276	276
47.5°	267	267	267	267	267	267	267	267	267
50°	259	259	259	259	259	259	259	259	259
52.5°	251	251	251	251	251	251	251	251	251
55°	242	242	242	242	242	242	242	242	242
57.5°	234	234	234	234	234	234	234	234	234
60°	225	225	225	225	225	225	225	225	225
62.5°	216	216	216	216	216	216	216	216	216
65°	207	207	207	207	207	207	207	207	207
67.5°	198	198	198	198	198	198	198	198	198
70°	189	189	189	189	189	189	189	189	189
72.5°	180	180	180	180	180	180	180	180	180
75°	171	171	171	171	171	171	171	171	171
77.5°	162	162	162	162	162	162	162	162	162
80°	153	153	153	153	153	153	153	153	153
82.5°	143	143	143	143	143	143	143	143	143
85°	134	134	134	134	134	134	134	134	134
87.5°	125	125	125	125	125	125	125	125	125
90°	53	21	27	32	10	36	31	18	46
92.5°	229	229	175	182	162	211	250	162	197
95°	924	655	396	415	310	710	797	371	452
97.5°	2053	1057	565	620	636	1812	1431	535	677
100°	3804	2197	1373	1701	2166	3321	2753	1384	1533
102.5°	5453	3298	2724	2988	3534	4908	3961	2716	2831
105°	6976	4730	4274	4477	4930	6290	5379	4277	4367
107.5°	7633	6042	5631	5679	5898	7003	6492	5681	5630
110°	7608	6721	6326	6280	6480	7208	6947	6429	6293



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	7367	7090	6771	6658	6855	7211	7143	6889	6682
115°	7092	7214	7047	6876	7074	7091	7141	7170	6889
117.5°	6926	7164	7127	6923	7105	6964	7049	7245	6914
120°	6806	7061	7073	6847	6999	6833	6946	7193	6787
122.5°	6736	6978	7015	6762	6913	6740	6877	7131	6672
125°	6714	6922	6887	6645	6796	6716	6851	7001	6540
127.5°	6701	6889	6798	6553	6727	6691	6838	6915	6440
130°	6681	6887	6775	6471	6742	6681	6833	6917	6326
132.5°	6655	6857	6752	6444	6808	6684	6798	6906	6272
135°	6594	6794	6788	6425	6837	6642	6721	6967	6171
137.5°	6529	6750	6797	6397	6925	6607	6654	7005	6080
140°	6478	6743	6787	6419	6940	6588	6632	6999	6071
142.5°	6501	6716	6823	6501	6942	6592	6623	7001	6164
145°	6496	6692	6794	6546	6952	6589	6602	6926	6325
147.5°	6536	6677	6706	6650	6851	6618	6622	6737	6634
150°	6602	6561	6698	6804	6573	6616	6581	6589	6957
152.5°	6456	6354	6694	6888	6445	6431	6372	6510	7121
155°	6299	6281	6736	6937	6413	6297	6265	6534	7169
157.5°	6293	6325	6894	7036	6478	6301	6287	6708	7189
160°	6397	6510	7082	7140	6749	6427	6428	6963	7197
162.5°	6704	6835	7192	7192	6987	6742	6759	7142	7210
165°	7025	7032	7232	7194	7108	7017	7003	7219	7192
167.5°	7122	7109	7232	7166	7142	7092	7097	7239	7143
170°	7112	7145	7214	7132	7166	7098	7127	7235	7101
172.5°	7070	7122	7213	7184	7150	7064	7098	7205	7196
175°	7047	7064	7210	7199	7159	7039	7044	7189	7211
177.5°	7143	7090	7189	7156	7187	7125	7091	7189	7141
180°	7119	7119	7119	7119	7119	7119	7119	7119	7119

(END OF REPORT)