

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: NEO-RAY

Report Number: P243380

Luminaire Tested: **S123DR-H340D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243380
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-54)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-H340D940-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1215.1 lumens
Efficiency: N/A
Efficacy: 108.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

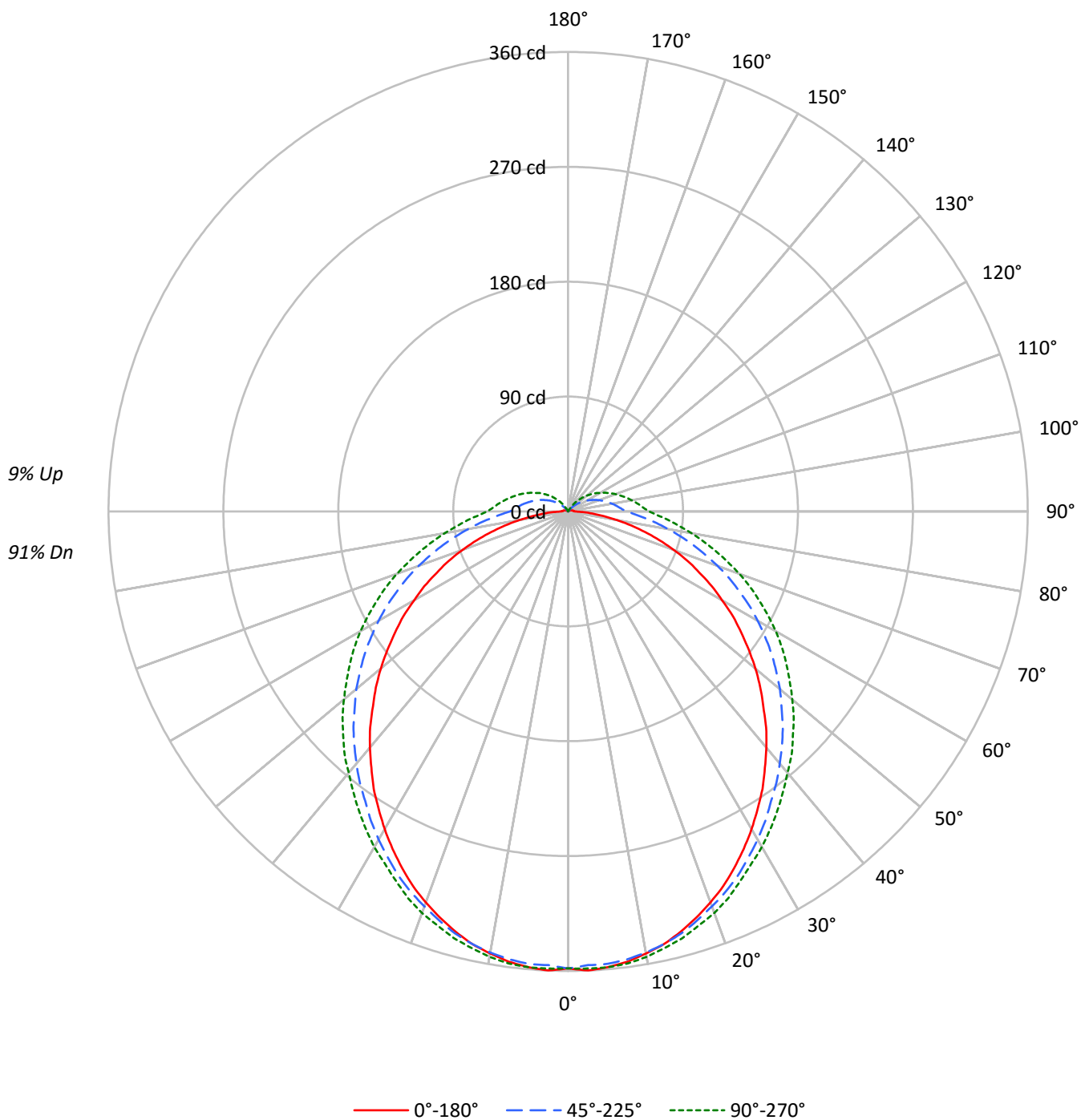
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94
1	105	100	95	90	101	96	92	88	91	87	84	85	82	80	80	78	76
2	95	86	79	72	91	83	77	71	78	73	68	74	69	65	69	66	62
3	86	75	66	60	83	73	65	58	69	62	56	65	59	54	61	56	52
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	45
5	72	59	50	43	70	57	49	42	54	47	41	51	45	40	49	43	39
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34
7	62	48	39	33	60	47	38	32	44	37	32	42	36	31	40	34	30
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	37	31	27
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4339	4339	4339
5°	4353	4228	4226
10°	4311	4121	4098
15°	4252	4003	3956
20°	4171	3863	3814
25°	4078	3735	3650
30°	3973	3590	3511
35°	3869	3442	3372
40°	3754	3322	3241
45°	3626	3204	3130
50°	3521	3082	3015
55°	3391	2959	2903
60°	3253	2822	2793
65°	3112	2676	2659
70°	2948	2520	2528
75°	2701	2351	2374
80°	2389	2181	2238
85°	2121	2046	2134

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.0	2.8
10°-20°	96.9	8.0
20°-30°	145.1	11.9
30°-40°	173.6	14.3
40°-50°	182.1	15.0
50°-60°	171.2	14.1
60°-70°	143.3	11.8
70°-80°	102.8	8.5
80°-90°	61.6	5.1
90°-100°	39.0	3.2
100°-110°	28.8	2.4
110°-120°	19.3	1.6
120°-130°	11.1	0.9
130°-140°	5.1	0.4
140°-150°	1.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	276.0	22.7
0°-40°	449.7	37.0
0°-60°	802.9	66.1
0°-90°	1110.6	91.4
90°-120°	87.1	7.2
90°-150°	104.5	8.6
90°-180°	104.0	8.6
0°-180°	1215.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	358	358	358	358	358	
5°	358	358	356	359	358	34
15°	341	343	342	347	346	96
25°	308	312	315	320	319	142
35°	265	272	277	284	286	166
45°	216	227	238	246	249	167
55°	165	179	194	205	209	148
65°	114	130	148	161	165	113
75°	62	81	101	115	120	66
85°	19	39	60	74	79	20
90°	5	25	46	59	64	4
95°	4	20	40	52	56	3
105°	3	13	30	41	45	3
115°	2	7	21	31	34	2
125°	2	2	13	21	24	1
135°	1	0	6	12	15	1
145°	0	0	0	4	5	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	358.0	358.0	358.0	358.0	358.0
2.5°	359.9	358.7	355.8	359.1	358.4
5°	358.4	358.0	355.8	358.7	358.4
7.5°	355.8	355.8	353.9	357.2	357.2
10°	351.6	352.8	350.9	354.6	354.3
12.5°	347.2	348.7	347.2	351.3	350.2
15°	340.8	343.1	342.3	346.8	346.0
17.5°	333.7	336.3	336.0	340.4	340.1
20°	325.9	329.2	329.2	333.7	334.8
22.5°	317.7	321.4	322.5	327.0	327.8
25°	308.0	312.1	314.7	319.5	319.2
27.5°	297.9	302.7	305.7	311.0	311.0
30°	287.4	293.0	296.8	302.4	303.5
32.5°	276.2	283.0	287.4	293.4	294.9
35°	265.4	271.8	277.0	284.1	285.9
37.5°	253.1	260.9	268.0	275.5	276.6
40°	241.5	250.1	257.9	265.8	267.3
42.5°	229.6	238.5	247.9	255.7	259.1
45°	216.1	227.0	237.8	246.0	249.0
47.5°	204.2	215.0	226.6	236.3	239.7
50°	191.5	202.7	216.5	225.8	229.2
52.5°	178.4	190.8	205.3	215.4	218.8
55°	165.4	179.2	194.5	204.9	208.7
57.5°	153.1	166.9	182.9	194.5	198.6
60°	139.2	154.5	171.3	183.3	187.8
62.5°	126.9	142.6	160.1	172.1	176.6
65°	113.5	130.3	147.8	160.9	165.0
67.5°	101.2	117.6	136.6	149.7	154.2
70°	88.1	105.3	124.3	137.7	142.6
72.5°	75.0	93.3	112.7	126.5	130.7
75°	62.3	81.4	101.2	115.0	119.5
77.5°	50.4	69.4	90.0	103.8	108.6
80°	38.4	58.2	79.5	93.3	98.2
82.5°	28.0	48.2	69.8	83.2	87.7
85°	19.0	38.8	60.5	74.3	79.1
87.5°	11.2	31.4	52.3	66.1	70.2
90°	5.2	24.6	45.5	59.4	63.5
92.5°	4.9	22.0	42.2	55.2	59.4
95°	4.1	20.2	39.6	52.3	56.4
97.5°	4.1	18.3	37.3	49.6	53.4
100°	3.7	16.4	35.1	46.7	50.4
102.5°	3.4	14.6	32.5	44.0	47.8
105°	3.0	13.1	30.2	41.4	44.8
107.5°	2.6	11.2	28.0	38.8	42.2
110°	2.6	9.7	25.8	36.2	39.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.2	8.2	23.5	33.6	37.0
115°	1.9	6.7	21.3	31.0	34.3
117.5°	1.9	5.2	19.0	28.7	31.7
120°	1.9	4.1	17.2	26.1	29.1
122.5°	1.5	2.6	15.3	23.9	26.9
125°	1.5	1.5	13.1	21.3	24.3
127.5°	1.1	0.7	11.2	19.0	21.7
130°	1.1	0.7	9.3	16.8	19.4
132.5°	0.7	0.7	7.5	14.6	17.2
135°	0.7	0.4	5.6	12.3	14.6
137.5°	0.7	0.4	3.7	10.1	12.3
140°	0.4	0.4	1.9	7.8	10.1
142.5°	0.4	0.0	0.4	6.0	7.8
145°	0.4	0.0	0.0	3.7	5.2
147.5°	0.4	0.0	0.0	1.9	3.4
150°	0.4	0.0	0.0	0.0	1.1
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)