

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: P243211

Luminaire Tested: **S122DR-H865D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243211
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-53)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DR-H865D940-X4F0-XX-UDD-D-W
Description: DEFINE 2 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: 2958.3 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

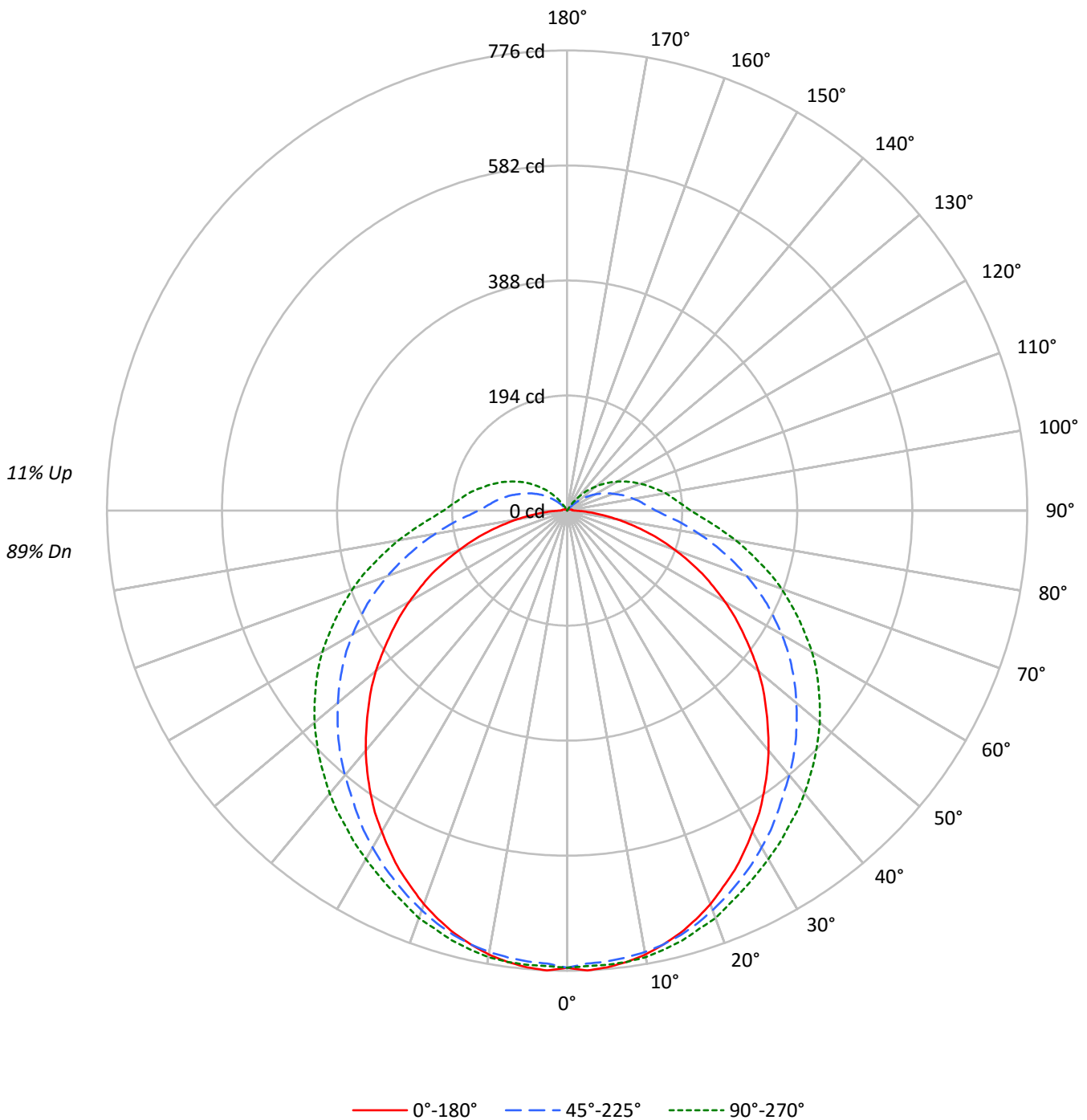
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	88	100	95	90	86	88	84	81	82	79	76	77	74	72	69
2	93	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	41	39
5	71	57	48	41	68	55	47	40	52	44	39	49	42	37	46	40	36	33
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	41	36	31	29
7	60	46	37	31	58	45	37	30	42	35	29	40	33	28	38	32	28	25
8	56	42	33	27	54	41	33	27	39	31	26	37	30	25	35	29	25	22
9	52	39	30	25	50	38	30	24	36	28	24	34	27	23	32	26	22	20
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14684	14684	14684
5°	14754	14080	14000
10°	14648	13614	13433
15°	14462	13135	12835
20°	14210	12613	12270
25°	13919	12099	11690
30°	13576	11616	11223
35°	13257	11136	10807
40°	12903	10724	10467
45°	12515	10352	10123
50°	12161	9971	9805
55°	11692	9613	9463
60°	11279	9218	9127
65°	10823	8817	8721
70°	10165	8336	8330
75°	9436	7825	7870
80°	8398	7323	7470
85°	7350	6928	7072



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.1	2.5
10°-20°	209.9	7.1
20°-30°	317.9	10.7
30°-40°	387.7	13.1
40°-50°	417.3	14.1
50°-60°	405.7	13.7
60°-70°	354.7	12.0
70°-80°	273.0	9.2
80°-90°	183.4	6.2
90°-100°	127.0	4.3
100°-110°	93.4	3.2
110°-120°	62.2	2.1
120°-130°	35.2	1.2
130°-140°	15.1	0.5
140°-150°	2.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	600.9	20.3
0°-40°	988.6	33.4
0°-60°	1811.5	61.2
0°-90°	2622.6	88.7
90°-120°	282.5	9.6
90°-150°	335.6	11.3
90°-180°	336.0	11.4
0°-180°	2958.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	771	771	771	771	771	
5°	773	770	763	770	769	73
15°	738	741	741	750	750	208
25°	669	680	688	703	704	308
35°	579	598	620	643	651	362
45°	475	504	545	579	590	367
55°	363	406	463	505	518	325
65°	251	305	372	417	431	248
75°	138	202	273	321	335	146
85°	42	111	184	230	244	43
90°	12	77	149	194	208	8
95°	9	62	130	173	186	7
105°	6	39	99	137	149	7
115°	4	18	69	103	115	4
125°	3	2	41	70	80	3
135°	1	1	14	38	47	1
145°	1	0	0	9	13	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°	770.9	770.9	770.9	770.9	770.9
2.5°	776.3	773.1	764.5	770.9	768.8
5°	773.1	769.8	763.4	769.8	768.8
7.5°	767.7	765.6	760.2	768.8	767.7
10°	760.2	759.1	755.9	764.5	764.5
12.5°	749.4	750.5	749.4	759.1	758.0
15°	737.6	740.9	740.9	750.5	750.5
17.5°	722.6	728.0	730.1	740.9	739.8
20°	706.5	712.9	717.2	729.0	731.2
22.5°	687.2	696.8	703.3	716.2	717.2
25°	668.9	679.7	688.2	703.3	704.4
27.5°	647.4	660.3	673.2	688.2	691.5
30°	624.9	641.0	656.0	674.3	678.6
32.5°	603.4	619.5	638.9	658.2	665.7
35°	578.7	598.1	619.5	643.2	650.7
37.5°	554.0	574.4	600.2	628.1	637.8
40°	528.3	551.9	583.0	613.1	622.8
42.5°	501.4	527.2	564.8	595.9	606.6
45°	474.6	503.6	545.4	578.7	590.5
47.5°	448.8	479.9	525.0	562.6	573.4
50°	420.9	455.3	504.6	543.3	556.2
52.5°	391.9	430.6	484.2	524.0	536.9
55°	362.9	405.9	462.8	504.6	517.5
57.5°	336.1	381.2	441.3	483.2	498.2
60°	307.1	355.4	417.7	461.7	476.7
62.5°	278.1	330.7	394.1	439.1	453.1
65°	251.2	304.9	371.5	416.6	430.6
67.5°	221.2	278.1	346.8	394.1	406.9
70°	193.3	253.4	322.1	369.4	384.4
72.5°	165.4	226.6	297.4	344.7	360.8
75°	138.5	201.9	272.7	321.0	335.0
77.5°	110.6	177.2	249.1	297.4	311.4
80°	85.9	152.5	225.5	273.8	288.8
82.5°	61.2	129.9	204.0	251.2	265.2
85°	41.9	110.6	183.6	229.8	243.7
87.5°	24.7	92.3	164.3	210.4	224.4
90°	11.8	77.3	149.2	194.3	208.3
92.5°	9.7	69.8	138.5	182.5	196.5
95°	8.6	62.3	129.9	172.9	185.8
97.5°	8.6	56.9	122.4	164.3	177.2
100°	7.5	50.5	113.8	154.6	168.6
102.5°	7.5	44.0	106.3	146.0	158.9
105°	6.4	38.7	98.8	137.4	149.2
107.5°	5.4	33.3	90.2	128.8	140.7
110°	5.4	27.9	82.7	120.3	132.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.3	23.6	76.2	111.7	123.5
115°	4.3	18.3	68.7	103.1	114.9
117.5°	4.3	12.9	61.2	94.5	106.3
120°	3.2	8.6	54.8	87.0	97.7
122.5°	3.2	5.4	47.2	78.4	89.1
125°	3.2	2.1	40.8	69.8	80.5
127.5°	2.1	2.1	33.3	62.3	71.9
130°	2.1	1.1	26.8	53.7	63.3
132.5°	2.1	1.1	20.4	46.2	54.8
135°	1.1	1.1	14.0	37.6	47.2
137.5°	1.1	1.1	7.5	30.1	37.6
140°	1.1	0.0	3.2	22.5	29.0
142.5°	1.1	0.0	0.0	15.0	21.5
145°	1.1	0.0	0.0	8.6	12.9
147.5°	0.0	0.0	0.0	2.1	6.4
150°	0.0	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)