

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: P243209

Luminaire Tested: **S122DR-H485D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243209
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-H485D940-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: 1637.9 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

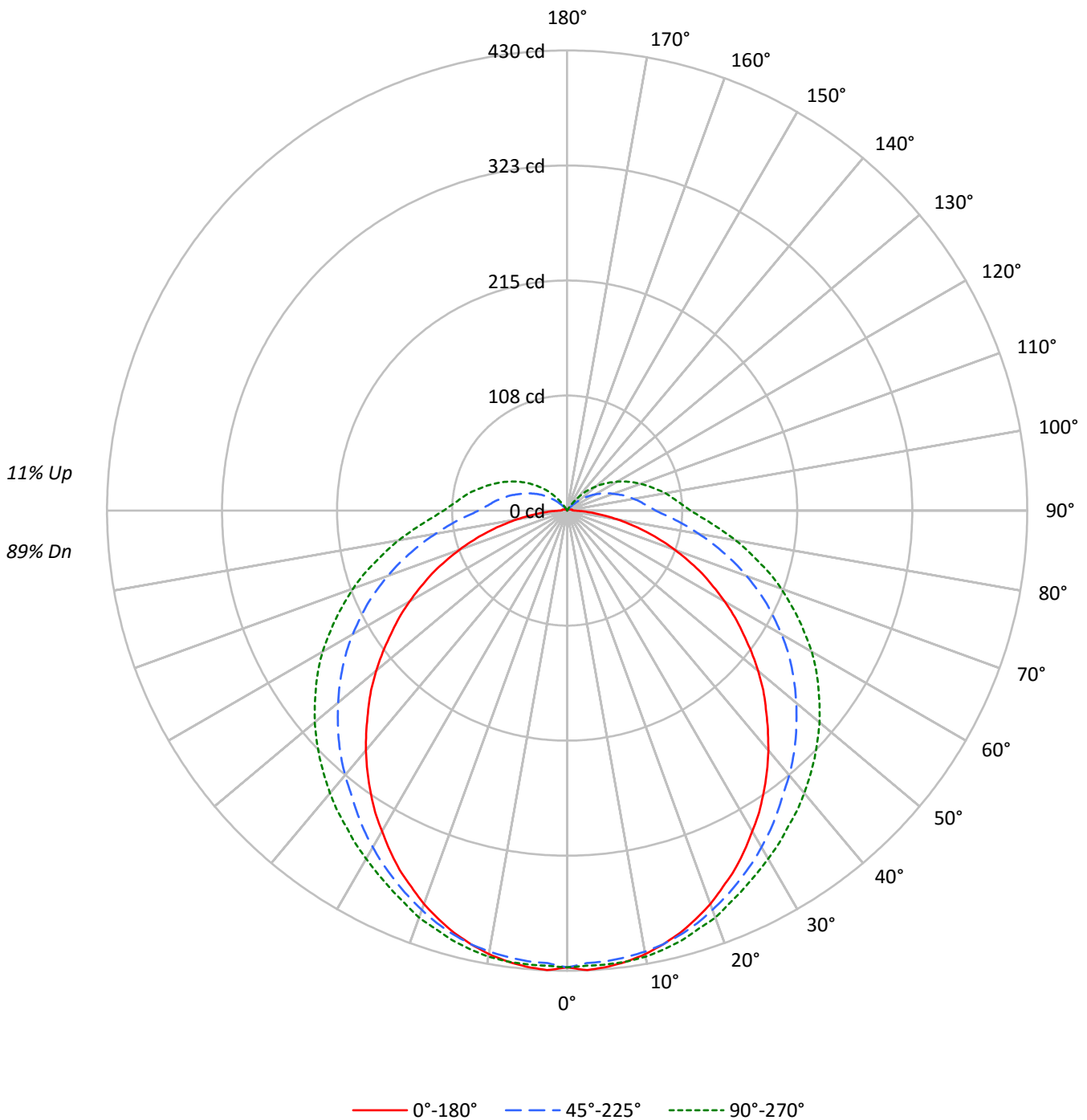
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8130	8130	8130
5°	8168	7796	7752
10°	8110	7537	7438
15°	8007	7272	7106
20°	7868	6984	6793
25°	7707	6700	6472
30°	7517	6432	6213
35°	7340	6166	5984
40°	7144	5938	5795
45°	6930	5732	5606
50°	6732	5521	5428
55°	6473	5322	5239
60°	6244	5105	5055
65°	5993	4882	4828
70°	5627	4614	4611
75°	5225	4333	4358
80°	4654	4053	4136
85°	4070	3837	3915



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.5	2.5
10°-20°	116.2	7.1
20°-30°	176.0	10.7
30°-40°	214.7	13.1
40°-50°	231.0	14.1
50°-60°	224.6	13.7
60°-70°	196.4	12.0
70°-80°	151.2	9.2
80°-90°	101.6	6.2
90°-100°	70.3	4.3
100°-110°	51.7	3.2
110°-120°	34.4	2.1
120°-130°	19.5	1.2
130°-140°	8.4	0.5
140°-150°	1.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	332.7	20.3
0°-40°	547.4	33.4
0°-60°	1003.0	61.2
0°-90°	1452.1	88.7
90°-120°	156.4	9.6
90°-150°	185.8	11.3
90°-180°	186.0	11.4
0°-180°	1637.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	427	427	427	427	427	
5°	428	426	423	426	426	41
15°	408	410	410	416	416	115
25°	370	376	381	389	390	170
35°	320	331	343	356	360	200
45°	263	279	302	320	327	203
55°	201	225	256	279	286	180
65°	139	169	206	231	238	137
75°	77	112	151	178	186	81
85°	23	61	102	127	135	24
90°	6	43	83	108	115	4
95°	5	34	72	96	103	4
105°	4	21	55	76	83	4
115°	2	10	38	57	64	2
125°	2	1	23	39	45	1
135°	1	1	8	21	26	1
145°	1	0	0	5	7	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°	426.8	426.8	426.8	426.8	426.8
2.5°	429.8	428.0	423.3	426.8	425.7
5°	428.0	426.2	422.7	426.2	425.7
7.5°	425.1	423.9	420.9	425.7	425.1
10°	420.9	420.3	418.5	423.3	423.3
12.5°	415.0	415.5	415.0	420.3	419.7
15°	408.4	410.2	410.2	415.5	415.5
17.5°	400.1	403.1	404.3	410.2	409.6
20°	391.2	394.7	397.1	403.7	404.8
22.5°	380.5	385.8	389.4	396.5	397.1
25°	370.4	376.3	381.1	389.4	390.0
27.5°	358.5	365.6	372.7	381.1	382.9
30°	346.0	354.9	363.2	373.3	375.7
32.5°	334.1	343.0	353.7	364.4	368.6
35°	320.4	331.1	343.0	356.1	360.3
37.5°	306.8	318.1	332.3	347.8	353.1
40°	292.5	305.6	322.8	339.5	344.8
42.5°	277.6	291.9	312.7	329.9	335.9
45°	262.8	278.8	302.0	320.4	327.0
47.5°	248.5	265.7	290.7	311.5	317.5
50°	233.0	252.1	279.4	300.8	307.9
52.5°	217.0	238.4	268.1	290.1	297.2
55°	200.9	224.7	256.2	279.4	286.5
57.5°	186.1	211.0	244.3	267.5	275.8
60°	170.0	196.8	231.3	255.6	264.0
62.5°	154.0	183.1	218.2	243.1	250.9
65°	139.1	168.8	205.7	230.7	238.4
67.5°	122.5	154.0	192.0	218.2	225.3
70°	107.0	140.3	178.3	204.5	212.8
72.5°	91.6	125.4	164.7	190.8	199.7
75°	76.7	111.8	151.0	177.8	185.5
77.5°	61.2	98.1	137.9	164.7	172.4
80°	47.6	84.4	124.8	151.6	159.9
82.5°	33.9	71.9	113.0	139.1	146.8
85°	23.2	61.2	101.7	127.2	134.9
87.5°	13.7	51.1	91.0	116.5	124.2
90°	6.5	42.8	82.6	107.6	115.3
92.5°	5.4	38.6	76.7	101.1	108.8
95°	4.8	34.5	71.9	95.7	102.8
97.5°	4.8	31.5	67.8	91.0	98.1
100°	4.2	27.9	63.0	85.6	93.3
102.5°	4.2	24.4	58.9	80.9	88.0
105°	3.6	21.4	54.7	76.1	82.6
107.5°	3.0	18.4	49.9	71.3	77.9
110°	3.0	15.5	45.8	66.6	73.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.4	13.1	42.2	61.8	68.4
115°	2.4	10.1	38.0	57.1	63.6
117.5°	2.4	7.1	33.9	52.3	58.9
120°	1.8	4.8	30.3	48.2	54.1
122.5°	1.8	3.0	26.2	43.4	49.3
125°	1.8	1.2	22.6	38.6	44.6
127.5°	1.2	1.2	18.4	34.5	39.8
130°	1.2	0.6	14.9	29.7	35.1
132.5°	1.2	0.6	11.3	25.6	30.3
135°	0.6	0.6	7.7	20.8	26.2
137.5°	0.6	0.6	4.2	16.6	20.8
140°	0.6	0.0	1.8	12.5	16.1
142.5°	0.6	0.0	0.0	8.3	11.9
145°	0.6	0.0	0.0	4.8	7.1
147.5°	0.0	0.0	0.0	1.2	3.6
150°	0.0	0.0	0.0	0.0	0.6
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)