

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: P242333

Luminaire Tested: **S122DR-S290D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242333
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DR-S290D840-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1160.9 lumens
Efficiency: N/A
Efficacy: 100.1 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

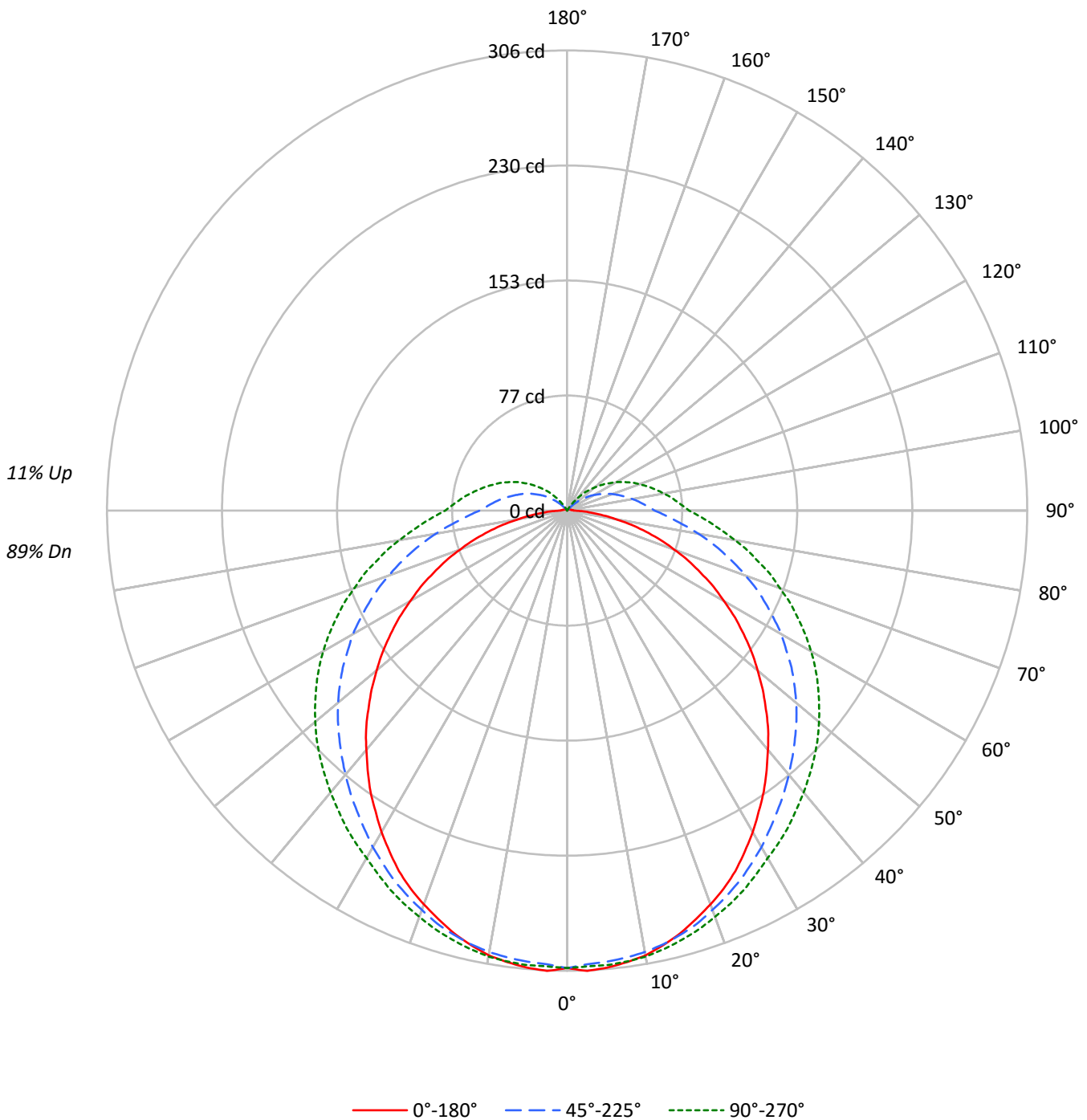
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	85	81	82	79	77	77	75	72	69
2	94	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	42	39
5	71	57	48	41	68	56	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	42	36	31	29
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28	25
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25	23
9	52	39	30	25	50	38	30	24	36	29	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°	5794	5794	5794
5°	5823	5555	5525
10°	5786	5369	5292
15°	5706	5175	5052
20°	5605	4970	4824
25°	5506	4775	4617
30°	5364	4576	4412
35°	5223	4383	4262
40°	5073	4218	4113
45°	4931	4067	3984
50°	4776	3930	3855
55°	4617	3783	3725
60°	4422	3630	3588
65°	4218	3453	3429
70°	3986	3264	3259
75°	3692	3073	3096
80°	3236	2877	2931
85°	2789	2694	2789



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.8	2.5
10°-20°	82.7	7.1
20°-30°	125.3	10.8
30°-40°	152.6	13.1
40°-50°	164.2	14.1
50°-60°	159.5	13.7
60°-70°	139.3	12.0
70°-80°	107.2	9.2
80°-90°	71.8	6.2
90°-100°	49.5	4.3
100°-110°	36.2	3.1
110°-120°	23.9	2.1
120°-130°	13.3	1.1
130°-140°	5.6	0.5
140°-150°	0.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	236.9	20.4
0°-40°	389.5	33.6
0°-60°	713.2	61.4
0°-90°	1031.5	88.9
90°-120°	109.6	9.4
90°-150°	129.4	11.1
90°-180°	129.0	11.1
0°-180°	1160.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	304	304	304	304	304	
5°	305	304	301	304	303	29
15°	291	292	292	296	295	82
25°	265	268	272	277	278	122
35°	228	236	244	254	257	142
45°	187	199	214	228	232	144
55°	143	159	182	198	204	128
65°	98	120	146	164	169	97
75°	54	79	107	126	132	57
85°	16	43	71	90	96	17
90°	4	30	58	76	81	3
95°	4	24	51	68	73	3
105°	2	15	38	53	58	3
115°	2	7	26	40	44	2
125°	1	1	15	27	31	1
135°	0	0	5	14	18	0
145°	0	0	0	3	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°	304.2	304.2	304.2	304.2	304.2
2.5°	306.4	305.1	302.0	304.2	303.4
5°	305.1	303.8	301.2	303.8	303.4
7.5°	302.9	302.0	299.8	302.9	302.5
10°	300.3	299.4	298.1	301.6	301.2
12.5°	295.9	296.3	295.4	299.0	298.5
15°	291.0	291.9	291.9	295.9	295.4
17.5°	284.8	286.6	287.9	291.9	291.9
20°	278.7	280.9	282.6	287.5	287.5
22.5°	272.1	274.7	277.3	282.2	283.1
25°	264.6	267.6	271.6	276.9	278.2
27.5°	255.7	260.6	265.0	271.6	272.5
30°	246.9	252.7	258.4	265.4	266.8
32.5°	237.2	243.8	250.9	259.3	261.9
35°	228.0	235.5	243.8	253.5	256.6
37.5°	217.8	226.2	236.8	247.4	250.4
40°	207.7	217.4	229.3	240.7	244.7
42.5°	198.0	207.7	221.8	234.6	238.5
45°	187.0	198.9	214.3	228.0	232.4
47.5°	176.4	189.2	206.8	220.9	225.8
50°	165.3	179.0	198.9	213.9	218.7
52.5°	154.8	169.3	190.5	205.9	211.2
55°	143.3	159.2	182.1	198.0	203.7
57.5°	132.3	149.9	172.8	190.0	195.8
60°	120.4	139.3	164.5	181.2	187.4
62.5°	109.8	129.6	154.8	172.8	178.6
65°	97.9	119.5	145.5	163.6	169.3
67.5°	87.3	109.8	136.2	154.3	160.5
70°	75.8	98.8	126.1	145.1	150.4
72.5°	65.3	89.1	116.8	135.4	142.0
75°	54.2	78.9	107.1	126.1	131.8
77.5°	43.7	69.2	97.9	116.8	123.0
80°	33.1	60.0	88.6	107.1	113.3
82.5°	24.3	50.7	79.8	98.3	104.1
85°	15.9	43.2	71.4	89.9	96.1
87.5°	9.7	36.2	64.4	82.5	88.2
90°	4.4	30.0	58.2	75.8	81.1
92.5°	4.0	27.3	54.2	71.4	76.7
95°	3.5	24.3	50.7	67.5	72.8
97.5°	3.1	22.0	47.6	63.9	69.2
100°	3.1	19.4	44.1	60.4	65.3
102.5°	2.6	17.2	41.0	56.9	61.7
105°	2.2	15.0	37.9	53.4	58.2
107.5°	2.2	12.8	34.8	49.8	54.7
110°	1.8	10.6	32.2	46.3	51.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.8	8.8	29.1	43.2	48.1
115°	1.8	6.6	26.5	39.7	44.5
117.5°	1.3	4.9	23.4	36.6	41.0
120°	1.3	3.1	20.7	33.1	37.9
122.5°	1.3	1.8	18.1	30.0	34.0
125°	0.9	0.9	15.0	26.9	30.9
127.5°	0.9	0.4	12.3	23.4	27.3
130°	0.9	0.4	9.7	20.3	23.8
132.5°	0.9	0.4	7.1	17.2	20.7
135°	0.4	0.4	4.9	14.1	17.6
137.5°	0.4	0.4	2.6	11.0	14.1
140°	0.4	0.0	0.9	7.9	10.6
142.5°	0.4	0.0	0.0	5.3	7.5
145°	0.0	0.0	0.0	2.6	4.9
147.5°	0.0	0.0	0.0	0.4	1.8
150°	0.0	0.0	0.0	0.0	0.0
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)