

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735869

Luminaire Tested: S122DR-S290D940-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735869
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-1)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-S290D940-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1149.0 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

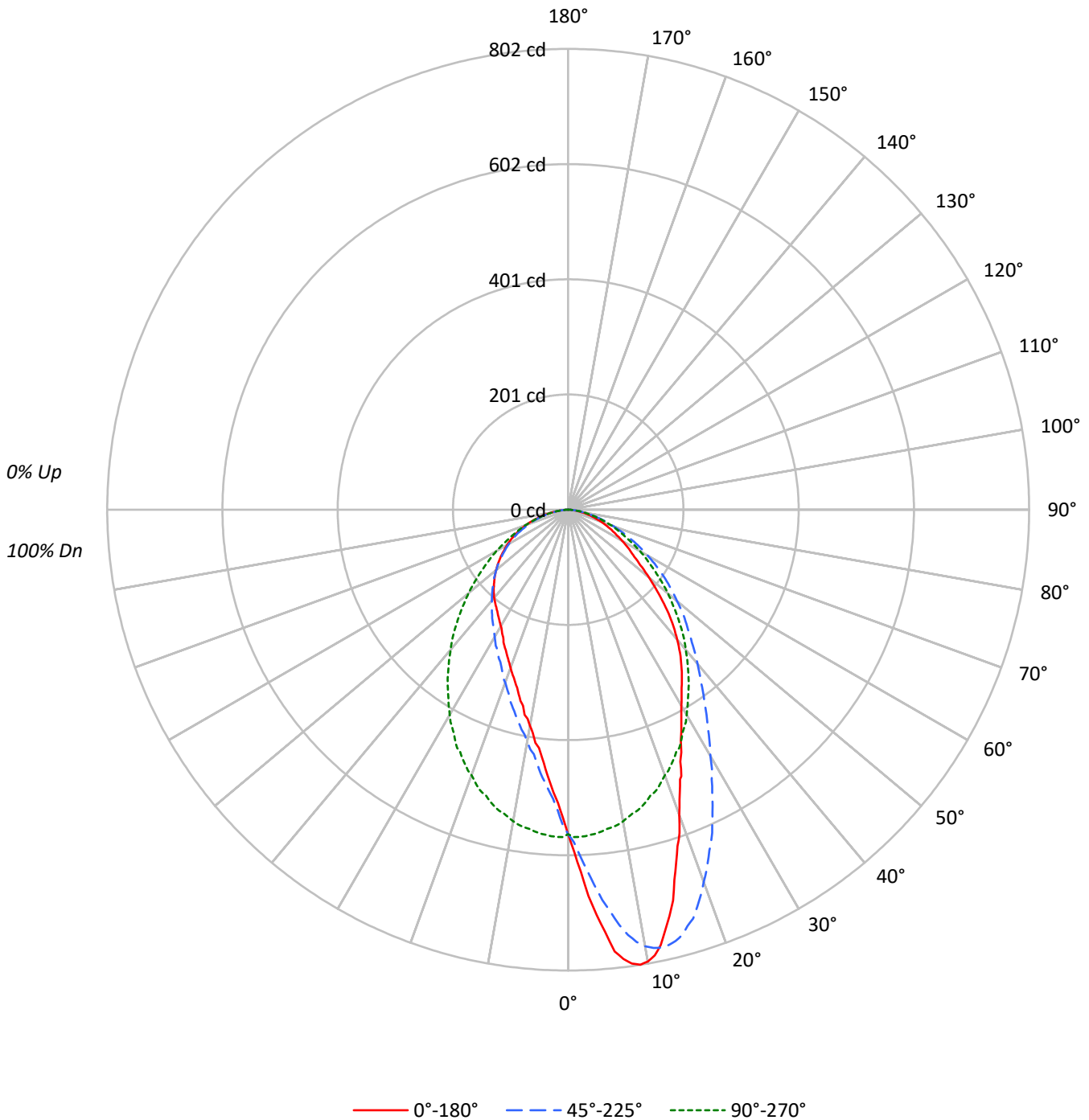
Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74					74			
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64					64			
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58	56					56			
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51	49					49			
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46	44					44			
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41	39					39			
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35					35			
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32					32			
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	10854	10854	10854	10854	10854
5°	14236	13157	10911	9151	8731
10°	15583	15060	10748	8000	7454
15°	14017	15253	10457	7221	6611
20°	11567	14108	10058	6550	5993
25°	9885	12585	9705	6059	5557
30°	8743	10991	9149	5677	5202
35°	8086	9736	8579	5409	5054
40°	7402	8785	7987	5181	5026
45°	6521	8019	7386	5021	4958
50°	5490	7392	6767	4886	4898
55°	4618	6803	6112	4722	4812
60°	4163	6147	5551	4582	4713
65°	3780	5403	4944	4362	4625
70°	3400	4670	4451	4035	4384
75°	2971	3951	3802	3661	4003
80°	2491	3088	3088	3177	3354
85°	1875	2227	2316	2492	2404

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 11773 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.6	4.8
10°-20°	152.5	13.3
20°-30°	200.0	17.4
30°-40°	211.4	18.4
40°-50°	196.3	17.1
50°-60°	157.1	13.7
60°-70°	107.5	9.4
70°-80°	55.4	4.8
80°-90°	13.2	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	408.1	35.5
0°-40°	619.5	53.9
0°-60°	972.9	84.7
0°-90°	1149.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1149.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	565	565	565	565	565	
5°	738	682	566	474	452	73
15°	704	766	526	363	332	193
25°	466	593	458	286	262	215
35°	345	415	366	230	215	215
45°	240	295	272	185	182	184
55°	138	203	182	141	144	126
65°	83	119	109	96	102	82
75°	40	53	51	49	54	43
85°	8	10	10	11	11	10
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	564.7	564.7	564.7	564.7	564.7	564.7	564.7	564.7	564.7
1°	595.8	592.7	579.1	579.8	569.8	558.5	548.0	541.4	536.0
2°	630.7	624.5	603.1	592.7	569.8	545.7	524.0	518.1	510.8
3°	673.0	658.2	628.7	603.9	569.0	534.0	504.2	493.7	492.5
4°	707.1	694.0	654.8	615.6	567.0	522.8	489.0	477.8	472.3
5°	737.8	729.3	681.9	630.3	565.5	511.9	474.3	458.8	452.5
6°	773.1	755.7	703.7	645.1	562.8	501.4	461.1	442.5	433.9
7°	787.5	776.6	728.1	654.8	559.3	489.4	444.4	424.2	418.0
8°	797.6	793.3	747.5	670.7	557.7	478.2	429.6	417.2	409.9
9°	801.8	798.4	761.5	677.3	555.0	472.3	422.3	401.7	393.6
10°	798.4	799.9	771.6	687.4	550.7	460.3	409.9	392.0	381.9
11°	790.2	794.1	777.0	699.0	545.3	450.6	398.6	380.4	370.7
12°	774.7	783.2	779.3	707.1	540.3	442.1	390.8	373.4	364.8
13°	750.6	769.6	777.8	710.6	537.2	432.4	381.1	360.9	350.1
14°	728.9	748.7	773.5	718.4	531.7	421.5	372.2	352.0	342.7
15°	704.4	727.3	766.5	720.7	525.5	412.6	362.9	340.8	332.2
16°	670.3	700.9	753.7	723.5	518.1	402.5	354.4	333.4	322.1
17°	641.9	674.9	744.0	725.0	514.3	394.7	347.0	322.1	314.8
18°	615.9	653.2	726.6	723.8	508.0	385.8	336.1	314.0	307.0
19°	595.4	625.6	709.1	721.1	499.5	377.2	328.0	308.2	300.0
20°	565.5	600.4	689.7	720.0	491.7	369.5	320.2	300.0	293.0
21°	540.6	576.4	671.8	716.1	486.3	362.1	314.4	292.3	286.0
22.5°	508.0	539.5	641.9	708.7	474.3	349.7	301.6	284.9	276.3
23°	504.2	530.9	634.2	706.4	470.8	347.0	297.3	280.6	273.6
24°	479.7	508.0	615.9	699.0	461.9	338.4	290.3	275.6	267.4
25°	466.1	489.4	593.4	692.0	457.6	330.7	285.7	269.0	262.0
26°	447.1	473.9	573.2	681.9	448.3	323.7	278.3	263.1	256.5
27°	433.1	455.6	552.3	674.5	437.4	316.3	272.5	257.3	249.2
28°	419.6	441.3	532.1	662.5	429.6	308.2	268.2	252.3	244.5
29°	405.6	424.6	515.8	653.2	422.3	301.2	261.6	245.7	238.3
30°	393.9	411.4	495.2	640.8	412.2	293.0	255.8	241.0	234.4
32.5°	367.2	381.9	453.3	611.3	388.1	276.7	241.8	228.2	224.3
35°	344.6	354.4	414.9	578.3	365.6	259.3	230.5	217.3	215.4
37.5°	321.0	330.3	380.0	543.8	341.9	243.3	217.7	209.2	207.6
40°	295.0	307.4	350.1	509.6	318.3	227.8	206.5	199.9	200.3
42.5°	269.0	283.3	321.0	469.6	296.1	213.1	195.6	191.0	191.7
45°	239.9	258.1	295.0	433.1	271.7	199.1	184.7	182.4	182.4
47.5°	209.6	232.9	272.5	395.5	248.4	185.1	174.3	172.7	173.5
50°	183.6	204.5	247.2	359.0	226.3	172.3	163.4	163.0	163.8
52.5°	158.0	178.9	225.1	324.9	203.8	160.7	152.9	152.9	153.7
55°	137.8	154.1	203.0	289.1	182.4	147.1	140.9	142.1	143.6
57.5°	123.8	134.7	181.3	255.0	162.6	133.9	130.0	130.8	132.7
60°	108.3	116.8	159.9	223.6	144.4	121.1	119.2	120.7	122.6
62.5°	94.3	101.7	139.7	195.2	124.6	108.7	107.9	110.2	112.2
65°	83.1	88.1	118.8	166.5	108.7	96.3	95.9	99.4	101.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	71.4	75.3	100.5	139.3	92.8	83.8	83.8	87.7	89.7
70°	60.5	63.7	83.1	114.9	79.2	71.4	71.8	76.5	78.0
72.5°	49.3	52.0	67.5	92.4	64.0	59.8	60.9	64.8	66.4
75°	40.0	41.9	53.2	73.0	51.2	47.7	49.3	52.8	53.9
77.5°	30.7	32.2	39.2	53.6	39.2	37.3	38.8	41.9	41.9
80°	22.5	22.9	27.9	37.6	27.9	26.8	28.7	30.3	30.3
82.5°	14.7	15.5	18.2	24.1	18.6	18.2	19.0	20.2	20.2
85°	8.5	8.9	10.1	13.2	10.5	10.5	11.3	11.3	10.9
87.5°	3.5	3.9	4.3	5.0	4.7	5.0	5.0	4.3	4.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)