

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735907

Luminaire Tested: S122RDRP-S290D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735907
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S290D830-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

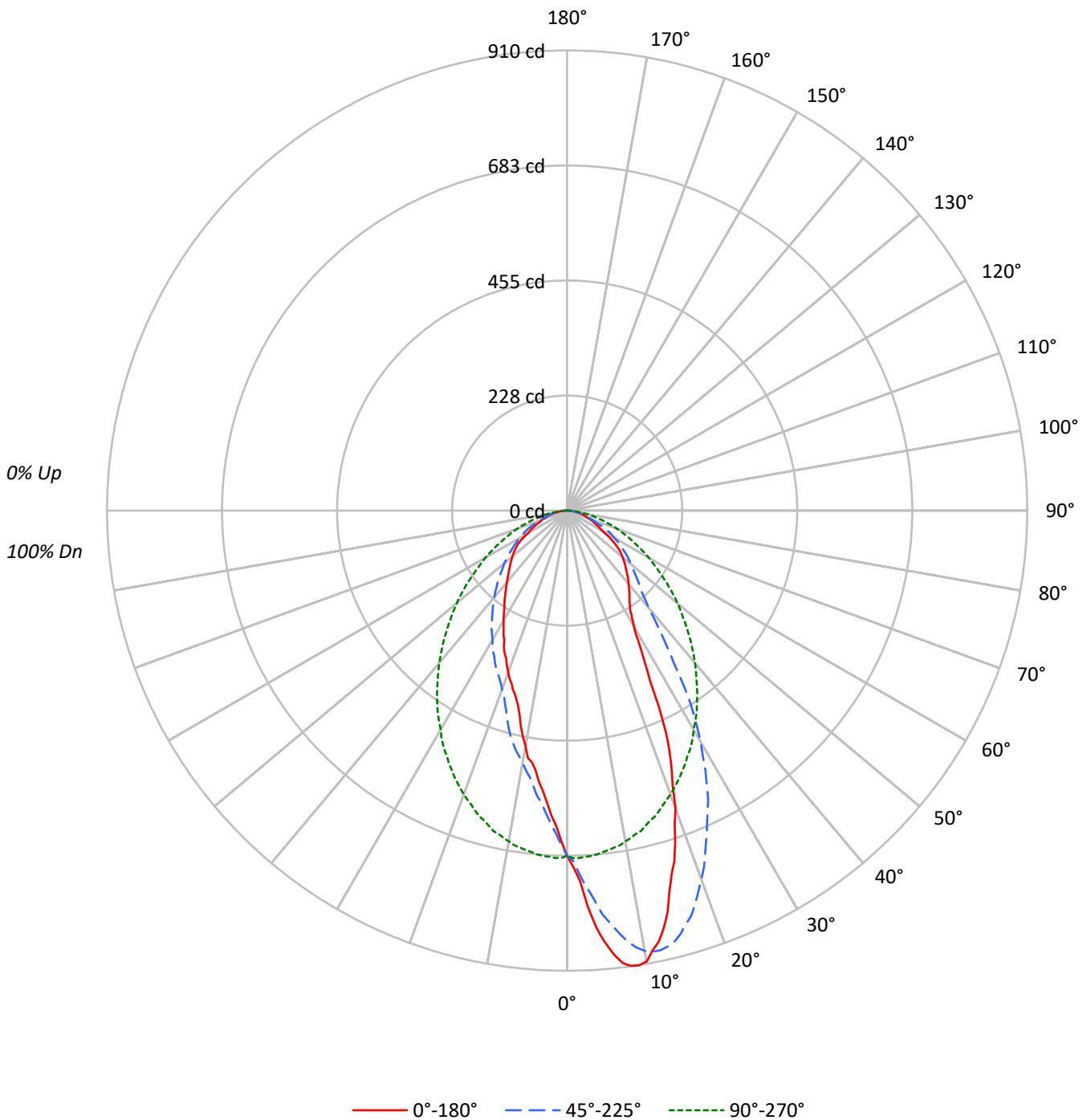
Lumens per Lamp: N/A
Luminaire Lumens: 1169.0 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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	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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	13113	13113	13113	13113	13113
5°	16543	15474	13163	11185	10710
10°	17671	17256	12964	9897	9248
15°	15543	17249	12620	8873	7707
20°	12813	15877	12218	7703	6973
25°	9137	13938	11728	7134	6273
30°	5846	11692	11100	6547	5573
35°	5036	8616	10522	6075	5054
40°	4745	6300	9871	5621	4642
45°	4482	5399	9177	5208	4382
50°	4270	4919	8525	4844	4219
55°	3917	4551	7795	4454	4068
60°	3091	4148	7162	4179	3437
65°	2797	3711	6495	3880	3134
70°	2580	2995	5901	3344	2883
75°	2406	2711	5147	2985	2711
80°	2225	2457	4361	2679	2457
85°	1985	2161	3352	2360	2161

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 12847 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.2	5.7
10°-20°	177.8	15.2
20°-30°	223.0	19.1
30°-40°	212.5	18.2
40°-50°	187.5	16.0
50°-60°	147.5	12.6
60°-70°	94.1	8.0
70°-80°	47.8	4.1
80°-90°	12.7	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°	467.0	39.9
0°-40°	679.5	58.1
0°-60°	1014.4	86.8
0°-90°	1169.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1169.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	682	682	682	682	682	
5°	857	802	682	580	555	83
15°	781	867	634	446	387	216
25°	431	657	553	336	296	194
35°	215	367	448	259	215	136
45°	165	199	338	192	161	128
55°	117	136	233	133	121	103
65°	62	82	143	85	69	62
75°	32	36	69	40	36	34
85°	9	10	15	11	10	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°	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2
1°	705.2	708.5	693.3	695.0	687.6	674.4	661.7	663.0	653.9
2°	733.5	742.1	721.2	708.5	687.2	664.2	638.7	635.5	624.4
3°	784.8	780.7	746.2	720.4	685.5	651.1	619.1	611.7	602.2
4°	826.2	813.9	771.7	735.6	684.7	635.9	599.8	587.1	577.6
5°	857.4	841.8	802.0	747.1	682.2	627.3	579.7	565.3	555.1
6°	882.4	870.5	821.7	757.7	679.0	614.5	567.8	548.5	537.8
7°	901.7	891.9	841.8	772.1	676.1	601.8	548.9	528.8	516.1
8°	909.1	904.6	860.3	782.3	672.8	592.8	532.1	514.0	502.5
9°	910.3	910.7	875.0	792.2	669.9	576.4	520.2	501.7	495.6
10°	905.4	909.1	884.1	803.3	664.2	568.2	507.1	489.4	473.8
11°	886.1	902.5	888.6	810.6	659.3	555.1	495.6	472.6	457.0
12°	871.8	887.4	889.0	820.1	653.5	548.9	485.7	455.0	438.5
13°	848.0	864.4	884.9	822.5	650.2	533.7	473.4	436.9	416.8
14°	819.7	845.9	878.3	827.9	642.0	520.6	461.1	411.5	399.6
15°	781.1	818.4	866.8	829.9	634.2	511.6	445.9	398.8	387.3
16°	749.1	791.4	851.3	829.9	629.3	499.3	429.5	387.7	376.2
17°	724.9	759.4	838.5	830.3	621.1	490.6	413.1	377.4	368.4
18°	690.8	729.4	818.4	828.7	612.5	480.4	399.2	368.8	357.7
19°	653.1	699.1	797.1	825.8	605.1	469.7	384.4	359.8	350.3
20°	626.4	668.7	776.2	821.3	597.3	462.8	376.6	349.5	340.9
21°	581.7	633.4	755.3	815.2	589.1	450.9	365.9	340.5	331.1
22.5°	536.2	583.8	716.7	804.9	575.6	436.1	354.0	329.4	315.5
23°	518.5	571.9	704.8	802.0	571.1	432.4	350.3	324.5	312.2
24°	480.8	536.2	680.2	793.0	561.2	420.1	343.4	314.7	306.0
25°	430.8	505.8	657.2	783.6	553.0	411.1	336.4	306.9	295.8
26°	374.1	464.4	636.3	772.1	541.5	398.8	327.0	299.5	283.9
27°	339.3	428.7	608.0	759.8	533.3	389.7	319.2	288.4	277.3
28°	311.4	372.5	582.5	747.9	523.5	378.7	313.8	280.6	267.5
29°	281.0	341.7	552.6	731.9	512.8	365.9	305.2	272.8	258.9
30°	263.4	308.9	526.8	720.0	500.1	357.3	295.0	265.0	251.1
32.5°	231.4	254.8	456.6	685.9	475.9	332.7	278.1	243.7	231.8
35°	214.6	226.9	367.2	646.1	448.4	312.2	258.9	226.0	215.4
37.5°	201.8	209.2	303.2	603.5	420.5	294.1	241.2	209.6	199.4
40°	189.1	194.9	251.1	562.4	393.4	276.5	224.0	192.8	185.0
42.5°	177.6	182.1	217.8	521.8	365.5	258.5	207.2	179.7	172.7
45°	164.9	169.0	198.6	472.6	337.6	240.0	191.6	165.3	161.2
47.5°	154.3	157.1	180.1	428.7	310.1	222.4	175.6	153.8	151.0
50°	142.8	146.5	164.5	379.9	285.1	205.1	162.0	143.6	141.1
52.5°	131.7	133.3	151.4	331.1	258.9	188.3	147.7	133.3	131.7
55°	116.9	123.5	135.8	281.0	232.6	172.7	132.9	122.7	121.4
57.5°	100.1	108.7	121.8	235.9	208.0	155.5	121.0	112.8	107.5
60°	80.4	90.7	107.9	196.1	186.3	139.9	108.7	96.0	89.4
62.5°	70.6	73.8	95.2	164.1	164.1	125.1	96.4	82.5	79.6
65°	61.5	64.0	81.6	135.8	142.8	108.7	85.3	71.4	68.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	53.7	55.8	62.4	113.2	123.1	94.8	70.6	62.4	59.5
70°	45.9	47.6	53.3	92.3	105.0	80.8	59.5	53.3	51.3
72.5°	39.0	40.6	43.9	69.3	86.2	67.3	50.0	45.5	43.9
75°	32.4	33.2	36.5	51.7	69.3	53.7	40.2	37.3	36.5
77.5°	26.3	26.7	28.7	36.9	53.7	41.0	32.4	29.9	29.5
80°	20.1	20.5	22.2	26.7	39.4	29.5	24.2	23.0	22.2
82.5°	14.4	14.8	15.6	18.1	26.7	20.1	17.2	16.8	15.6
85°	9.0	9.0	9.8	11.1	15.2	11.5	10.7	10.3	9.8
87.5°	4.1	4.1	4.5	4.5	7.0	4.9	4.9	4.5	4.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	15.38	16.84	15.74	17.16	17.47	18.07	19.54	18.44	19.85	20.17
	3H	16.49	17.81	16.87	18.13	18.50	19.51	20.83	19.89	21.16	21.52
	4H	16.93	18.17	17.34	18.52	18.89	20.01	21.25	20.42	21.60	21.97
	6H	17.28	18.41	17.69	18.78	19.17	20.34	21.48	20.75	21.84	22.24
	8H	17.39	18.47	17.82	18.86	19.27	20.43	21.51	20.86	21.90	22.30
	12H	17.47	18.50	17.90	18.88	19.31	20.48	21.51	20.91	21.89	22.32
4H	2H	16.55	17.78	16.95	18.13	18.51	18.53	19.76	18.93	20.11	20.49
	3H	17.77	18.79	18.18	19.19	19.59	20.18	21.20	20.59	21.60	22.00
	4H	18.25	19.17	18.68	19.58	20.02	20.82	21.74	21.25	22.15	22.59
	6H	18.65	19.45	19.11	19.89	20.35	21.28	22.07	21.73	22.51	22.98
	8H	18.79	19.53	19.25	19.98	20.45	21.40	22.15	21.87	22.59	23.06
	12H	18.89	19.55	19.37	20.03	20.50	21.48	22.15	21.97	22.63	23.10
8H	4H	18.65	19.40	19.12	19.84	20.31	20.93	21.68	21.40	22.12	22.59
	6H	19.15	19.76	19.64	20.25	20.73	21.49	22.11	21.99	22.60	23.08
	8H	19.34	19.89	19.85	20.40	20.89	21.69	22.24	22.21	22.75	23.24
	12H	19.49	19.98	20.00	20.47	21.04	21.84	22.33	22.35	22.82	23.39
12H	4H	18.70	19.36	19.18	19.84	20.31	20.92	21.59	21.41	22.06	22.54
	6H	19.22	19.77	19.73	20.28	20.77	21.49	22.04	22.01	22.55	23.04
	8H	19.46	19.94	19.97	20.44	21.00	21.74	22.22	22.25	22.72	23.28