

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: P735915

Luminaire Tested: S122RDRP-S290D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735915
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-S290D950-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

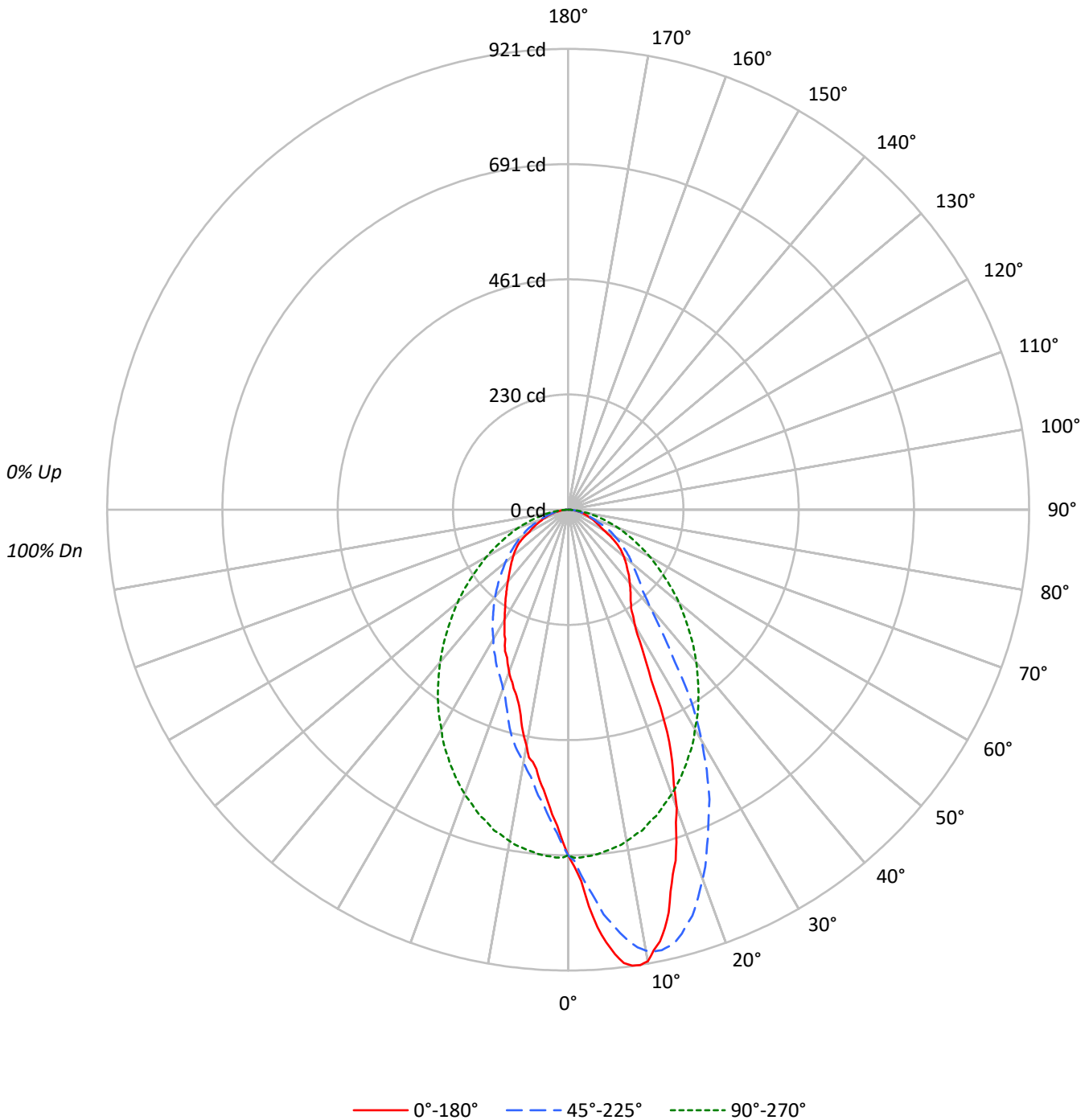
Lumens per Lamp: N/A
Luminaire Lumens: 1183.2 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	13272	13272	13272	13272	13272
5°	16744	15663	13323	11320	10840
10°	17886	17465	13122	10017	9361
15°	15732	17460	12773	8983	7801
20°	12970	16069	12367	7797	7059
25°	9247	14108	11870	7221	6350
30°	5917	11834	11235	6625	5640
35°	5097	8720	10648	6148	5115
40°	4803	6376	9991	5688	4700
45°	4537	5464	9288	5271	4436
50°	4321	4979	8630	4904	4270
55°	3964	4604	7889	4507	4119
60°	3129	4198	7246	4229	3479
65°	2833	3757	6572	3930	3175
70°	2613	3035	5974	3383	2917
75°	2436	2748	5213	3023	2748
80°	2247	2479	4417	2712	2479
85°	2007	2205	3396	2382	2205

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 13002 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.0	5.7
10°-20°	180.0	15.2
20°-30°	225.7	19.1
30°-40°	215.1	18.2
40°-50°	189.7	16.0
50°-60°	149.2	12.6
60°-70°	95.2	8.0
70°-80°	48.4	4.1
80°-90°	12.8	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°	472.6	39.9
0°-40°	687.7	58.1
0°-60°	1026.7	86.8
0°-90°	1183.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1183.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	690	690	690	690	690	
5°	868	812	690	587	562	84
15°	791	877	642	451	392	219
25°	436	665	560	340	299	197
35°	217	372	454	262	218	138
45°	167	201	342	194	163	129
55°	118	137	235	134	123	104
65°	62	83	144	86	70	62
75°	33	37	70	41	37	35
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°	690.5	690.5	690.5	690.5	690.5	690.5	690.5	690.5	690.5
1°	713.8	717.1	701.7	703.4	695.9	682.6	669.8	671.0	661.9
2°	742.4	751.1	730.0	717.1	695.5	672.3	646.5	643.2	632.0
3°	794.3	790.2	755.3	729.1	693.8	659.0	626.6	619.1	609.6
4°	836.3	823.8	781.0	744.5	693.0	643.6	607.1	594.2	584.6
5°	867.8	852.1	811.8	756.1	690.5	634.9	586.7	572.2	561.8
6°	893.2	881.1	831.7	766.9	687.2	622.0	574.7	555.2	544.4
7°	912.7	902.7	852.1	781.5	684.3	609.1	555.6	535.2	522.4
8°	920.1	915.6	870.7	791.8	681.0	600.0	538.6	520.3	508.7
9°	921.4	921.8	885.7	801.8	678.1	583.4	526.5	507.8	501.6
10°	916.4	920.1	894.8	813.0	672.3	575.1	513.2	495.4	479.6
11°	896.9	913.5	899.4	820.5	667.3	561.8	501.6	478.3	462.6
12°	882.4	898.1	899.8	830.0	661.5	555.6	491.6	460.5	443.9
13°	858.3	874.9	895.6	832.5	658.1	540.2	479.2	442.2	421.9
14°	829.6	856.2	889.0	837.9	649.8	526.9	466.7	416.5	404.4
15°	790.6	828.4	877.4	840.0	641.9	517.8	451.4	403.6	392.0
16°	758.2	801.0	861.6	840.0	637.0	505.3	434.7	392.4	380.8
17°	733.7	768.6	848.7	840.4	628.7	496.6	418.1	382.0	372.9
18°	699.2	738.3	828.4	838.8	619.9	486.2	404.0	373.3	362.1
19°	661.0	707.6	806.8	835.9	612.5	475.4	389.1	364.2	354.6
20°	634.1	676.8	785.6	831.3	604.6	468.4	381.2	353.8	345.1
21°	588.8	641.1	764.4	825.1	596.3	456.3	370.4	344.6	335.1
22.5°	542.7	590.9	725.4	814.7	582.6	441.4	358.3	333.4	319.3
23°	524.8	578.8	713.4	811.8	578.0	437.7	354.6	328.4	316.0
24°	486.6	542.7	688.5	802.6	568.0	425.2	347.5	318.5	309.8
25°	436.0	512.0	665.2	793.1	559.7	416.1	340.5	310.6	299.4
26°	378.7	470.0	644.0	781.5	548.1	403.6	330.9	303.1	287.3
27°	343.4	433.9	615.4	769.0	539.8	394.5	323.0	291.9	280.7
28°	315.2	377.0	589.6	757.0	529.8	383.3	317.7	284.0	270.7
29°	284.4	345.9	559.3	740.8	519.0	370.4	308.9	276.1	262.0
30°	266.6	312.7	533.2	728.7	506.2	361.7	298.5	268.2	254.1
32.5°	234.2	257.9	462.2	694.3	481.7	336.8	281.5	246.6	234.6
35°	217.2	229.6	371.6	654.0	453.8	316.0	262.0	228.8	218.0
37.5°	204.3	211.8	306.9	610.8	425.6	297.7	244.2	212.2	201.8
40°	191.4	197.2	254.1	569.3	398.2	279.9	226.7	195.2	187.3
42.5°	179.8	184.4	220.5	528.2	370.0	261.6	209.7	181.9	174.8
45°	166.9	171.1	201.0	478.3	341.7	242.9	193.9	167.3	163.2
47.5°	156.1	159.0	182.3	433.9	313.9	225.1	177.7	155.7	152.8
50°	144.5	148.2	166.5	384.5	288.6	207.6	164.0	145.3	142.8
52.5°	133.3	134.9	153.2	335.1	262.0	190.6	149.5	134.9	133.3
55°	118.3	125.0	137.4	284.4	235.4	174.8	134.5	124.2	122.9
57.5°	101.3	110.0	123.3	238.8	210.5	157.4	122.5	114.2	108.8
60°	81.4	91.8	109.2	198.5	188.5	141.6	110.0	97.2	90.5
62.5°	71.4	74.7	96.3	166.1	166.1	126.6	97.6	83.5	80.6
65°	62.3	64.8	82.6	137.4	144.5	110.0	86.4	72.2	69.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	54.4	56.5	63.1	114.6	124.6	95.9	71.4	63.1	60.2
70°	46.5	48.2	54.0	93.4	106.3	81.8	60.2	54.0	51.9
72.5°	39.4	41.1	44.4	70.2	87.2	68.1	50.7	46.1	44.4
75°	32.8	33.6	37.0	52.3	70.2	54.4	40.7	37.8	37.0
77.5°	26.6	27.0	29.1	37.4	54.4	41.5	32.8	30.3	29.9
80°	20.3	20.8	22.4	27.0	39.9	29.9	24.5	23.3	22.4
82.5°	14.5	14.9	15.8	18.3	27.0	20.3	17.4	17.0	15.8
85°	9.1	9.1	10.0	11.2	15.4	11.6	10.8	10.4	10.0
87.5°	4.2	4.2	4.6	4.6	7.1	5.0	5.0	4.6	4.2
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	15.42	16.89	15.78	17.20	17.51	18.11	19.58	18.48	19.90	20.21
	3H	16.53	17.85	16.91	18.18	18.54	19.55	20.87	19.93	21.20	21.56
	4H	16.98	18.21	17.38	18.56	18.94	20.06	21.29	20.46	21.64	22.02
	6H	17.32	18.46	17.73	18.82	19.22	20.38	21.52	20.80	21.89	22.28
	8H	17.43	18.52	17.86	18.91	19.31	20.47	21.55	20.90	21.94	22.35
	12H	17.51	18.54	17.94	18.92	19.35	20.52	21.55	20.95	21.94	22.36
4H	2H	16.59	17.82	16.99	18.17	18.55	18.57	19.80	18.97	20.15	20.53
	3H	17.81	18.83	18.23	19.23	19.64	20.22	21.24	20.63	21.64	22.05
	4H	18.29	19.21	18.73	19.63	20.07	20.86	21.78	21.30	22.20	22.64
	6H	18.70	19.49	19.15	19.94	20.40	21.32	22.11	21.78	22.56	23.02
	8H	18.83	19.57	19.30	20.02	20.49	21.45	22.19	21.91	22.63	23.10
	12H	18.93	19.59	19.41	20.07	20.54	21.53	22.19	22.01	22.67	23.14
8H	4H	18.70	19.44	19.16	19.88	20.35	20.98	21.72	21.44	22.16	22.63
	6H	19.19	19.80	19.69	20.29	20.77	21.54	22.15	22.04	22.64	23.12
	8H	19.38	19.93	19.89	20.44	20.93	21.74	22.29	22.25	22.80	23.29
	12H	19.53	20.02	20.05	20.51	21.08	21.88	22.37	22.40	22.86	23.43
12H	4H	18.74	19.41	19.23	19.89	20.36	20.96	21.63	21.45	22.11	22.58
	6H	19.26	19.81	19.77	20.32	20.81	21.53	22.08	22.05	22.60	23.09
	8H	19.50	19.98	20.01	20.48	21.04	21.78	22.27	22.29	22.76	23.32