

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: P735910

Luminaire Tested: S122RDRP-S290D850-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735910
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-S290D850-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

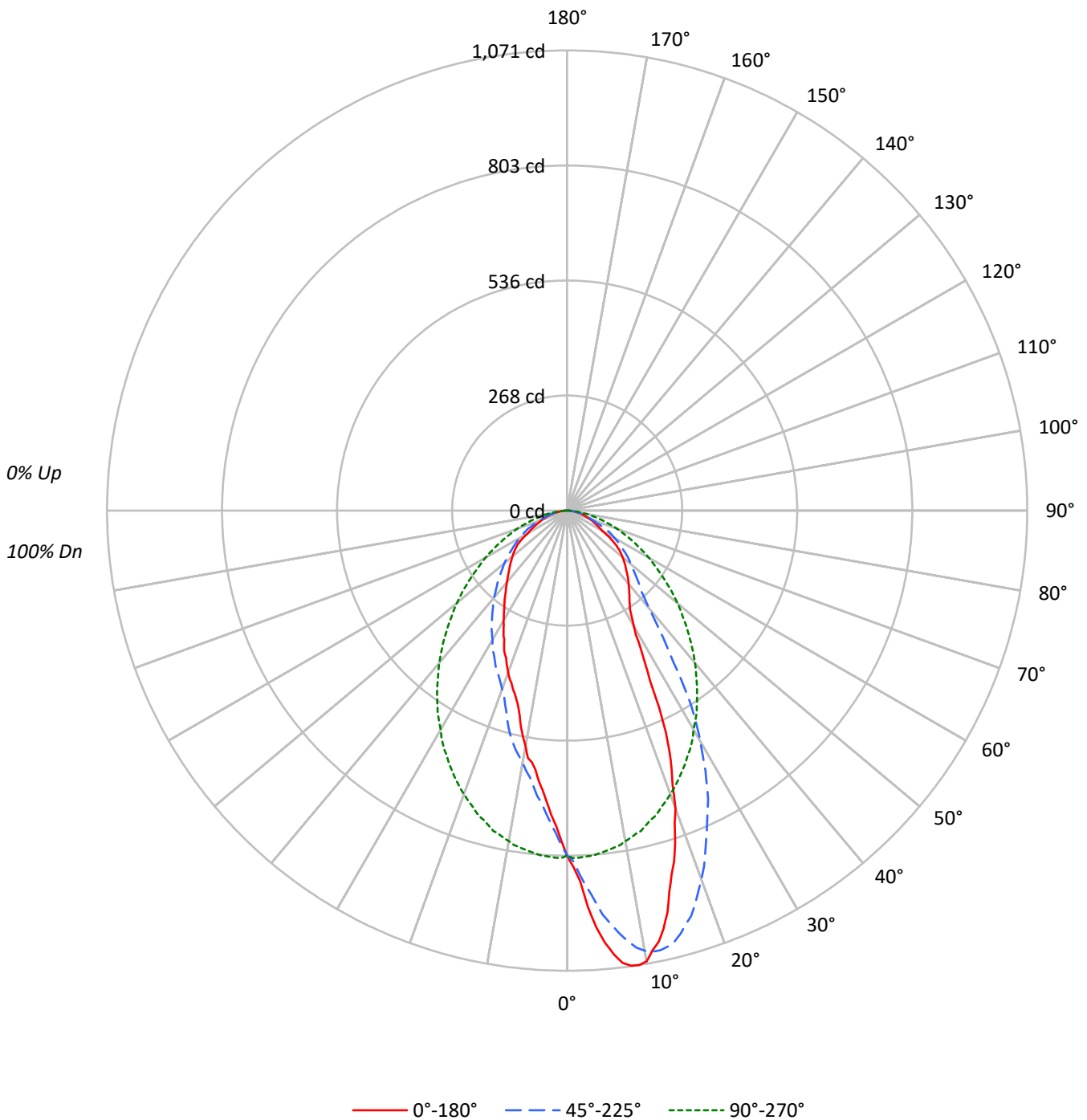
Lumens per Lamp: N/A
Luminaire Lumens: 1375.4 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (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: 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°	15429	15429	15429	15429	15429
5°	19464	18208	15488	13159	12601
10°	20792	20302	15253	11644	10881
15°	18287	20295	14849	10441	9068
20°	15077	18681	14376	9064	8204
25°	10748	16400	13800	8394	7380
30°	6878	13756	13059	7704	6556
35°	5923	10137	12380	7147	5946
40°	5583	7412	11615	6614	5462
45°	5274	6350	10800	6127	5157
50°	5024	5789	10032	5703	4964
55°	4611	5355	9172	5241	4789
60°	3637	4878	8423	4917	4044
65°	3293	4371	7641	4566	3689
70°	3040	3529	6946	3934	3389
75°	2830	3193	6060	3513	3193
80°	2623	2889	5125	3155	2889
85°	2338	2558	3948	2779	2558

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 15116 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	5.7
10°-20°	209.2	15.2
20°-30°	262.4	19.1
30°-40°	250.0	18.2
40°-50°	220.6	16.0
50°-60°	173.5	12.6
60°-70°	110.7	8.0
70°-80°	56.3	4.1
80°-90°	14.9	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°	549.4	39.9
0°-40°	799.5	58.1
0°-60°	1193.5	86.8
0°-90°	1375.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1375.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	803	803	803	803	803	
5°	1009	944	803	682	653	98
15°	919	1020	746	525	456	255
25°	507	773	651	396	348	228
35°	252	432	528	305	253	161
45°	194	234	397	225	190	150
55°	138	160	274	156	143	121
65°	72	96	168	100	81	72
75°	38	43	82	47	43	41
85°	11	12	18	13	12	12
90°	0	0	0	0	0	



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CATALOG NUMBER: S122RDRP-S290D850-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	802.7	802.7	802.7	802.7	802.7	802.7	802.7	802.7	802.7
1°	829.7	833.6	815.8	817.7	809.0	793.5	778.6	780.0	769.4
2°	863.1	873.2	848.6	833.6	808.5	781.5	751.6	747.7	734.7
3°	923.4	918.6	878.0	847.6	806.6	766.0	728.4	719.7	708.6
4°	972.1	957.7	907.9	865.5	805.6	748.2	705.7	690.7	679.6
5°	1008.8	990.5	943.7	879.0	802.7	738.0	682.0	665.2	653.1
6°	1038.3	1024.3	966.8	891.5	798.9	723.1	668.0	645.4	632.8
7°	1061.0	1049.4	990.5	908.4	795.5	708.1	645.8	622.2	607.2
8°	1069.6	1064.3	1012.2	920.5	791.6	697.5	626.1	604.8	591.3
9°	1071.1	1071.6	1029.6	932.1	788.2	678.2	612.1	590.3	583.1
10°	1065.3	1069.6	1040.2	945.1	781.5	668.5	596.6	575.9	557.5
11°	1042.6	1061.9	1045.5	953.8	775.7	653.1	583.1	556.1	537.7
12°	1025.7	1044.1	1046.0	964.9	768.9	645.8	571.5	535.3	516.0
13°	997.7	1017.0	1041.2	967.8	765.1	628.0	557.0	514.1	490.4
14°	964.4	995.3	1033.4	974.1	755.4	612.5	542.5	484.1	470.1
15°	919.0	963.0	1019.9	976.5	746.2	601.9	524.7	469.2	455.7
16°	881.4	931.1	1001.6	976.5	740.5	587.4	505.4	456.1	442.6
17°	852.9	893.5	986.6	977.0	730.8	577.3	486.1	444.1	433.5
18°	812.9	858.2	963.0	975.0	720.7	565.2	469.7	433.9	420.9
19°	768.4	822.5	937.9	971.7	712.0	552.7	452.3	423.3	412.2
20°	737.1	786.8	913.3	966.4	702.8	544.5	443.1	411.3	401.1
21°	684.5	745.3	888.6	959.1	693.1	530.5	430.6	400.6	389.5
22.5°	630.9	686.9	843.3	947.0	677.2	513.1	416.6	387.6	371.2
23°	610.1	672.9	829.3	943.7	671.9	508.8	412.2	381.8	367.3
24°	565.7	630.9	800.3	933.0	660.3	494.3	404.0	370.2	360.1
25°	506.8	595.2	773.3	921.9	650.7	483.7	395.8	361.1	348.0
26°	440.2	546.4	748.7	908.4	637.2	469.2	384.7	352.4	334.0
27°	399.2	504.4	715.4	893.9	627.5	458.6	375.5	339.3	326.3
28°	366.4	438.3	685.4	879.9	615.9	445.5	369.3	330.2	314.7
29°	330.6	402.1	650.2	861.1	603.4	430.6	359.1	321.0	304.6
30°	309.9	363.5	619.8	847.1	588.4	420.4	347.1	311.8	295.4
32.5°	272.2	299.8	537.2	807.1	559.9	391.5	327.3	286.7	272.7
35°	252.4	266.9	432.0	760.2	527.6	367.3	304.6	266.0	253.4
37.5°	237.5	246.2	356.7	710.0	494.8	346.1	283.8	246.7	234.6
40°	222.5	229.3	295.4	661.8	462.9	325.3	263.6	226.9	217.7
42.5°	209.0	214.3	256.3	614.0	430.1	304.1	243.8	211.4	203.2
45°	194.0	198.9	233.6	556.1	397.3	282.4	225.4	194.5	189.7
47.5°	181.5	184.9	211.9	504.4	364.9	261.6	206.6	181.0	177.6
50°	168.0	172.3	193.6	447.0	335.5	241.3	190.7	168.9	166.0
52.5°	154.9	156.9	178.1	389.5	304.6	221.6	173.8	156.9	154.9
55°	137.6	145.3	159.8	330.6	273.7	203.2	156.4	144.3	142.9
57.5°	117.8	127.9	143.4	277.5	244.7	182.9	142.4	132.7	126.5
60°	94.6	106.7	126.9	230.7	219.1	164.6	127.9	113.0	105.2
62.5°	83.0	86.9	112.0	193.1	193.1	147.2	113.4	97.0	93.6
65°	72.4	75.3	96.1	159.8	168.0	127.9	100.4	84.0	81.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	63.2	65.6	73.4	133.2	144.8	111.5	83.0	73.4	70.0
70°	54.1	56.0	62.8	108.6	123.6	95.1	70.0	62.8	60.3
72.5°	45.9	47.8	51.6	81.6	101.4	79.2	58.9	53.6	51.6
75°	38.1	39.1	43.0	60.8	81.6	63.2	47.3	43.9	43.0
77.5°	30.9	31.4	33.8	43.4	63.2	48.3	38.1	35.2	34.8
80°	23.7	24.1	26.1	31.4	46.3	34.8	28.5	27.0	26.1
82.5°	16.9	17.4	18.3	21.2	31.4	23.7	20.3	19.8	18.3
85°	10.6	10.6	11.6	13.0	17.9	13.5	12.6	12.1	11.6
87.5°	4.8	4.8	5.3	5.3	8.2	5.8	5.8	5.3	4.8
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	15.94	17.41	16.31	17.72	18.04	18.64	20.10	19.00	20.42	20.73
	3H	17.06	18.37	17.44	18.70	19.06	20.08	21.39	20.46	21.72	22.08
	4H	17.50	18.73	17.90	19.08	19.46	20.58	21.81	20.98	22.16	22.54
	6H	17.84	18.98	18.26	19.35	19.74	20.91	22.04	21.32	22.41	22.80
	8H	17.96	19.04	18.39	19.43	19.83	21.00	22.08	21.42	22.47	22.87
	12H	18.03	19.07	18.46	19.45	19.88	21.04	22.08	21.47	22.46	22.89
4H	2H	17.11	18.34	17.51	18.69	19.07	19.09	20.32	19.49	20.67	21.05
	3H	18.34	19.36	18.75	19.76	20.16	20.75	21.77	21.16	22.17	22.57
	4H	18.82	19.74	19.25	20.15	20.59	21.39	22.30	21.82	22.72	23.16
	6H	19.22	20.02	19.68	20.46	20.92	21.84	22.64	22.30	23.08	23.54
	8H	19.36	20.10	19.82	20.54	21.01	21.97	22.71	22.43	23.16	23.63
	12H	19.45	20.12	19.94	20.60	21.07	22.05	22.71	22.53	23.19	23.66
8H	4H	19.22	19.96	19.69	20.41	20.88	21.50	22.24	21.96	22.69	23.16
	6H	19.71	20.32	20.21	20.82	21.30	22.06	22.67	22.56	23.17	23.64
	8H	19.90	20.45	20.42	20.96	21.45	22.26	22.81	22.78	23.32	23.81
	12H	20.06	20.54	20.57	21.04	21.60	22.41	22.89	22.92	23.39	23.95
12H	4H	19.27	19.93	19.75	20.41	20.88	21.49	22.15	21.97	22.63	23.10
	6H	19.78	20.33	20.30	20.84	21.33	22.06	22.61	22.57	23.12	23.61
	8H	20.02	20.51	20.53	21.00	21.57	22.30	22.79	22.82	23.28	23.85