

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



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: P1059595

Luminaire Tested: S123RDR-H340D840-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059595
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D840-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

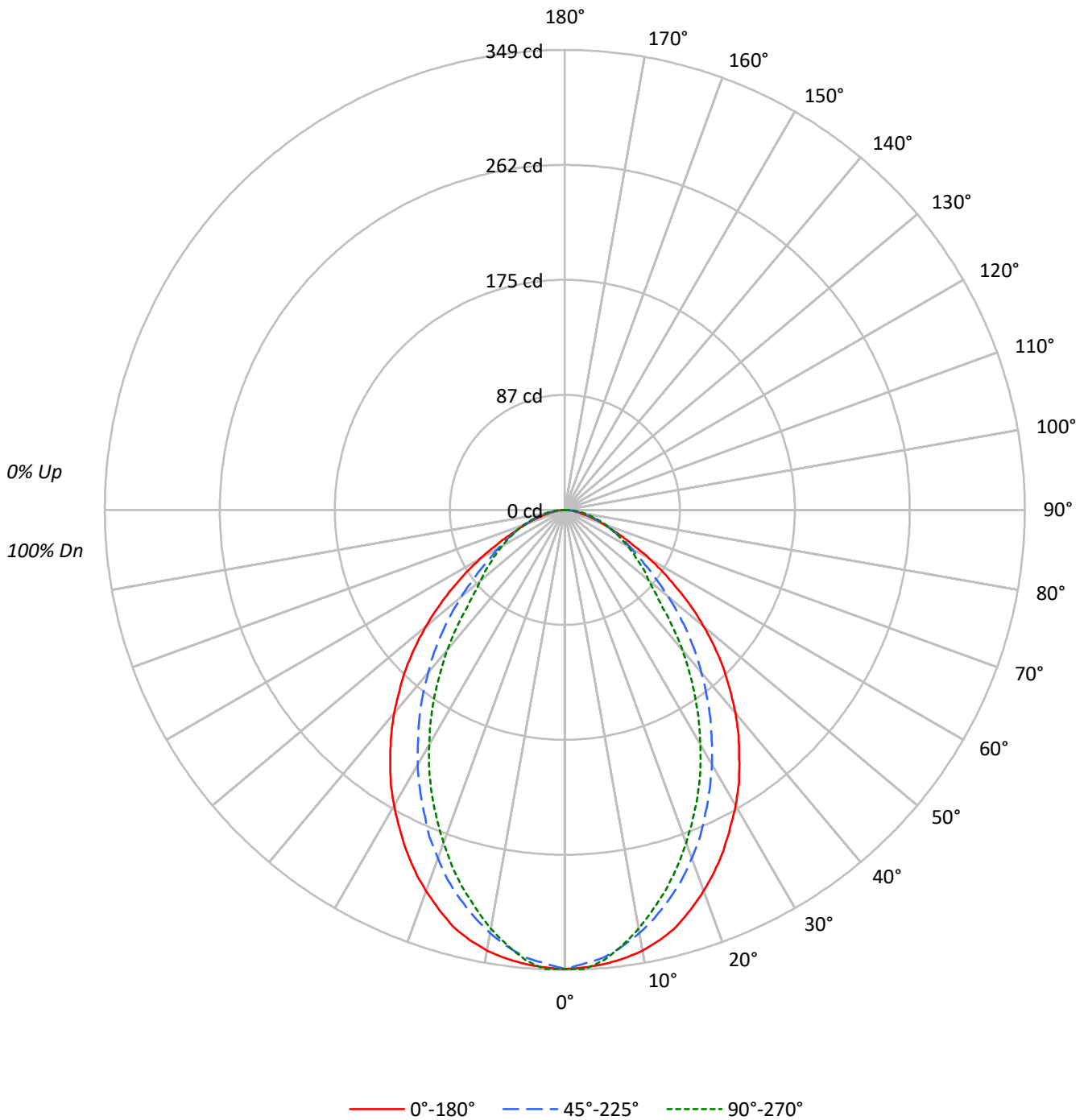
Lumens per Lamp: N/A
Luminaire Lumens: 609.4 lumens
Efficiency: N/A
Efficacy: 52.1 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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				
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				
7	71	58	50	45	69	58	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	41	37	47	41	37	46	41	37	35				
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4091	4091	4091
5°	4077	4018	4043
10°	4049	3889	3850
15°	3981	3721	3619
20°	3846	3516	3360
25°	3690	3277	3093
30°	3514	3026	2788
35°	3307	2755	2467
40°	3087	2471	2125
45°	2830	2184	1745
50°	2510	1874	1514
55°	2135	1568	1388
60°	1740	1367	1289
65°	1325	1211	1198
70°	1037	1078	1123
75°	835	971	1043
80°	622	791	960
85°	337	512	849

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2830 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.3	5.3
10°-20°	87.0	14.3
20°-30°	118.3	19.4
30°-40°	122.6	20.1
40°-50°	103.4	17.0
50°-60°	73.4	12.0
60°-70°	44.9	7.4
70°-80°	22.3	3.7
80°-90°	5.1	0.8
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°	237.7	39.0
0°-40°	360.3	59.1
0°-60°	537.1	88.1
0°-90°	609.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	609.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	348	348	348	348	348	
5°	346	346	341	343	343	33
15°	328	321	306	301	298	92
25°	285	272	253	244	239	131
35°	231	213	192	179	172	144
45°	170	152	132	114	105	131
55°	104	93	77	70	68	94
65°	48	46	44	44	43	49
75°	18	20	21	22	23	20
85°	2	3	4	5	6	4
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	348.4	348.4	348.4	348.4	348.4
2.5°	347.6	348.0	344.6	348.4	348.8
5°	345.9	345.9	340.9	343.0	343.0
7.5°	343.4	342.6	334.2	334.2	333.3
10°	339.6	337.1	326.2	324.1	322.9
12.5°	334.2	330.0	316.6	312.8	310.3
15°	327.5	321.2	306.1	300.7	297.7
17.5°	317.8	311.6	294.8	287.3	283.9
20°	307.8	298.6	281.4	273.9	268.9
22.5°	296.9	285.2	268.4	259.2	253.8
25°	284.8	272.2	252.9	243.7	238.7
27.5°	271.8	258.0	238.3	227.8	222.8
30°	259.2	243.3	223.2	211.5	205.6
32.5°	245.8	227.8	207.3	195.1	189.3
35°	230.7	213.2	192.2	178.8	172.1
37.5°	216.5	198.5	176.7	162.5	154.9
40°	201.4	183.4	161.2	146.6	138.6
42.5°	185.5	168.3	146.6	129.4	121.9
45°	170.4	152.4	131.5	113.5	105.1
47.5°	154.1	137.4	116.8	98.4	92.5
50°	137.4	121.9	102.6	85.8	82.9
52.5°	121.0	108.0	88.4	77.5	76.2
55°	104.3	93.4	76.6	69.9	67.8
57.5°	88.8	80.8	65.7	62.4	61.6
60°	74.1	67.4	58.2	56.1	54.9
62.5°	59.9	56.1	50.7	49.8	49.0
65°	47.7	46.1	43.6	43.6	43.1
67.5°	37.7	37.7	37.3	38.1	37.7
70°	30.2	30.6	31.4	32.2	32.7
72.5°	23.9	25.1	26.0	27.2	27.6
75°	18.4	19.7	21.4	22.2	23.0
77.5°	13.4	14.7	16.3	17.6	18.4
80°	9.2	10.1	11.7	13.4	14.2
82.5°	5.9	6.3	7.5	9.2	10.1
85°	2.5	2.9	3.8	5.4	6.3
87.5°	0.0	0.0	0.4	1.7	2.9
90°	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	13.70	15.15	14.07	15.47	15.78	11.80	13.25	12.17	13.57	13.88
	3H	14.60	15.90	14.98	16.23	16.59	13.37	14.67	13.75	15.00	15.36
	4H	14.88	16.10	15.28	16.45	16.83	13.97	15.18	14.37	15.53	15.91
	6H	15.03	16.15	15.45	16.52	16.91	14.42	15.54	14.83	15.90	16.30
	8H	15.06	16.12	15.49	16.51	16.91	14.57	15.63	15.00	16.02	16.42
	12H	15.05	16.07	15.48	16.45	16.88	14.67	15.68	15.10	16.07	16.50
4H	2H	13.95	15.16	14.35	15.51	15.89	12.34	13.56	12.74	13.91	14.29
	3H	15.06	16.06	15.47	16.46	16.87	14.12	15.12	14.53	15.52	15.92
	4H	15.45	16.35	15.89	16.77	17.21	14.83	15.73	15.26	16.14	16.58
	6H	15.69	16.47	16.15	16.92	17.38	15.40	16.18	15.86	16.62	17.08
	8H	15.74	16.47	16.20	16.91	17.38	15.59	16.32	16.06	16.76	17.23
	12H	15.75	16.39	16.23	16.87	17.35	15.73	16.38	16.21	16.86	17.33
8H	4H	15.61	16.34	16.08	16.78	17.25	15.04	15.76	15.50	16.21	16.68
	6H	15.92	16.52	16.42	17.02	17.49	15.71	16.31	16.21	16.80	17.28
	8H	16.00	16.54	16.52	17.05	17.54	15.97	16.51	16.49	17.02	17.51
	12H	16.04	16.51	16.55	17.00	17.57	16.18	16.65	16.69	17.15	17.71
12H	4H	15.61	16.26	16.10	16.74	17.21	15.03	15.68	15.52	16.16	16.63
	6H	15.94	16.48	16.45	16.99	17.48	15.72	16.26	16.24	16.77	17.26
	8H	16.05	16.53	16.56	17.02	17.59	16.02	16.50	16.54	16.99	17.56