

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: P1060819

Luminaire Tested: S124RDR-H350D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060819
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H350D850-X4F0-XX-UDD-WVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

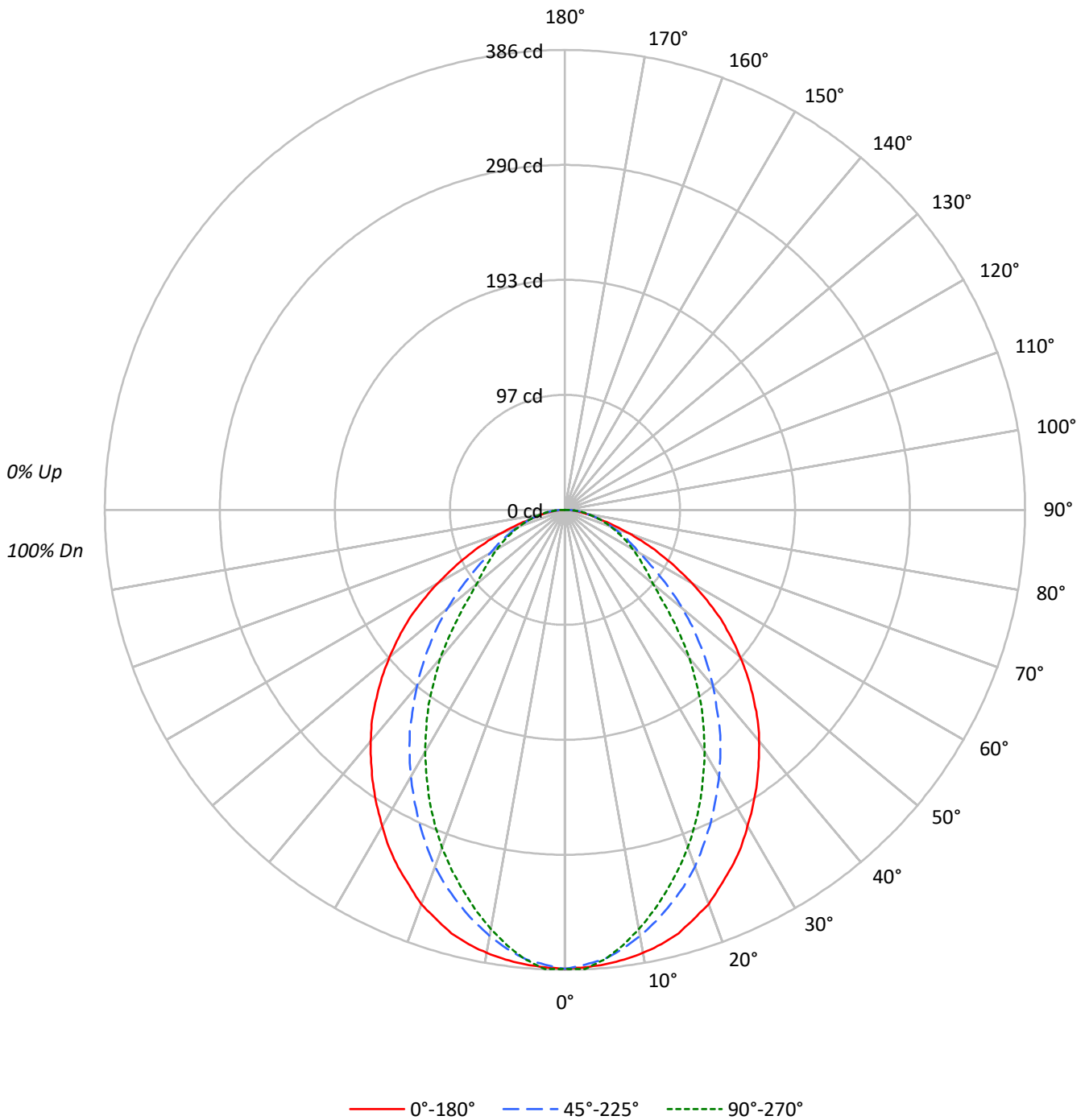
Lumens per Lamp: N/A
Luminaire Lumens: 742.8 lumens
Efficiency: N/A
Efficacy: 63.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86				
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74				
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64				
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44				
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40				
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36				
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33				
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3317	3317	3317
5°	3311	3272	3275
10°	3302	3175	3123
15°	3281	3055	2946
20°	3227	2920	2763
25°	3144	2749	2555
30°	3048	2570	2332
35°	2951	2384	2094
40°	2850	2173	1827
45°	2723	1952	1527
50°	2571	1723	1291
55°	2393	1461	1197
60°	2120	1240	1130
65°	1807	1143	1070
70°	1412	1060	1015
75°	965	978	978
80°	828	922	942
85°	711	899	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2723 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.8	4.8
10°-20°	97.3	13.1
20°-30°	135.1	18.2
30°-40°	144.9	19.5
40°-50°	128.3	17.3
50°-60°	96.7	13.0
60°-70°	62.6	8.4
70°-80°	32.1	4.3
80°-90°	9.9	1.3
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°	268.3	36.1
0°-40°	413.2	55.6
0°-60°	638.2	85.9
0°-90°	742.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	742.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	385	385	385	385	385	
5°	383	383	378	379	379	36
15°	368	360	343	334	330	104
25°	331	313	289	274	269	152
35°	281	255	227	206	199	175
45°	224	195	160	135	125	172
55°	159	133	97	82	80	142
65°	89	72	56	53	52	88
75°	29	30	29	29	29	34
85°	7	8	9	10	10	8
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	385.2	385.2	385.2	385.2	385.2
2.5°	384.3	385.7	382.1	384.8	385.7
5°	383.0	383.4	378.5	378.9	378.9
7.5°	380.7	379.8	371.7	369.4	369.0
10°	377.6	374.8	363.1	358.5	357.2
12.5°	373.5	368.5	353.6	347.2	344.5
15°	368.0	359.9	342.7	334.1	330.5
17.5°	359.9	349.5	331.4	320.5	316.4
20°	352.2	338.2	318.7	305.1	301.5
22.5°	341.3	326.4	304.2	289.7	285.2
25°	330.9	313.3	289.3	273.9	268.9
27.5°	319.6	299.7	273.9	257.6	251.2
30°	306.5	285.2	258.5	241.3	234.5
32.5°	293.8	271.2	242.6	223.6	216.4
35°	280.7	255.3	226.8	206.4	199.2
37.5°	267.1	240.4	209.1	189.2	179.7
40°	253.5	225.4	193.3	170.7	162.5
42.5°	239.5	210.1	177.0	153.5	143.1
45°	223.6	194.7	160.3	135.4	125.4
47.5°	208.2	179.7	144.9	117.7	108.6
50°	191.9	163.9	128.6	102.3	96.4
52.5°	175.6	147.6	112.7	90.5	87.8
55°	159.4	132.6	97.3	81.9	79.7
57.5°	141.2	117.2	83.7	74.2	72.4
60°	123.1	100.5	72.0	67.0	65.6
62.5°	105.5	86.0	63.8	59.8	58.9
65°	88.7	71.5	56.1	53.0	52.5
67.5°	72.4	58.9	48.9	47.1	46.2
70°	56.1	47.1	42.1	41.2	40.3
72.5°	41.6	38.0	35.8	35.3	34.9
75°	29.0	30.3	29.4	29.4	29.4
77.5°	23.1	23.5	24.0	24.4	24.0
80°	16.7	18.1	18.6	19.5	19.0
82.5°	11.8	12.7	14.0	14.5	14.9
85°	7.2	7.7	9.1	10.0	10.0
87.5°	3.2	3.6	4.5	5.4	5.9
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	14.60	16.10	14.97	16.42	16.73	11.17	12.66	11.53	12.98	13.29
	3H	15.81	17.15	16.19	17.48	17.84	12.86	14.21	13.24	14.54	14.90
	4H	16.12	17.37	16.52	17.72	18.10	13.54	14.80	13.94	15.15	15.53
	6H	16.32	17.48	16.73	17.85	18.24	14.09	15.25	14.50	15.62	16.01
	8H	16.38	17.48	16.80	17.87	18.27	14.31	15.41	14.73	15.80	16.21
	12H	16.41	17.47	16.84	17.85	18.28	14.48	15.54	14.91	15.92	16.35
4H	2H	14.74	16.00	15.14	16.35	16.73	11.83	13.09	12.23	13.43	13.81
	3H	16.15	17.19	16.56	17.59	17.99	13.74	14.78	14.15	15.18	15.59
	4H	16.57	17.51	17.01	17.93	18.37	14.54	15.48	14.97	15.90	16.34
	6H	16.90	17.72	17.36	18.16	18.62	15.23	16.05	15.69	16.49	16.95
	8H	17.00	17.76	17.46	18.20	18.67	15.50	16.27	15.97	16.71	17.18
	12H	17.07	17.75	17.55	18.23	18.70	15.73	16.41	16.21	16.89	17.36
8H	4H	16.70	17.47	17.16	17.91	18.38	14.86	15.62	15.32	16.07	16.53
	6H	17.12	17.75	17.62	18.25	18.72	15.69	16.32	16.18	16.81	17.29
	8H	17.28	17.85	17.79	18.36	18.85	16.05	16.62	16.57	17.13	17.62
	12H	17.41	17.91	17.92	18.40	18.97	16.39	16.89	16.90	17.38	17.95
12H	4H	16.71	17.39	17.19	17.87	18.34	14.89	15.57	15.37	16.05	16.52
	6H	17.15	17.71	17.66	18.23	18.71	15.75	16.31	16.26	16.82	17.31
	8H	17.36	17.86	17.87	18.35	18.92	16.18	16.68	16.69	17.17	17.74