

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: P1060812

Luminaire Tested: S124RDR-H350D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060812
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-73)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H350D840-X4F0-XX-UDD-WVL-W
Description: DEFINE 4 WHITE 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

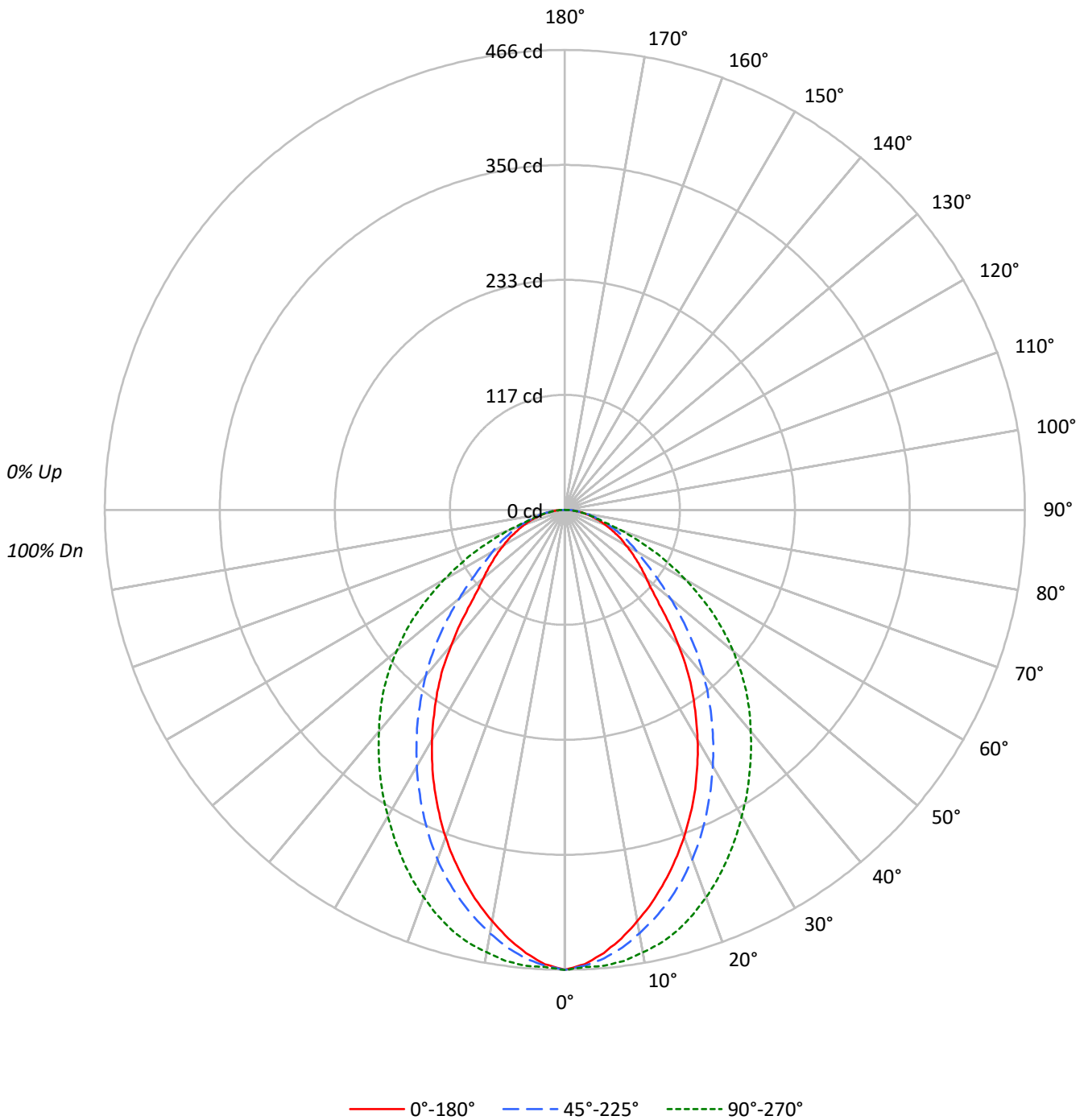
Lumens per Lamp: N/A
Luminaire Lumens: 855.4 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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										
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	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87					87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75					75															
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65					65															
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59	57					57															
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52	50					50															
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45					45															
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40					40															
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37					37															
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33					33															
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31					31															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4014	4014	4014
5°	3898	3943	4008
10°	3700	3809	3982
15°	3479	3648	3935
20°	3236	3455	3830
25°	2967	3226	3704
30°	2675	2982	3565
35°	2367	2728	3430
40°	2012	2462	3292
45°	1648	2175	3165
50°	1443	1867	2978
55°	1326	1611	2756
60°	1230	1450	2430
65°	1151	1361	2033
70°	1080	1246	1526
75°	1015	1138	1111
80°	942	1041	942
85°	860	1018	820

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3165 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.1	5.0
10°-20°	115.9	13.6
20°-30°	158.4	18.5
30°-40°	166.5	19.5
40°-50°	144.5	16.9
50°-60°	109.0	12.7
60°-70°	70.7	8.3
70°-80°	36.3	4.2
80°-90°	11.0	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°	317.4	37.1
0°-40°	483.9	56.6
0°-60°	737.5	86.2
0°-90°	855.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	855.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	466	466	466	466	466	
5°	451	457	456	460	464	42
15°	390	400	409	428	441	109
25°	312	323	340	366	390	143
35°	225	238	260	294	326	140
45°	135	148	179	223	260	107
55°	88	91	107	152	184	79
65°	56	58	67	81	100	56
75°	30	34	34	35	33	32
85°	9	11	10	10	8	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	466.1	466.1	466.1	466.1	466.1
2.5°	460.8	466.6	462.4	463.3	463.7
5°	450.9	457.1	456.2	460.0	463.7
7.5°	438.1	445.5	447.2	454.6	460.8
10°	423.2	431.5	435.6	447.6	455.4
12.5°	407.6	415.8	423.2	438.5	449.6
15°	390.2	399.7	409.2	427.8	441.4
17.5°	372.1	382.0	394.0	414.2	430.3
20°	353.1	363.0	377.0	398.9	417.9
22.5°	332.9	344.0	358.9	382.4	404.7
25°	312.3	323.4	339.5	365.5	389.8
27.5°	290.8	302.4	319.7	348.6	374.6
30°	269.0	281.3	299.9	330.4	358.5
32.5°	246.7	259.9	279.7	312.3	342.8
35°	225.2	237.6	259.5	294.1	326.3
37.5°	203.0	215.3	238.8	276.4	309.8
40°	179.0	192.6	219.0	257.8	292.9
42.5°	156.8	170.4	198.8	240.1	276.8
45°	135.3	148.1	178.6	223.2	259.9
47.5°	118.8	127.9	158.4	206.7	241.7
50°	107.7	111.8	139.4	188.5	222.3
52.5°	97.8	101.1	122.1	170.4	203.4
55°	88.3	90.8	107.3	152.2	183.6
57.5°	80.0	81.3	94.1	134.1	162.1
60°	71.4	73.0	84.2	115.5	141.1
62.5°	64.4	65.2	75.5	97.8	120.0
65°	56.5	57.8	66.8	80.9	99.8
67.5°	49.5	51.6	57.8	66.0	78.8
70°	42.9	45.8	49.5	53.6	60.6
72.5°	36.7	40.0	42.1	43.7	42.5
75°	30.5	34.2	34.2	34.7	33.4
77.5°	24.8	28.1	27.6	27.2	25.6
80°	19.0	21.9	21.0	20.6	19.0
82.5°	14.0	16.1	15.3	14.9	12.8
85°	8.7	10.7	10.3	9.9	8.3
87.5°	4.1	6.2	5.8	5.4	3.7
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	11.33	12.82	11.70	13.13	13.45	15.07	16.56	15.44	16.87	17.19
	3H	13.00	14.33	13.38	14.66	15.02	16.20	17.53	16.57	17.86	18.22
	4H	13.67	14.91	14.07	15.26	15.64	16.49	17.74	16.89	18.09	18.47
	6H	14.18	15.33	14.59	15.70	16.09	16.69	17.85	17.10	18.21	18.60
	8H	14.35	15.45	14.78	15.84	16.24	16.75	17.84	17.17	18.23	18.64
	12H	14.47	15.52	14.90	15.90	16.33	16.78	17.83	17.21	18.21	18.64
4H	2H	12.12	13.37	12.52	13.72	14.10	15.24	16.48	15.64	16.83	17.21
	3H	14.00	15.03	14.41	15.43	15.83	16.57	17.60	16.98	18.00	18.40
	4H	14.80	15.73	15.23	16.15	16.59	16.98	17.91	17.42	18.33	18.77
	6H	15.44	16.25	15.90	16.70	17.16	17.30	18.11	17.76	18.56	19.02
	8H	15.67	16.42	16.13	16.87	17.34	17.40	18.16	17.86	18.60	19.07
	12H	15.83	16.51	16.32	16.99	17.46	17.47	18.15	17.95	18.63	19.10
8H	4H	15.15	15.90	15.61	16.35	16.82	17.12	17.87	17.58	18.32	18.78
	6H	15.94	16.56	16.44	17.06	17.53	17.53	18.16	18.03	18.65	19.13
	8H	16.26	16.82	16.77	17.33	17.82	17.69	18.25	18.21	18.76	19.25
	12H	16.52	17.02	17.03	17.51	18.08	17.83	18.33	18.34	18.82	19.39
12H	4H	15.18	15.85	15.66	16.33	16.80	17.12	17.80	17.60	18.27	18.75
	6H	16.00	16.56	16.51	17.07	17.56	17.56	18.12	18.07	18.63	19.12
	8H	16.39	16.88	16.90	17.37	17.94	17.77	18.26	18.28	18.75	19.32