

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: P1060801

Luminaire Tested: S124RDR-H350D835-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060801
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-H350D835-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: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

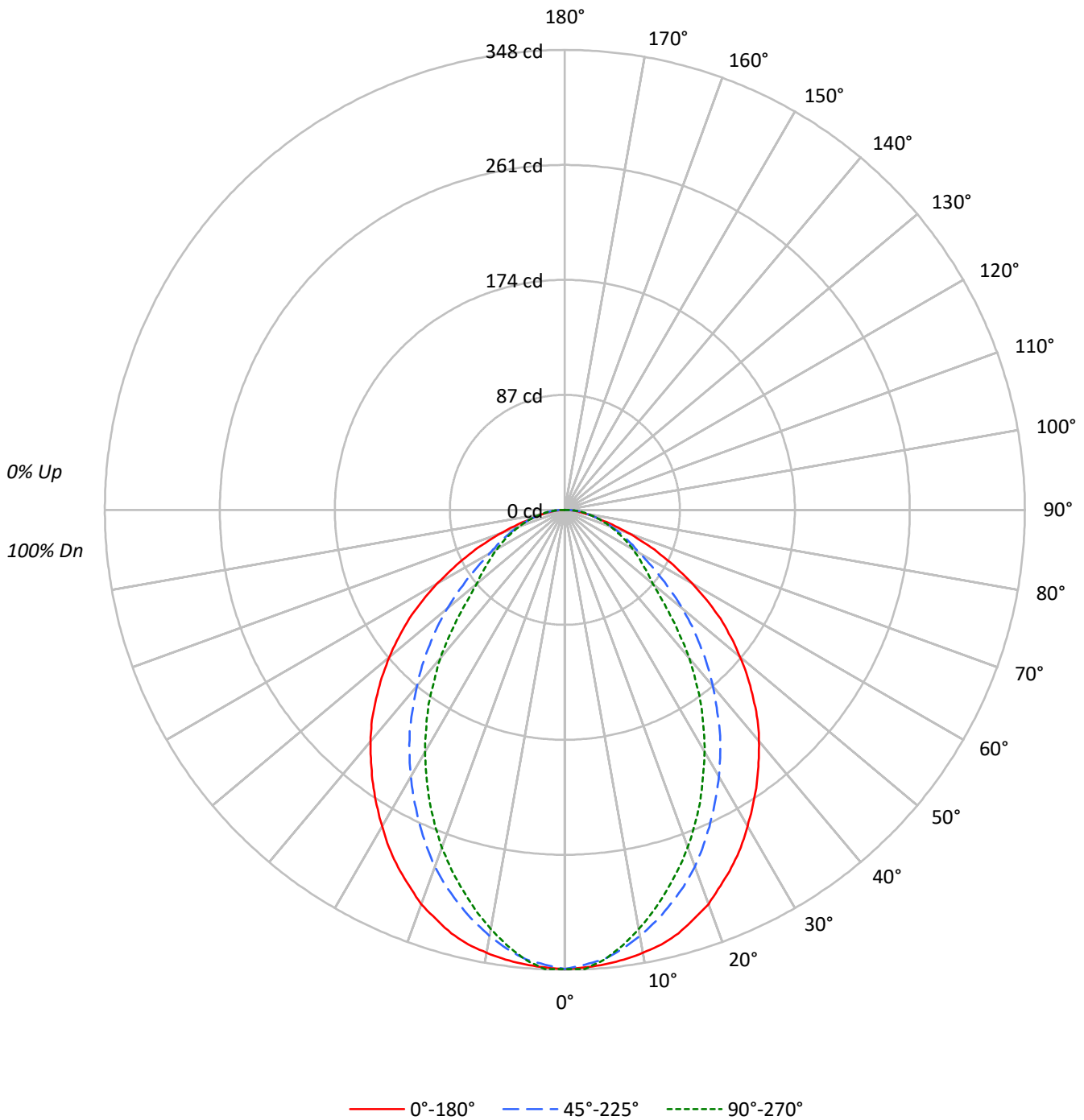
Lumens per Lamp: N/A
Luminaire Lumens: 669.8 lumens
Efficiency: N/A
Efficacy: 57.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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°	2992	2992	2992
5°	2985	2950	2954
10°	2976	2863	2816
15°	2959	2755	2657
20°	2910	2634	2492
25°	2835	2478	2304
30°	2748	2318	2103
35°	2661	2150	1888
40°	2570	1959	1647
45°	2456	1760	1377
50°	2319	1553	1164
55°	2157	1318	1078
60°	1912	1118	1020
65°	1630	1031	966
70°	1274	957	914
75°	868	882	882
80°	749	828	848
85°	642	810	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2456 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.3	4.8
10°-20°	87.8	13.1
20°-30°	121.9	18.2
30°-40°	130.6	19.5
40°-50°	115.7	17.3
50°-60°	87.2	13.0
60°-70°	56.5	8.4
70°-80°	29.0	4.3
80°-90°	8.9	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°	242.0	36.1
0°-40°	372.6	55.6
0°-60°	575.5	85.9
0°-90°	669.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	669.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	347	347	347	347	347	
5°	345	346	341	342	342	33
15°	332	324	309	301	298	93
25°	298	282	261	247	242	137
35°	253	230	204	186	180	158
45°	202	176	144	122	113	156
55°	144	120	88	74	72	128
65°	80	64	51	48	47	79
75°	26	27	26	26	26	31
85°	6	7	8	9	9	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	347.4	347.4	347.4	347.4	347.4
2.5°	346.6	347.8	344.5	347.0	347.8
5°	345.3	345.8	341.3	341.7	341.7
7.5°	343.3	342.5	335.1	333.1	332.7
10°	340.4	338.0	327.4	323.3	322.1
12.5°	336.8	332.3	318.8	313.1	310.6
15°	331.9	324.5	309.0	301.3	298.0
17.5°	324.5	315.1	298.8	289.0	285.3
20°	317.6	304.9	287.4	275.1	271.9
22.5°	307.8	294.3	274.3	261.3	257.2
25°	298.4	282.5	260.8	247.0	242.5
27.5°	288.2	270.2	247.0	232.3	226.6
30°	276.4	257.2	233.1	217.6	211.5
32.5°	264.9	244.5	218.8	201.7	195.1
35°	253.1	230.2	204.5	186.1	179.6
37.5°	240.8	216.8	188.6	170.6	162.1
40°	228.6	203.3	174.3	153.9	146.5
42.5°	215.9	189.4	159.6	138.4	129.0
45°	201.7	175.5	144.5	122.1	113.1
47.5°	187.8	162.1	130.6	106.1	98.0
50°	173.1	147.8	115.9	92.3	86.9
52.5°	158.4	133.1	101.6	81.6	79.2
55°	143.7	119.6	87.8	73.9	71.8
57.5°	127.4	105.7	75.5	66.9	65.3
60°	111.0	90.6	64.9	60.4	59.2
62.5°	95.1	77.6	57.6	53.9	53.1
65°	80.0	64.5	50.6	47.8	47.4
67.5°	65.3	53.1	44.1	42.5	41.6
70°	50.6	42.5	38.0	37.1	36.3
72.5°	37.6	34.3	32.2	31.8	31.4
75°	26.1	27.3	26.5	26.5	26.5
77.5°	20.8	21.2	21.6	22.0	21.6
80°	15.1	16.3	16.7	17.6	17.1
82.5°	10.6	11.4	12.7	13.1	13.5
85°	6.5	6.9	8.2	9.0	9.0
87.5°	2.9	3.3	4.1	4.9	5.3
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	14.25	15.74	14.61	16.06	16.37	10.81	12.31	11.17	12.62	12.93
	3H	15.45	16.79	15.83	17.12	17.48	12.50	13.85	12.88	14.17	14.54
	4H	15.76	17.02	16.16	17.37	17.74	13.18	14.44	13.58	14.79	15.17
	6H	15.96	17.12	16.37	17.49	17.88	13.73	14.89	14.14	15.26	15.65
	8H	16.02	17.12	16.44	17.51	17.92	13.95	15.05	14.37	15.44	15.84
	12H	16.05	17.11	16.48	17.49	17.92	14.12	15.18	14.55	15.56	15.99
4H	2H	14.39	15.65	14.79	16.00	16.37	11.47	12.73	11.87	13.08	13.45
	3H	15.79	16.83	16.20	17.24	17.64	13.38	14.42	13.79	14.82	15.22
	4H	16.22	17.16	16.65	17.57	18.01	14.18	15.12	14.61	15.53	15.97
	6H	16.54	17.36	17.00	17.80	18.26	14.87	15.68	15.32	16.13	16.59
	8H	16.64	17.40	17.10	17.85	18.31	15.14	15.90	15.60	16.35	16.82
	12H	16.71	17.39	17.19	17.87	18.34	15.37	16.05	15.85	16.53	17.00
8H	4H	16.34	17.11	16.81	17.55	18.02	14.49	15.26	14.96	15.70	16.17
	6H	16.76	17.39	17.26	17.89	18.36	15.32	15.96	15.82	16.45	16.92
	8H	16.92	17.49	17.43	18.00	18.49	15.69	16.26	16.21	16.77	17.26
	12H	17.05	17.55	17.56	18.04	18.61	16.03	16.53	16.54	17.02	17.59
12H	4H	16.35	17.03	16.83	17.51	17.98	14.52	15.20	15.01	15.68	16.16
	6H	16.79	17.36	17.30	17.87	18.35	15.38	15.95	15.90	16.46	16.95
	8H	17.00	17.50	17.51	17.99	18.56	15.82	16.32	16.33	16.81	17.38