

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: P1060896

Luminaire Tested: S124RDR-H575D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060896
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H575D850-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

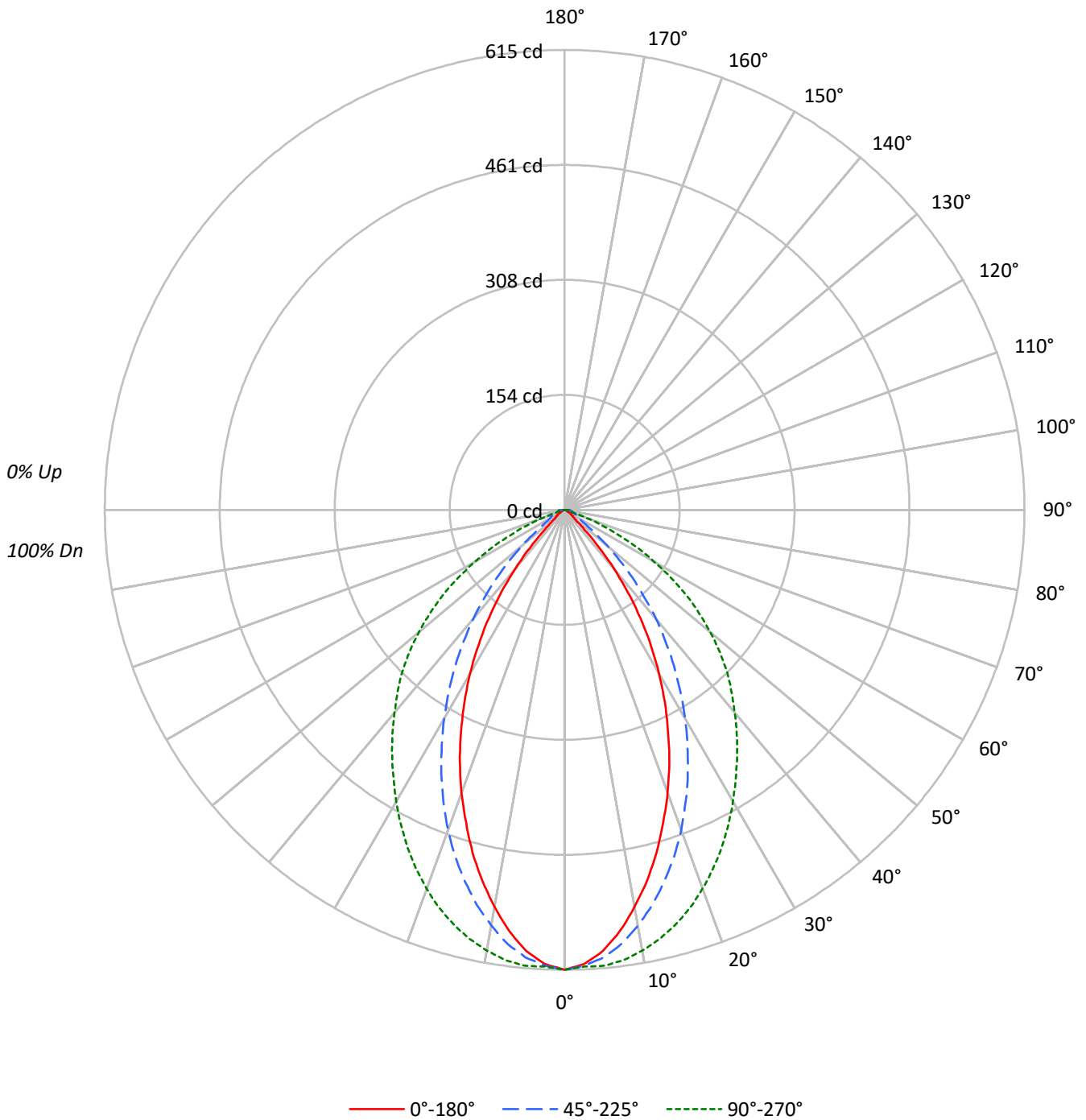
Lumens per Lamp: N/A
Luminaire Lumens: 775.1 lumens
Efficiency: N/A
Efficacy: 44.5 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81				
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72				
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65				
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59				
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54				
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49				
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45				
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5296	5296	5296
5°	5116	5192	5291
10°	4715	4936	5232
15°	4235	4588	5116
20°	3691	4174	4941
25°	3114	3704	4726
30°	2513	3202	4478
35°	1860	2679	4227
40°	1152	2135	3976
45°	457	1556	3745
50°	204	977	3404
55°	162	509	2980
60°	112	386	2375
65°	73	383	1632
70°	73	345	763
75°	96	336	336
80°	144	392	392
85°	287	781	573

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3745 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.4	7.3
10°-20°	145.6	18.8
20°-30°	183.8	23.7
30°-40°	168.6	21.8
40°-50°	114.8	14.8
50°-60°	62.6	8.1
60°-70°	27.1	3.5
70°-80°	9.9	1.3
80°-90°	6.3	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°	385.8	49.8
0°-40°	554.4	71.5
0°-60°	731.8	94.4
0°-90°	775.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	775.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	615	615	615	615	615	
5°	592	600	601	607	612	55
15°	475	492	515	552	574	132
25°	328	351	390	452	497	150
35°	177	203	255	336	402	109
45°	38	63	128	227	308	35
55°	11	12	34	125	198	10
65°	4	5	19	39	80	4
75°	3	9	10	10	10	3
85°	3	6	8	8	6	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	615.0	615.0	615.0	615.0	615.0
2.5°	607.8	615.0	610.0	611.4	611.4
5°	591.9	599.9	600.6	607.1	612.1
7.5°	568.1	579.7	585.4	598.4	607.1
10°	539.2	553.0	564.5	586.9	598.4
12.5°	508.2	524.1	541.4	571.0	587.6
15°	475.0	491.6	514.7	551.5	573.9
17.5°	438.2	458.4	486.5	530.6	558.0
20°	402.8	423.0	455.5	505.3	539.2
22.5°	366.0	386.9	423.0	478.6	519.0
25°	327.7	350.8	389.8	451.9	497.4
27.5°	290.2	314.7	355.9	423.7	474.3
30°	252.7	277.2	322.0	394.9	450.4
32.5°	214.4	239.7	288.0	364.5	425.9
35°	176.9	202.8	254.8	335.7	402.1
37.5°	138.6	166.0	221.6	307.5	378.3
40°	102.5	129.9	189.9	279.4	353.7
42.5°	68.6	96.0	157.4	251.9	330.6
45°	37.5	62.8	127.8	226.7	307.5
47.5°	20.2	34.6	98.9	202.1	281.5
50°	15.2	18.8	72.9	176.1	254.1
52.5°	13.0	14.4	50.5	148.7	226.7
55°	10.8	11.5	33.9	124.9	198.5
57.5°	8.7	9.4	25.3	101.1	168.2
60°	6.5	7.9	22.4	78.0	137.9
62.5°	5.1	6.5	20.9	57.0	109.0
65°	3.6	5.1	18.8	39.0	80.1
67.5°	3.6	5.8	15.9	25.3	54.1
70°	2.9	7.9	13.7	16.6	30.3
72.5°	2.9	8.7	11.5	11.5	11.5
75°	2.9	9.4	10.1	10.1	10.1
77.5°	2.9	8.7	9.4	8.7	8.7
80°	2.9	7.9	7.9	7.9	7.9
82.5°	2.9	7.2	7.9	7.9	6.5
85°	2.9	6.5	7.9	7.9	5.8
87.5°	2.2	6.5	7.2	7.2	4.3
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	0.00	0.00	0.00	0.00	0.00	14.20	15.48	14.57	15.79	16.11
	3H	0.00	0.00	0.00	0.00	0.09	14.58	15.71	14.96	16.04	16.40
	4H	0.00	0.54	0.00	0.89	1.27	14.56	15.61	14.96	15.96	16.34
	6H	0.67	1.64	1.09	2.01	2.40	14.54	15.51	14.96	15.88	16.28
	8H	1.26	2.18	1.69	2.57	2.97	14.54	15.46	14.97	15.85	16.25
	12H	1.93	2.81	2.37	3.19	3.62	14.56	15.43	14.99	15.81	16.24
4H	2H	0.46	1.51	0.86	1.86	2.24	14.01	15.07	14.42	15.42	15.80
	3H	2.03	2.89	2.45	3.30	3.70	14.43	15.29	14.85	15.70	16.10
	4H	3.33	4.10	3.77	4.52	4.96	14.43	15.20	14.87	15.62	16.06
	6H	4.46	5.12	4.92	5.57	6.03	14.47	15.13	14.93	15.58	16.05
	8H	4.97	5.58	5.44	6.03	6.50	14.50	15.12	14.97	15.56	16.03
	12H	5.52	6.06	6.01	6.55	7.02	14.56	15.11	15.05	15.59	16.07
8H	4H	4.41	5.03	4.88	5.48	5.95	14.34	14.96	14.81	15.41	15.88
	6H	5.95	6.45	6.45	6.95	7.43	14.42	14.92	14.92	15.42	15.90
	8H	6.76	7.21	7.28	7.73	8.22	14.50	14.96	15.02	15.47	15.96
	12H	7.59	7.99	8.11	8.49	9.06	14.67	15.07	15.19	15.57	16.14
12H	4H	4.60	5.15	5.09	5.63	6.10	14.30	14.85	14.79	15.33	15.81
	6H	6.30	6.76	6.83	7.27	7.77	14.39	14.85	14.91	15.36	15.85
	8H	7.31	7.71	7.83	8.21	8.78	14.53	14.93	15.04	15.42	16.00