

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: P1060900

Luminaire Tested: S124RDR-H575D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060900
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-H575D850-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

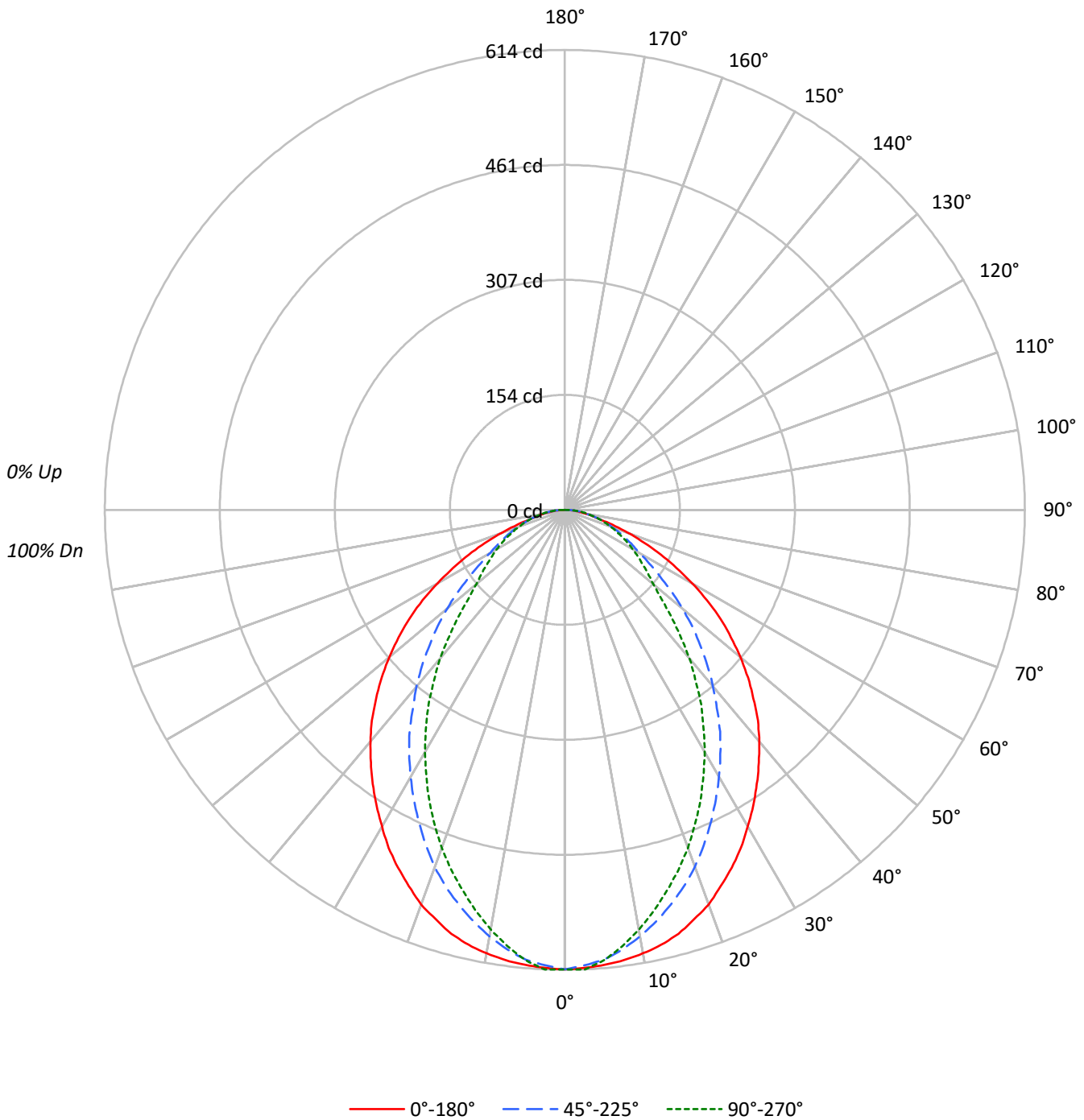
Lumens per Lamp: N/A
Luminaire Lumens: 1183.0 lumens
Efficiency: N/A
Efficacy: 68.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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			100	
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86			86	
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74			74	
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64			64	
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56			56	
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50	
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44			44	
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40			40	
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36			36	
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33			33	
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30			30	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5283	5283	5283
5°	5272	5210	5216
10°	5258	5056	4974
15°	5225	4865	4692
20°	5140	4651	4400
25°	5007	4377	4068
30°	4853	4093	3713
35°	4699	3797	3334
40°	4538	3460	2909
45°	4337	3108	2432
50°	4095	2742	2058
55°	3810	2327	1905
60°	3377	1974	1800
65°	2879	1822	1703
70°	2251	1687	1616
75°	1534	1560	1560
80°	1324	1468	1503
85°	1136	1423	1571

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4337 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.1	4.8
10°-20°	155.0	13.1
20°-30°	215.2	18.2
30°-40°	230.7	19.5
40°-50°	204.4	17.3
50°-60°	154.0	13.0
60°-70°	99.7	8.4
70°-80°	51.2	4.3
80°-90°	15.7	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°	427.3	36.1
0°-40°	658.0	55.6
0°-60°	1016.3	85.9
0°-90°	1183.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1183.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	614	614	614	614	614	
5°	610	611	603	603	603	58
15°	586	573	546	532	526	165
25°	527	499	461	436	428	243
35°	447	407	361	329	317	279
45°	356	310	255	216	200	275
55°	254	211	155	130	127	225
65°	141	114	89	84	84	140
75°	46	48	47	47	47	55
85°	12	12	14	16	16	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	613.5	613.5	613.5	613.5	613.5
2.5°	612.1	614.2	608.5	612.8	614.2
5°	609.9	610.6	602.7	603.4	603.4
7.5°	606.3	604.9	591.9	588.3	587.6
10°	601.3	596.9	578.2	571.0	568.8
12.5°	594.8	586.8	563.0	553.0	548.6
15°	586.1	573.1	545.7	532.0	526.3
17.5°	573.1	556.6	527.7	510.4	503.9
20°	560.9	538.5	507.5	485.9	480.1
22.5°	543.6	519.8	484.5	461.4	454.2
25°	527.0	498.9	460.7	436.2	428.2
27.5°	509.0	477.3	436.2	410.2	400.1
30°	488.1	454.2	411.6	384.3	373.4
32.5°	467.9	431.8	386.4	356.1	344.6
35°	447.0	406.6	361.2	328.7	317.2
37.5°	425.3	382.8	333.1	301.3	286.2
40°	403.7	359.0	307.8	271.8	258.8
42.5°	381.4	334.5	281.9	244.4	227.8
45°	356.1	310.0	255.2	215.6	199.7
47.5°	331.6	286.2	230.7	187.4	173.0
50°	305.7	261.0	204.7	162.9	153.6
52.5°	279.7	235.0	179.5	144.2	139.9
55°	253.8	211.2	155.0	130.5	126.9
57.5°	224.9	186.7	133.4	118.2	115.3
60°	196.1	160.0	114.6	106.7	104.5
62.5°	168.0	137.0	101.7	95.2	93.7
65°	141.3	113.9	89.4	84.3	83.6
67.5°	115.3	93.7	77.9	75.0	73.5
70°	89.4	75.0	67.0	65.6	64.2
72.5°	66.3	60.6	57.0	56.2	55.5
75°	46.1	48.3	46.9	46.9	46.9
77.5°	36.8	37.5	38.2	38.9	38.2
80°	26.7	28.8	29.6	31.0	30.3
82.5°	18.7	20.2	22.3	23.1	23.8
85°	11.5	12.3	14.4	15.9	15.9
87.5°	5.0	5.8	7.2	8.7	9.4
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	16.22	17.72	16.59	18.03	18.35	12.78	14.28	13.15	14.60	14.91
	3H	17.43	18.77	17.80	19.10	19.46	14.48	15.82	14.86	16.15	16.51
	4H	17.73	18.99	18.13	19.34	19.72	15.16	16.42	15.56	16.77	17.15
	6H	17.94	19.10	18.35	19.47	19.86	15.71	16.87	16.12	17.24	17.63
	8H	17.99	19.10	18.42	19.49	19.89	15.93	17.03	16.35	17.42	17.82
	12H	18.03	19.09	18.46	19.47	19.90	16.10	17.16	16.53	17.54	17.97
4H	2H	16.36	17.62	16.76	17.97	18.35	13.45	14.70	13.85	15.05	15.43
	3H	17.77	18.81	18.18	19.21	19.61	15.36	16.40	15.77	16.80	17.20
	4H	18.19	19.13	18.62	19.55	19.99	16.16	17.10	16.59	17.51	17.95
	6H	18.52	19.33	18.97	19.78	20.24	16.85	17.66	17.30	18.11	18.57
	8H	18.61	19.38	19.08	19.82	20.29	17.12	17.88	17.58	18.33	18.80
	12H	18.68	19.37	19.17	19.85	20.32	17.35	18.03	17.83	18.51	18.98
8H	4H	18.32	19.08	18.78	19.53	20.00	16.48	17.24	16.94	17.68	18.15
	6H	18.74	19.37	19.24	19.86	20.34	17.30	17.94	17.80	18.43	18.91
	8H	18.90	19.46	19.41	19.98	20.46	17.67	18.24	18.18	18.75	19.24
	12H	19.03	19.53	19.54	20.02	20.59	18.01	18.51	18.52	19.00	19.56
12H	4H	18.33	19.01	18.81	19.49	19.96	16.50	17.19	16.99	17.67	18.14
	6H	18.77	19.33	19.28	19.84	20.33	17.36	17.93	17.88	18.44	18.93
	8H	18.97	19.48	19.48	19.97	20.53	17.80	18.30	18.31	18.79	19.36