

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: P1059802

Luminaire Tested: S123RDR-H775D940-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059802
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H775D940-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

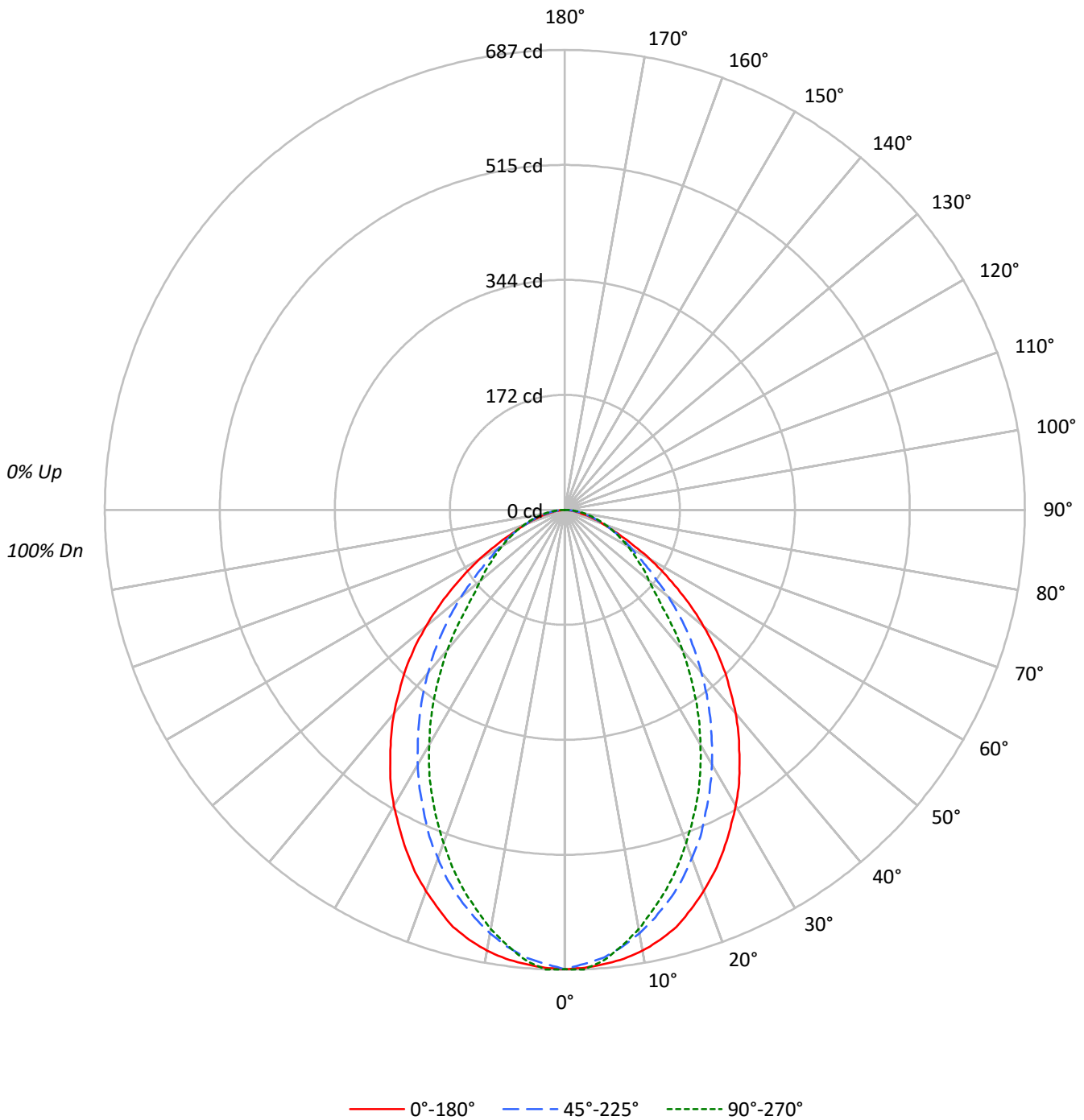
Lumens per Lamp: N/A
Luminaire Lumens: 1200.1 lumens
Efficiency: N/A
Efficacy: 51.1 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.5
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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35				
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8058	8058	8058
5°	8030	7913	7961
10°	7974	7660	7581
15°	7840	7329	7129
20°	7575	6925	6617
25°	7266	6454	6091
30°	6922	5961	5490
35°	6514	5426	4860
40°	6081	4867	4185
45°	5575	4301	3438
50°	4941	3692	2983
55°	4205	3089	2735
60°	3429	2691	2536
65°	2612	2384	2359
70°	2039	2125	2208
75°	1647	1910	2060
80°	1224	1562	1893
85°	660	997	1671

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5575 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.7	5.3
10°-20°	171.4	14.3
20°-30°	233.0	19.4
30°-40°	241.5	20.1
40°-50°	203.7	17.0
50°-60°	144.6	12.0
60°-70°	88.4	7.4
70°-80°	44.0	3.7
80°-90°	10.0	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°	468.0	39.0
0°-40°	709.5	59.1
0°-60°	1057.8	88.1
0°-90°	1200.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1200.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	686	686	686	686	686	
5°	681	681	671	675	675	65
15°	645	632	603	592	586	181
25°	561	536	498	480	470	258
35°	454	420	378	352	339	284
45°	336	300	259	224	207	258
55°	205	184	151	138	134	184
65°	94	91	86	86	85	96
75°	36	39	42	44	45	39
85°	5	6	7	11	12	7
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	686.2	686.2	686.2	686.2	686.2
2.5°	684.5	685.3	678.7	686.2	687.0
5°	681.2	681.2	671.3	675.4	675.4
7.5°	676.3	674.6	658.1	658.1	656.5
10°	668.8	663.9	642.4	638.3	635.8
12.5°	658.1	649.9	623.5	616.1	611.1
15°	644.9	632.5	602.9	592.1	586.4
17.5°	625.9	613.6	580.6	565.7	559.1
20°	606.2	588.0	554.2	539.4	529.5
22.5°	584.7	561.6	528.6	510.5	499.8
25°	560.8	536.1	498.1	480.0	470.1
27.5°	535.2	508.0	469.3	448.6	438.7
30°	510.5	479.2	439.6	416.5	404.9
32.5°	484.1	448.6	408.2	384.3	372.8
35°	454.4	419.8	378.5	352.1	339.0
37.5°	426.4	390.9	348.0	320.0	305.1
40°	396.7	361.2	317.5	288.6	273.0
42.5°	365.3	331.5	288.6	254.8	240.0
45°	335.7	300.2	259.0	223.5	207.0
47.5°	303.5	270.5	230.1	193.8	182.3
50°	270.5	240.0	202.1	169.1	163.3
52.5°	238.3	212.8	174.0	152.6	150.1
55°	205.4	183.9	150.9	137.7	133.6
57.5°	174.8	159.2	129.5	122.9	121.2
60°	146.0	132.8	114.6	110.5	108.0
62.5°	117.9	110.5	99.8	98.1	96.5
65°	94.0	90.7	85.8	85.8	84.9
67.5°	74.2	74.2	73.4	75.0	74.2
70°	59.4	60.2	61.9	63.5	64.3
72.5°	47.0	49.5	51.1	53.6	54.4
75°	36.3	38.8	42.1	43.7	45.4
77.5°	26.4	28.9	32.2	34.6	36.3
80°	18.1	19.8	23.1	26.4	28.0
82.5°	11.5	12.4	14.8	18.1	19.8
85°	4.9	5.8	7.4	10.7	12.4
87.5°	0.0	0.0	0.8	3.3	5.8
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	16.06	17.51	16.42	17.82	18.14	14.16	15.61	14.52	15.92	16.23
	3H	16.96	18.25	17.33	18.58	18.94	15.73	17.02	16.11	17.35	17.71
	4H	17.24	18.45	17.64	18.80	19.18	16.32	17.54	16.72	17.89	18.27
	6H	17.39	18.51	17.80	18.87	19.27	16.77	17.89	17.19	18.26	18.65
	8H	17.41	18.47	17.84	18.86	19.27	16.92	17.99	17.35	18.38	18.78
	12H	17.40	18.42	17.84	18.80	19.23	17.02	18.04	17.45	18.42	18.85
4H	2H	16.30	17.52	16.70	17.87	18.25	14.70	15.91	15.10	16.26	16.64
	3H	17.42	18.42	17.83	18.82	19.22	16.47	17.47	16.88	17.87	18.27
	4H	17.81	18.71	18.24	19.12	19.56	17.18	18.08	17.62	18.50	18.94
	6H	18.05	18.83	18.51	19.27	19.73	17.75	18.53	18.21	18.98	19.44
	8H	18.09	18.82	18.56	19.26	19.73	17.94	18.67	18.41	19.12	19.59
	12H	18.10	18.75	18.58	19.23	19.70	18.08	18.73	18.57	19.21	19.68
8H	4H	17.96	18.69	18.43	19.14	19.61	17.39	18.12	17.86	18.56	19.03
	6H	18.28	18.88	18.78	19.37	19.85	18.07	18.67	18.57	19.16	19.64
	8H	18.35	18.89	18.87	19.40	19.89	18.32	18.86	18.84	19.37	19.86
	12H	18.39	18.86	18.90	19.36	19.92	18.53	19.01	19.04	19.50	20.07
12H	4H	17.97	18.62	18.45	19.10	19.57	17.39	18.04	17.87	18.52	18.99
	6H	18.29	18.83	18.81	19.34	19.83	18.08	18.61	18.59	19.13	19.61
	8H	18.41	18.88	18.92	19.37	19.94	18.38	18.85	18.89	19.35	19.91