

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: P1059753

Luminaire Tested: S123RDR-H775D840-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059753
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H775D840-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

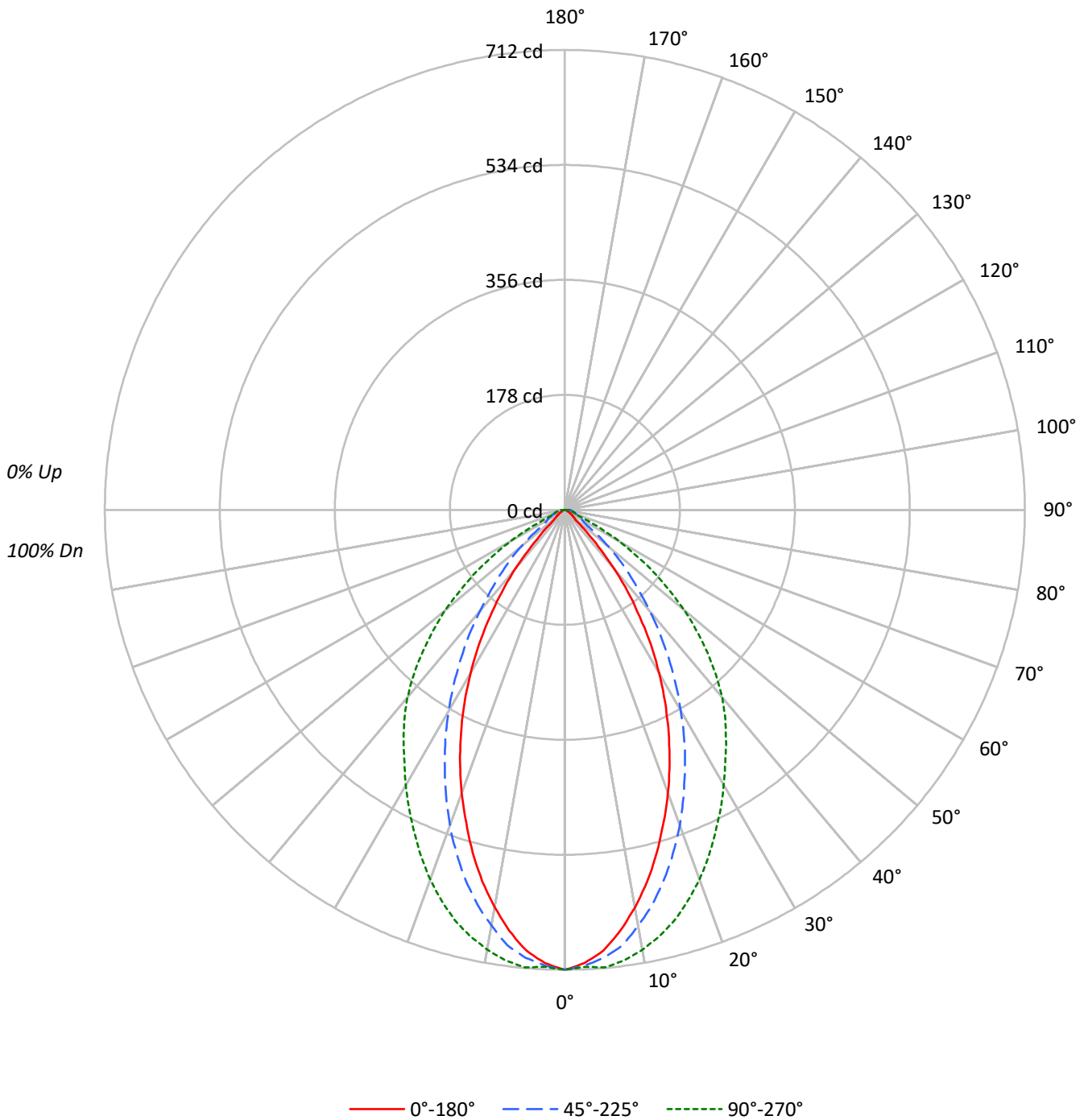
Lumens per Lamp: N/A
Luminaire Lumens: 854.7 lumens
Efficiency: N/A
Efficacy: 36.4 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8359	8359	8359
5°	8071	8204	8380
10°	7451	7797	8243
15°	6686	7210	7994
20°	5833	6499	7610
25°	4921	5697	7139
30°	3958	4870	6671
35°	2897	4009	6236
40°	1807	3126	5808
45°	684	2330	5173
50°	325	1606	4408
55°	250	880	3409
60°	176	747	2240
65°	131	650	936
70°	127	611	611
75°	168	635	635
80°	250	757	697
85°	498	1266	1010

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5173 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.3	7.6
10°-20°	167.6	19.6
20°-30°	207.4	24.3
30°-40°	185.9	21.8
40°-50°	121.9	14.3
50°-60°	61.0	7.1
60°-70°	23.8	2.8
70°-80°	13.4	1.6
80°-90°	8.3	1.0
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°	440.3	51.5
0°-40°	626.3	73.3
0°-60°	809.2	94.7
0°-90°	854.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	854.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	712	712	712	712	712	
5°	685	696	696	703	711	63
15°	550	572	593	632	658	153
25°	380	403	440	502	551	173
35°	202	229	280	364	435	126
45°	41	66	140	240	312	39
55°	12	15	43	118	166	11
65°	5	14	23	31	34	5
75°	4	14	14	14	14	4
85°	4	9	9	9	8	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	711.9	711.9	711.9	711.9	711.9
2.5°	702.5	712.8	706.3	707.2	708.1
5°	684.7	696.0	696.0	703.4	710.9
7.5°	657.6	670.7	680.1	693.2	703.4
10°	624.9	640.8	653.9	677.3	691.3
12.5°	589.3	609.0	625.8	656.7	676.3
15°	550.0	572.5	593.1	632.4	657.6
17.5°	507.9	530.4	557.5	603.4	634.2
20°	466.8	489.2	520.1	571.6	609.0
22.5°	423.8	447.1	479.9	536.9	580.9
25°	379.8	403.2	439.7	502.3	551.0
27.5°	335.8	359.2	400.4	468.7	522.0
30°	291.9	315.2	359.2	432.2	492.0
32.5°	247.9	273.1	319.0	398.5	462.1
35°	202.1	229.2	279.7	363.9	435.0
37.5°	160.0	185.2	242.3	333.9	407.8
40°	117.9	145.0	203.9	305.0	378.9
42.5°	76.7	105.7	169.3	273.1	346.1
45°	41.2	66.4	140.3	240.4	311.5
47.5°	22.5	36.5	113.2	205.8	276.0
50°	17.8	20.6	87.9	175.9	241.3
52.5°	15.0	16.8	62.7	147.8	203.0
55°	12.2	15.0	43.0	117.9	166.5
57.5°	10.3	13.1	33.7	91.7	130.0
60°	7.5	11.2	31.8	67.4	95.4
62.5°	5.6	12.2	28.1	46.8	62.7
65°	4.7	14.0	23.4	30.9	33.7
67.5°	3.7	15.0	20.6	19.6	19.6
70°	3.7	14.0	17.8	16.8	17.8
72.5°	3.7	15.0	15.9	15.0	15.9
75°	3.7	14.0	14.0	14.0	14.0
77.5°	3.7	13.1	13.1	12.2	12.2
80°	3.7	11.2	11.2	11.2	10.3
82.5°	3.7	10.3	10.3	10.3	8.4
85°	3.7	9.4	9.4	9.4	7.5
87.5°	2.8	8.4	9.4	8.4	5.6
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	0.99	0.10	1.30	1.62	13.98	15.24	14.35	15.55	15.87
	3H	2.06	3.17	2.44	3.50	3.87	14.06	15.17	14.44	15.50	15.87
	4H	3.16	4.19	3.56	4.54	4.93	14.14	15.17	14.54	15.52	15.91
	6H	4.14	5.09	4.56	5.46	5.86	14.24	15.19	14.66	15.56	15.96
	8H	4.62	5.52	5.05	5.91	6.31	14.30	15.20	14.73	15.59	16.00
	12H	5.17	6.03	5.60	6.41	6.84	14.38	15.24	14.82	15.62	16.06
4H	2H	2.99	4.02	3.39	4.37	4.76	13.84	14.87	14.24	15.22	15.61
	3H	5.30	6.15	5.72	6.55	6.96	14.01	14.86	14.43	15.26	15.67
	4H	6.67	7.42	7.10	7.84	8.29	14.16	14.92	14.60	15.34	15.78
	6H	7.75	8.40	8.21	8.85	9.32	14.39	15.04	14.85	15.49	15.96
	8H	8.20	8.81	8.67	9.26	9.73	14.51	15.12	14.98	15.57	16.04
	12H	8.69	9.23	9.18	9.72	10.19	14.69	15.23	15.18	15.71	16.19
8H	4H	7.64	8.25	8.11	8.70	9.17	14.16	14.77	14.63	15.22	15.69
	6H	9.16	9.66	9.66	10.16	10.64	14.50	15.00	15.00	15.49	15.98
	8H	9.93	10.38	10.46	10.90	11.39	14.73	15.18	15.25	15.70	16.19
	12H	10.74	11.14	11.25	11.63	12.20	15.07	15.47	15.58	15.96	16.53
12H	4H	7.82	8.35	8.30	8.84	9.31	14.14	14.68	14.63	15.17	15.64
	6H	9.47	9.92	10.00	10.44	10.93	14.52	14.97	15.04	15.48	15.98
	8H	10.43	10.83	10.95	11.33	11.90	14.83	15.23	15.34	15.72	16.29