

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: P1059759

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059759
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H775D840-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

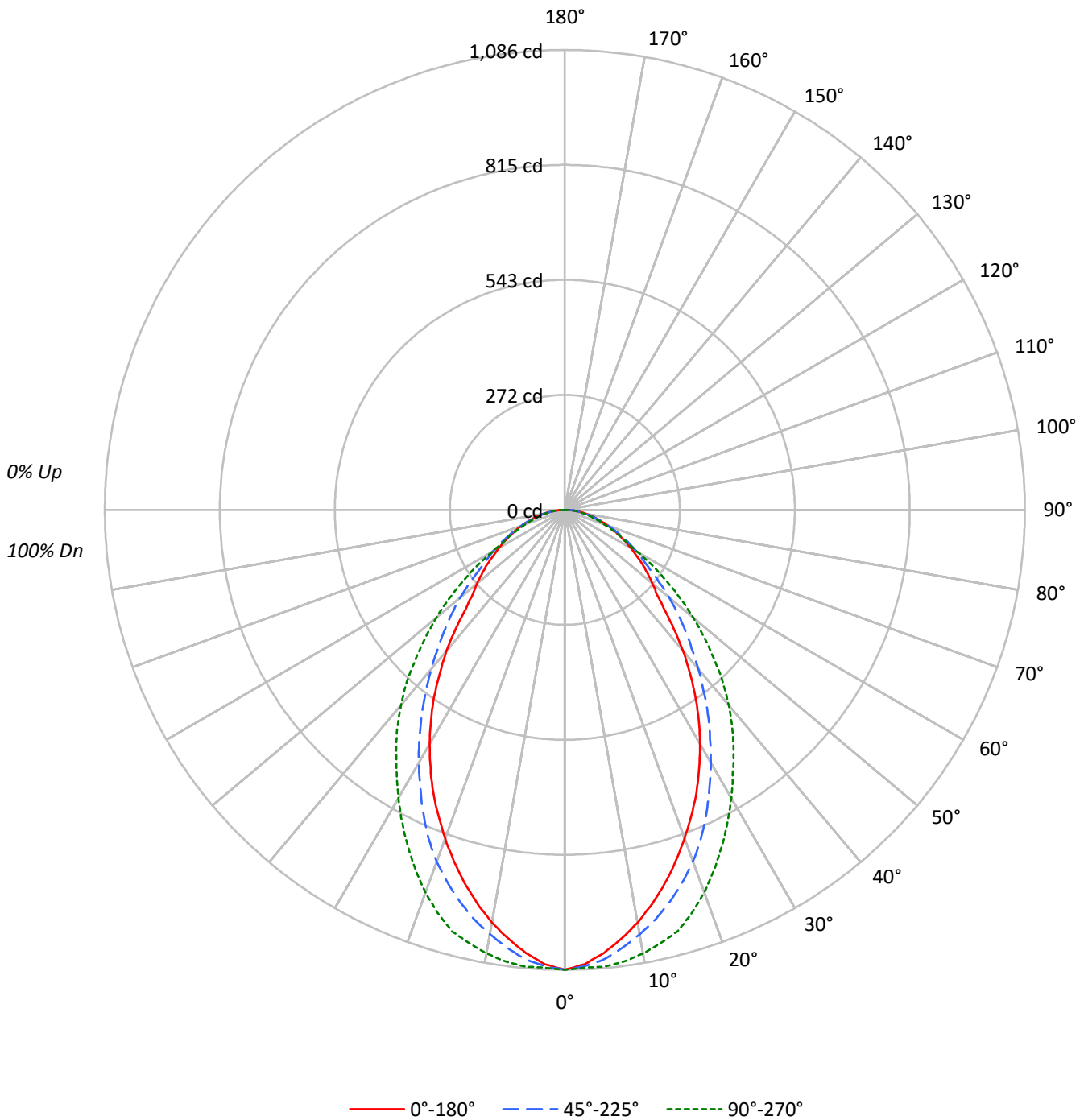
Lumens per Lamp: N/A
Luminaire Lumens: 1908.3 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66				
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58				
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51				
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41				
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12752	12752	12752
5°	12383	12559	12757
10°	11802	12136	12682
15°	11100	11646	12520
20°	10324	11048	12017
25°	9529	10245	11359
30°	8655	9352	10657
35°	7704	8440	9954
40°	6648	7522	9226
45°	5495	6657	8272
50°	4934	5873	7221
55°	4574	5014	5988
60°	4213	4565	4587
65°	3920	4129	3843
70°	3691	3753	3368
75°	3475	3348	2967
80°	3286	3036	2779
85°	3153	3395	3153

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 8272 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.6	5.3
10°-20°	271.0	14.2
20°-30°	366.6	19.2
30°-40°	376.7	19.7
40°-50°	316.4	16.6
50°-60°	226.8	11.9
60°-70°	144.4	7.6
70°-80°	79.3	4.2
80°-90°	26.5	1.4
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°	738.2	38.7
0°-40°	1114.9	58.4
0°-60°	1658.1	86.9
0°-90°	1908.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1908.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1050	1069	1066	1073	1082	98
15°	913	938	958	999	1030	256
25°	736	764	791	834	877	337
35°	537	566	589	641	694	334
45°	331	360	401	459	498	261
55°	223	228	245	278	292	200
65°	141	150	149	140	138	141
75°	77	84	74	68	65	81
85°	23	24	25	26	23	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1086.0	1086.0	1086.0	1086.0	1086.0
2.5°	1073.9	1088.8	1078.5	1079.5	1082.3
5°	1050.5	1069.2	1065.5	1072.9	1082.3
7.5°	1021.5	1042.1	1043.0	1060.8	1075.7
10°	989.8	1011.3	1017.8	1044.9	1063.6
12.5°	952.4	975.7	989.8	1023.4	1047.7
15°	913.1	938.4	958.0	999.1	1029.9
17.5°	870.1	897.2	922.5	966.4	998.2
20°	826.2	855.2	884.1	925.3	961.7
22.5°	780.4	810.3	840.2	880.4	920.6
25°	735.5	763.6	790.7	833.7	876.7
27.5°	686.9	715.9	739.3	786.9	831.8
30°	638.3	667.3	689.7	739.3	786.0
32.5°	587.9	617.8	638.3	689.7	738.3
35°	537.4	566.4	588.8	641.1	694.4
37.5°	484.1	515.9	538.3	597.2	649.6
40°	433.7	463.6	490.7	552.4	601.9
42.5°	381.3	412.2	443.0	506.6	552.4
45°	330.9	359.8	400.9	458.9	498.1
47.5°	294.4	313.1	360.8	409.4	446.7
50°	270.1	277.6	321.5	364.5	395.3
52.5°	245.8	251.4	281.3	320.6	343.9
55°	223.4	228.0	244.9	277.6	292.5
57.5°	199.1	203.7	217.8	236.5	244.9
60°	179.4	183.2	194.4	197.2	195.3
62.5°	159.8	165.4	171.0	164.5	161.7
65°	141.1	149.5	148.6	140.2	138.3
67.5°	124.3	132.7	128.0	119.6	116.8
70°	107.5	115.9	109.3	100.9	98.1
72.5°	91.6	100.9	90.7	83.2	81.3
75°	76.6	84.1	73.8	68.2	65.4
77.5°	62.6	68.2	58.9	54.2	52.3
80°	48.6	52.3	44.9	42.1	41.1
82.5°	35.5	37.4	32.7	34.6	33.6
85°	23.4	24.3	25.2	26.2	23.4
87.5°	11.2	15.9	15.9	15.0	12.1
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	16.03	17.49	16.39	17.80	18.12	17.10	18.56	17.47	18.88	19.19
	3H	17.73	19.04	18.10	19.37	19.73	18.18	19.49	18.56	19.82	20.19
	4H	18.38	19.61	18.78	19.96	20.34	18.59	19.81	18.99	20.16	20.54
	6H	18.88	20.02	19.30	20.38	20.78	18.89	20.03	19.31	20.40	20.79
	8H	19.06	20.13	19.48	20.52	20.93	19.03	20.11	19.46	20.50	20.90
	12H	19.18	20.21	19.61	20.60	21.02	19.15	20.18	19.58	20.56	20.99
4H	2H	16.63	17.86	17.03	18.21	18.59	17.50	18.73	17.90	19.08	19.46
	3H	18.56	19.58	18.97	19.98	20.38	18.82	19.84	19.23	20.24	20.64
	4H	19.37	20.29	19.80	20.70	21.14	19.34	20.26	19.77	20.67	21.11
	6H	20.02	20.81	20.48	21.26	21.72	19.77	20.57	20.23	21.01	21.47
	8H	20.24	20.98	20.70	21.43	21.90	19.96	20.71	20.43	21.15	21.62
	12H	20.41	21.08	20.90	21.56	22.03	20.14	20.81	20.63	21.29	21.76
8H	4H	19.61	20.35	20.07	20.80	21.26	19.58	20.33	20.05	20.77	21.24
	6H	20.39	21.01	20.89	21.50	21.98	20.13	20.75	20.63	21.24	21.72
	8H	20.71	21.26	21.22	21.77	22.26	20.41	20.96	20.93	21.47	21.96
	12H	20.98	21.47	21.49	21.96	22.52	20.70	21.19	21.21	21.68	22.25
12H	4H	19.62	20.28	20.10	20.76	21.23	19.61	20.28	20.09	20.76	21.23
	6H	20.43	20.98	20.94	21.49	21.98	20.19	20.74	20.70	21.25	21.74
	8H	20.80	21.29	21.32	21.79	22.35	20.53	21.02	21.04	21.51	22.07