

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1217362

Luminaire Tested: S124DRP-H290D940-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

Test Information

Test Method: LM-79-2024
Report Number: P1217362
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-3)
Test Lab: INNOVATION CENTER
Issue Date: 4/9/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H290D940-X4F0-XX-UDD-G-W
Description: DEFINE 4, DIRECT RECESSED WITH GRAZE FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

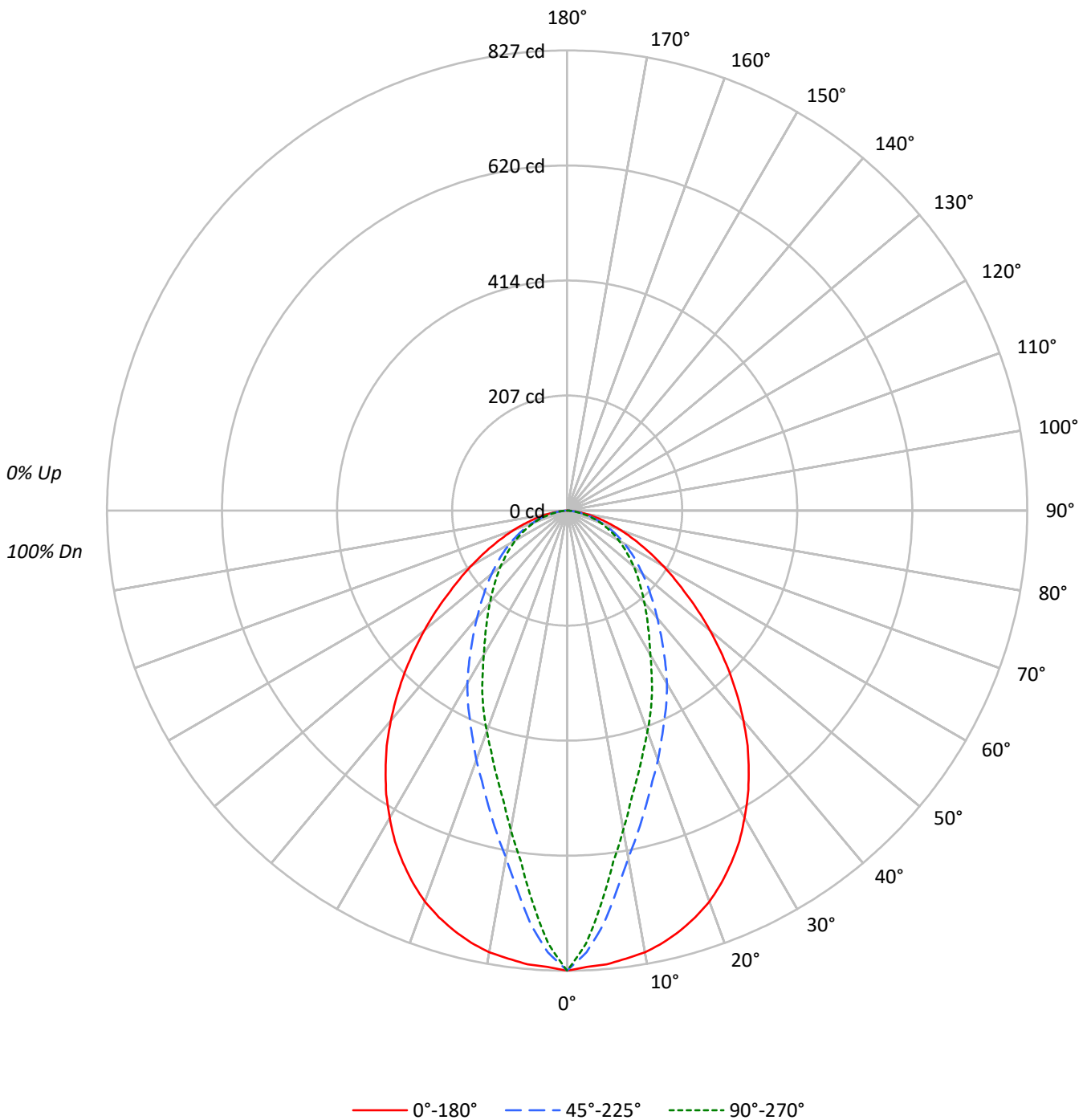
Lumens per Lamp: N/A
Luminaire Lumens: 1159.3 lumens
Efficiency: N/A
Efficacy: 99.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.59 / 0.87
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
Input Voltage (V): 120
Input Current (A_{in}): 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	110	106	102	99	108	104	100	97	100	97	94	96	94	92	92	90	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65
4	87	76	68	62	84	75	67	62	72	66	61	70	64	60	68	63	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	57	52	47	45
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37
9	62	49	42	36	60	49	41	36	48	41	36	47	40	36	46	40	36	34
10	58	46	38	34	57	45	38	34	44	38	33	43	37	33	43	37	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7309	7309	7309
5°	7265	6629	6284
10°	7235	5683	5229
15°	7160	5014	4498
20°	7035	4486	3972
25°	6811	4038	3519
30°	6510	3660	3055
35°	6140	3246	2734
40°	5689	2907	2492
45°	5170	2645	2298
50°	4606	2433	2148
55°	4017	2261	2009
60°	3528	2104	1892
65°	3054	1941	1766
70°	2645	1760	1629
75°	2200	1554	1431
80°	1706	1263	1166
85°	1075	852	771

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5170 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.2	6.0
10°-20°	164.4	14.2
20°-30°	210.0	18.1
30°-40°	213.3	18.4
40°-50°	189.1	16.3
50°-60°	148.6	12.8
60°-70°	101.2	8.7
70°-80°	51.9	4.5
80°-90°	11.5	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°	443.6	38.3
0°-40°	657.0	56.7
0°-60°	994.7	85.8
0°-90°	1159.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1159.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	819	798	747	718	708	78
15°	782	653	548	503	491	220
25°	698	512	414	374	361	321
35°	569	388	301	262	253	355
45°	414	279	212	190	184	319
55°	261	186	147	134	130	235
65°	146	113	93	86	84	146
75°	64	53	46	43	42	69
85°	11	10	8	8	8	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	826.7	826.7	826.7	826.7	826.7
2.5°	820.8	821.9	794.6	784.8	779.0
5°	818.6	797.9	746.9	718.2	708.0
7.5°	812.1	767.0	686.5	646.8	636.3
10°	805.9	731.6	633.0	593.7	582.4
12.5°	795.7	692.7	590.0	544.9	531.4
15°	782.2	653.0	547.8	502.7	491.4
17.5°	766.2	615.2	509.6	466.3	453.9
20°	747.7	580.2	476.8	432.4	422.2
22.5°	724.4	545.6	443.4	403.3	392.0
25°	698.2	511.8	413.9	374.2	360.7
27.5°	670.1	479.0	386.6	342.5	328.3
30°	637.7	447.7	358.5	312.3	299.2
32.5°	605.0	416.8	329.1	285.4	274.8
35°	568.9	387.7	300.7	262.4	253.3
37.5°	532.5	359.6	275.2	241.7	233.7
40°	492.9	332.3	251.9	222.4	215.9
42.5°	453.2	305.0	230.8	205.3	199.1
45°	413.5	279.2	211.5	189.6	183.8
47.5°	373.5	253.7	193.6	174.4	169.6
50°	334.9	229.7	176.9	160.2	156.2
52.5°	297.4	207.1	160.9	146.7	142.3
55°	260.6	186.0	146.7	133.6	130.3
57.5°	229.3	166.3	132.5	121.2	118.7
60°	199.5	147.4	119.0	109.6	107.0
62.5°	171.4	129.9	105.6	97.9	96.1
65°	146.0	112.8	92.8	86.3	84.4
67.5°	122.7	97.2	79.7	75.0	73.5
70°	102.3	81.5	68.1	64.1	63.0
72.5°	81.9	66.6	56.4	53.5	52.4
75°	64.4	53.1	45.5	43.3	41.9
77.5°	48.4	40.4	34.9	33.1	32.0
80°	33.5	28.8	24.8	24.0	22.9
82.5°	21.1	18.2	16.0	15.7	14.6
85°	10.6	9.8	8.4	8.4	7.6
87.5°	3.6	3.3	3.3	3.3	2.9
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	15.81	17.30	16.18	17.61	17.93	13.14	14.63	13.51	14.94	15.26
	3H	17.41	18.74	17.79	19.07	19.43	14.74	16.07	15.12	16.40	16.76
	4H	17.94	19.19	18.34	19.54	19.91	15.30	16.55	15.70	16.90	17.28
	6H	18.27	19.42	18.68	19.79	20.18	15.65	16.81	16.06	17.17	17.57
	8H	18.35	19.44	18.77	19.83	20.24	15.74	16.84	16.17	17.23	17.63
	12H	18.38	19.43	18.81	19.81	20.24	15.78	16.83	16.21	17.21	17.64
4H	2H	16.04	17.29	16.44	17.64	18.02	13.82	15.07	14.22	15.41	15.79
	3H	17.83	18.86	18.24	19.26	19.67	15.60	16.64	16.02	17.04	17.44
	4H	18.47	19.40	18.90	19.81	20.25	16.27	17.20	16.70	17.62	18.06
	6H	18.91	19.72	19.37	20.17	20.63	16.72	17.53	17.18	17.98	18.44
	8H	19.02	19.78	19.49	20.23	20.69	16.84	17.60	17.30	18.04	18.51
	12H	19.08	19.76	19.57	20.24	20.71	16.90	17.57	17.38	18.05	18.53
8H	4H	18.57	19.33	19.03	19.77	20.24	16.57	17.32	17.03	17.77	18.24
	6H	19.09	19.71	19.59	20.20	20.68	17.12	17.74	17.61	18.23	18.71
	8H	19.24	19.80	19.76	20.31	20.80	17.28	17.84	17.80	18.35	18.84
	12H	19.35	19.84	19.86	20.33	20.90	17.39	17.88	17.90	18.38	18.94
12H	4H	18.56	19.24	19.04	19.71	20.19	16.59	17.27	17.07	17.74	18.22
	6H	19.08	19.64	19.60	20.15	20.64	17.15	17.71	17.67	18.22	18.71
	8H	19.28	19.77	19.79	20.26	20.83	17.37	17.86	17.88	18.35	18.92