

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: P1217355

Luminaire Tested: S124DRP-H290D830-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1217355  
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-H290D830-X4F0-XX-UDD-G-W  
Description: DEFINE 4, DIRECT RECESSED WITH GRAZE FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

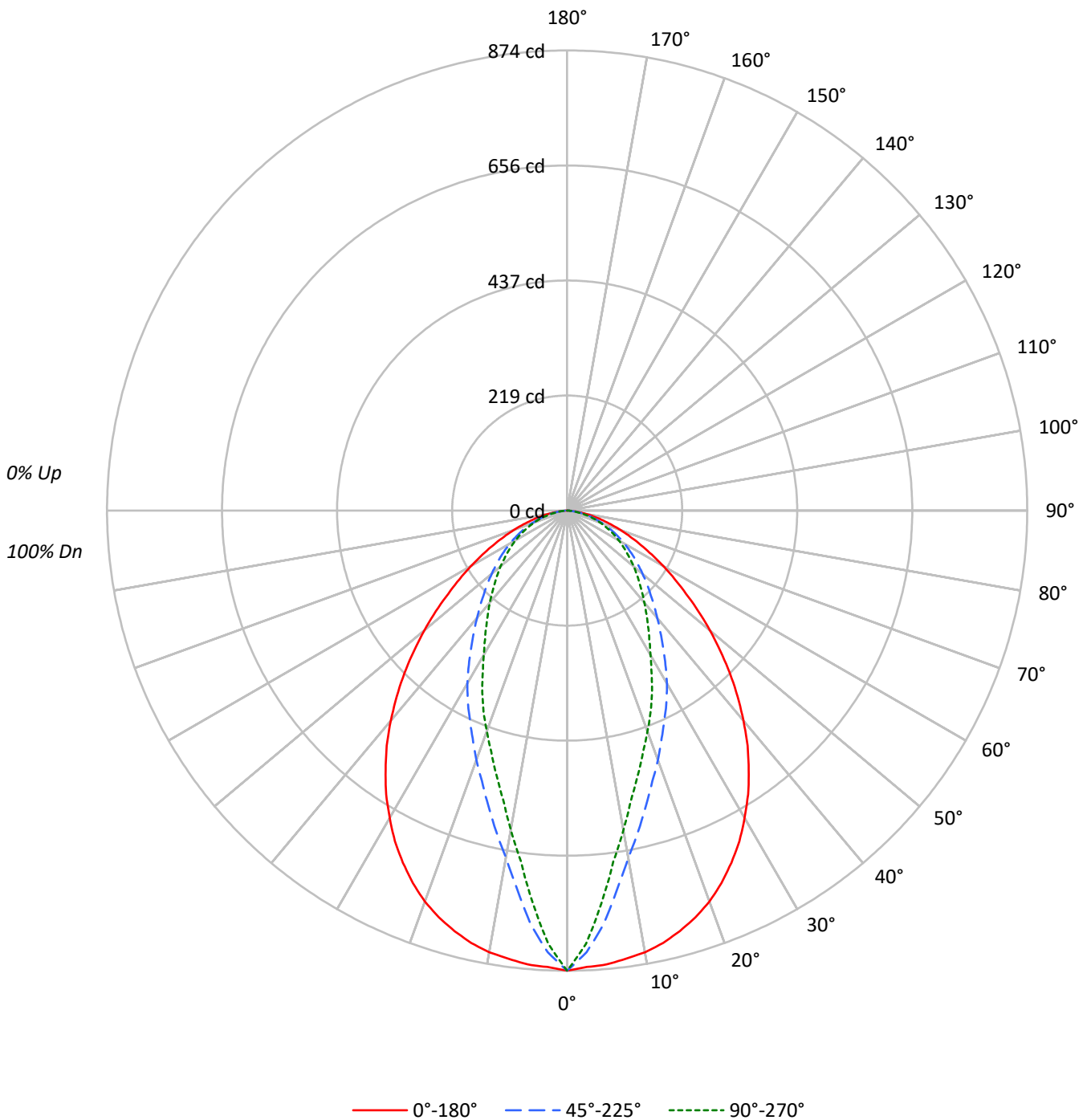
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1225.4 lumens  
Efficiency: N/A  
Efficacy: 104.7 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<sub>in</sub>): 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°	7726	7726	7726
5°	7680	7007	6641
10°	7647	6007	5527
15°	7568	5301	4754
20°	7436	4742	4199
25°	7199	4268	3720
30°	6882	3869	3229
35°	6491	3430	2890
40°	6013	3072	2634
45°	5465	2795	2429
50°	4869	2572	2271
55°	4247	2391	2123
60°	3728	2224	2000
65°	3228	2052	1868
70°	2794	1859	1722
75°	2326	1643	1510
80°	1802	1334	1232
85°	1136	893	822

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5465 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.1	6.0
10°-20°	173.8	14.2
20°-30°	222.0	18.1
30°-40°	225.5	18.4
40°-50°	199.9	16.3
50°-60°	157.1	12.8
60°-70°	107.0	8.7
70°-80°	54.9	4.5
80°-90°	12.2	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°	468.9	38.3
0°-40°	694.4	56.7
0°-60°	1051.4	85.8
0°-90°	1225.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1225.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	874	874	874	874	874	
5°	865	843	790	759	748	82
15°	827	690	579	531	519	233
25°	738	541	438	396	381	339
35°	601	410	318	277	268	375
45°	437	295	224	200	194	337
55°	276	197	155	141	138	249
65°	154	119	98	91	89	154
75°	68	56	48	46	44	73
85°	11	10	9	9	8	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	873.8	873.8	873.8	873.8	873.8
2.5°	867.6	868.8	839.9	829.5	823.4
5°	865.3	843.4	789.5	759.1	748.3
7.5°	858.4	810.7	725.6	683.7	672.5
10°	851.8	773.4	669.1	627.5	615.6
12.5°	841.1	732.2	623.7	576.0	561.7
15°	826.8	690.2	579.1	531.3	519.4
17.5°	809.9	650.2	538.7	492.9	479.8
20°	790.3	613.3	504.0	457.1	446.3
22.5°	765.7	576.7	468.6	426.3	414.4
25°	738.0	541.0	437.5	395.5	381.3
27.5°	708.3	506.3	408.6	362.1	347.0
30°	674.1	473.2	379.0	330.1	316.3
32.5°	639.5	440.5	347.8	301.6	290.5
35°	601.4	409.8	317.8	277.4	267.8
37.5°	562.9	380.1	290.9	255.5	247.0
40°	521.0	351.3	266.2	235.1	228.2
42.5°	479.0	322.4	243.9	217.0	210.5
45°	437.1	295.1	223.5	200.5	194.3
47.5°	394.8	268.2	204.7	184.3	179.3
50°	354.0	242.8	187.0	169.3	165.1
52.5°	314.3	218.9	170.1	155.1	150.4
55°	275.5	196.6	155.1	141.2	137.7
57.5°	242.4	175.8	140.0	128.1	125.4
60°	210.8	155.8	125.8	115.8	113.1
62.5°	181.2	137.4	111.6	103.5	101.6
65°	154.3	119.3	98.1	91.2	89.3
67.5°	129.7	102.7	84.3	79.3	77.7
70°	108.1	86.2	71.9	67.7	66.6
72.5°	86.6	70.4	59.6	56.6	55.4
75°	68.1	56.2	48.1	45.8	44.2
77.5°	51.2	42.7	36.9	35.0	33.9
80°	35.4	30.4	26.2	25.4	24.2
82.5°	22.3	19.2	16.9	16.5	15.4
85°	11.2	10.4	8.8	8.8	8.1
87.5°	3.8	3.5	3.5	3.5	3.1
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	16.01	17.49	16.37	17.81	18.12	13.33	14.82	13.70	15.13	15.45
	3H	17.60	18.93	17.98	19.26	19.62	14.93	16.26	15.31	16.59	16.95
	4H	18.13	19.38	18.53	19.73	20.11	15.49	16.74	15.89	17.09	17.47
	6H	18.46	19.62	18.87	19.98	20.38	15.84	17.00	16.26	17.37	17.76
	8H	18.54	19.64	18.97	20.03	20.43	15.93	17.03	16.36	17.42	17.82
	12H	18.57	19.62	19.00	20.00	20.43	15.97	17.02	16.40	17.40	17.83
4H	2H	16.24	17.49	16.64	17.83	18.21	14.01	15.26	14.41	15.61	15.99
	3H	18.02	19.06	18.43	19.46	19.86	15.80	16.83	16.21	17.23	17.63
	4H	18.66	19.59	19.09	20.01	20.45	16.46	17.39	16.89	17.81	18.25
	6H	19.11	19.92	19.56	20.36	20.82	16.92	17.73	17.37	18.17	18.63
	8H	19.22	19.97	19.68	20.42	20.89	17.03	17.79	17.50	18.23	18.70
	12H	19.28	19.95	19.76	20.43	20.90	17.09	17.77	17.58	18.25	18.72
8H	4H	18.76	19.52	19.23	19.96	20.43	16.76	17.52	17.22	17.96	18.43
	6H	19.28	19.91	19.78	20.40	20.88	17.31	17.93	17.81	18.42	18.90
	8H	19.44	20.00	19.95	20.51	20.99	17.48	18.03	17.99	18.54	19.03
	12H	19.54	20.03	20.05	20.52	21.09	17.58	18.07	18.09	18.57	19.13
12H	4H	18.75	19.43	19.24	19.91	20.38	16.78	17.46	17.27	17.94	18.41
	6H	19.28	19.83	19.79	20.35	20.83	17.35	17.91	17.86	18.42	18.90
	8H	19.47	19.96	19.98	20.45	21.02	17.56	18.05	18.07	18.54	19.11