

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: P243474

Luminaire Tested: S124DRP-H575D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243474  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-84)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-H575D930-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

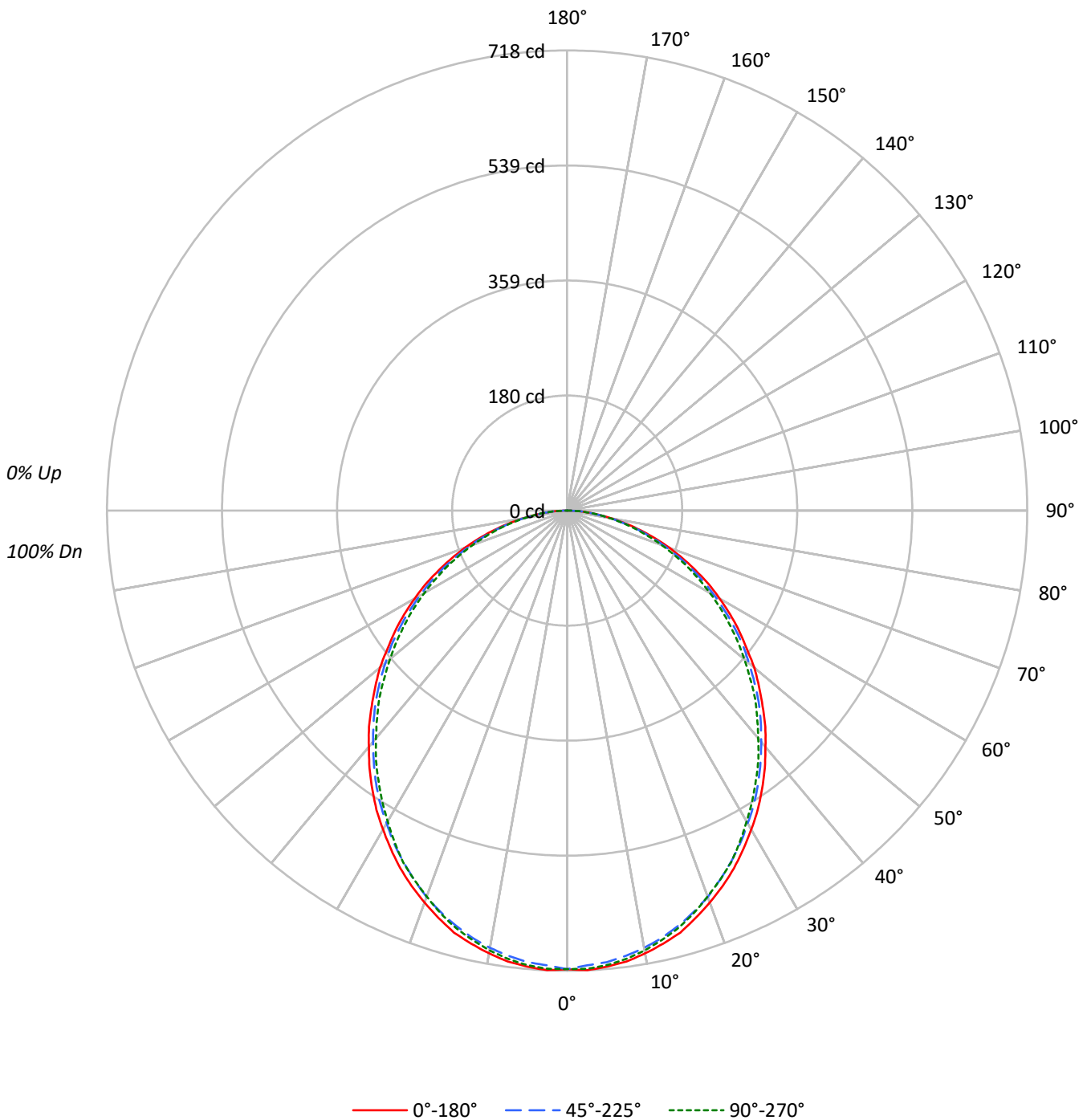
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1841.8 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.2  
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				100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84				84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70				70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60				60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51				51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44				44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39				39
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35				35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31				31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28				28
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25				25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6360	6360	6360
5°	6374	6311	6353
10°	6332	6253	6289
15°	6273	6171	6199
20°	6156	6068	6063
25°	6041	5933	5938
30°	5898	5784	5748
35°	5754	5642	5572
40°	5586	5465	5384
45°	5423	5312	5211
50°	5273	5119	4991
55°	5080	4944	4790
60°	4885	4720	4574
65°	4652	4495	4348
70°	4403	4205	4070
75°	4059	3898	3778
80°	3578	3517	3425
85°	3151	3151	3090

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5423 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.5	3.7
10°-20°	190.2	10.3
20°-30°	280.1	15.2
30°-40°	325.9	17.7
40°-50°	326.0	17.7
50°-60°	285.1	15.5
60°-70°	211.8	11.5
70°-80°	120.6	6.6
80°-90°	34.8	1.9
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°	537.7	29.2
0°-40°	863.6	46.9
0°-60°	1474.7	80.1
0°-90°	1841.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1841.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	716	716	716	716	716	
5°	714	713	707	713	712	68
15°	682	678	671	675	674	192
25°	616	613	605	607	605	283
35°	530	526	520	515	514	332
45°	431	430	423	416	414	333
55°	328	325	319	312	309	293
65°	221	220	214	209	207	220
75°	118	116	114	111	110	125
85°	31	30	31	30	30	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	715.5	715.5	715.5	715.5	715.5
2.5°	717.8	716.0	710.2	716.0	715.5
5°	714.3	713.1	707.3	712.6	712.0
7.5°	709.6	707.3	700.9	706.2	705.6
10°	701.5	699.7	692.8	698.0	696.8
12.5°	692.2	690.4	682.9	686.9	685.8
15°	681.7	678.2	670.6	674.7	673.6
17.5°	666.6	664.2	656.7	660.2	658.4
20°	650.8	647.9	641.5	642.1	641.0
22.5°	634.0	631.1	623.5	625.8	623.5
25°	615.9	613.0	604.9	606.6	605.4
27.5°	595.5	592.6	585.1	585.6	583.3
30°	574.6	571.1	563.5	562.9	560.0
32.5°	553.6	550.1	542.6	540.2	537.3
35°	530.3	525.7	519.9	515.2	513.5
37.5°	506.5	504.1	495.4	492.5	490.2
40°	481.4	479.1	471.0	466.9	464.0
42.5°	457.6	454.7	447.1	441.3	438.9
45°	431.4	429.6	422.6	416.2	414.5
47.5°	405.8	405.2	396.4	390.0	387.1
50°	381.3	377.8	370.2	364.4	360.9
52.5°	352.8	352.2	345.8	338.2	335.3
55°	327.8	325.4	319.0	312.0	309.1
57.5°	301.6	300.4	292.2	286.4	283.5
60°	274.8	272.4	265.5	260.2	257.3
62.5°	249.2	246.3	239.8	234.6	231.7
65°	221.2	219.5	213.7	209.0	206.7
67.5°	195.0	192.7	186.9	182.8	180.5
70°	169.4	165.9	161.8	158.3	156.6
72.5°	143.8	140.9	137.4	135.1	132.7
75°	118.2	115.8	113.5	111.2	110.0
77.5°	93.7	91.4	90.2	89.7	88.5
80°	69.9	68.7	68.7	68.1	66.9
82.5°	49.5	48.3	48.3	48.3	47.7
85°	30.9	30.3	30.9	29.7	30.3
87.5°	14.6	14.6	15.1	14.6	15.1
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	17.73	19.34	18.09	19.66	19.97	17.38	18.99	17.74	19.31	19.62
	3H	19.48	20.94	19.86	21.26	21.62	19.09	20.55	19.47	20.88	21.24
	4H	20.14	21.51	20.53	21.86	22.23	19.74	21.11	20.14	21.46	21.84
	6H	20.61	21.88	21.02	22.25	22.64	20.23	21.50	20.64	21.86	22.26
	8H	20.76	21.98	21.19	22.37	22.77	20.39	21.60	20.81	21.99	22.39
	12H	20.87	22.03	21.30	22.41	22.84	20.50	21.67	20.93	22.05	22.48
4H	2H	18.30	19.67	18.70	20.02	20.40	18.02	19.40	18.42	19.74	20.12
	3H	20.27	21.42	20.68	21.82	22.22	19.95	21.11	20.36	21.50	21.90
	4H	21.06	22.10	21.49	22.51	22.95	20.73	21.77	21.16	22.18	22.62
	6H	21.66	22.57	22.11	23.01	23.47	21.35	22.26	21.80	22.70	23.15
	8H	21.86	22.71	22.32	23.15	23.62	21.56	22.41	22.02	22.85	23.31
	12H	22.01	22.78	22.49	23.25	23.72	21.71	22.48	22.19	22.95	23.42
8H	4H	21.34	22.19	21.80	22.63	23.10	21.05	21.90	21.51	22.34	22.81
	6H	22.06	22.77	22.55	23.26	23.73	21.79	22.50	22.29	22.99	23.46
	8H	22.33	22.97	22.84	23.47	23.96	22.08	22.71	22.59	23.22	23.70
	12H	22.56	23.12	23.07	23.61	24.17	22.31	22.87	22.82	23.36	23.92
12H	4H	21.37	22.13	21.85	22.61	23.08	21.09	21.85	21.57	22.33	22.79
	6H	22.11	22.75	22.62	23.25	23.74	21.85	22.49	22.36	22.99	23.48
	8H	22.44	23.00	22.95	23.49	24.05	22.19	22.76	22.70	23.25	23.81