

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: P242605

Luminaire Tested: S124DRP-S575D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242605  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-S575D835-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

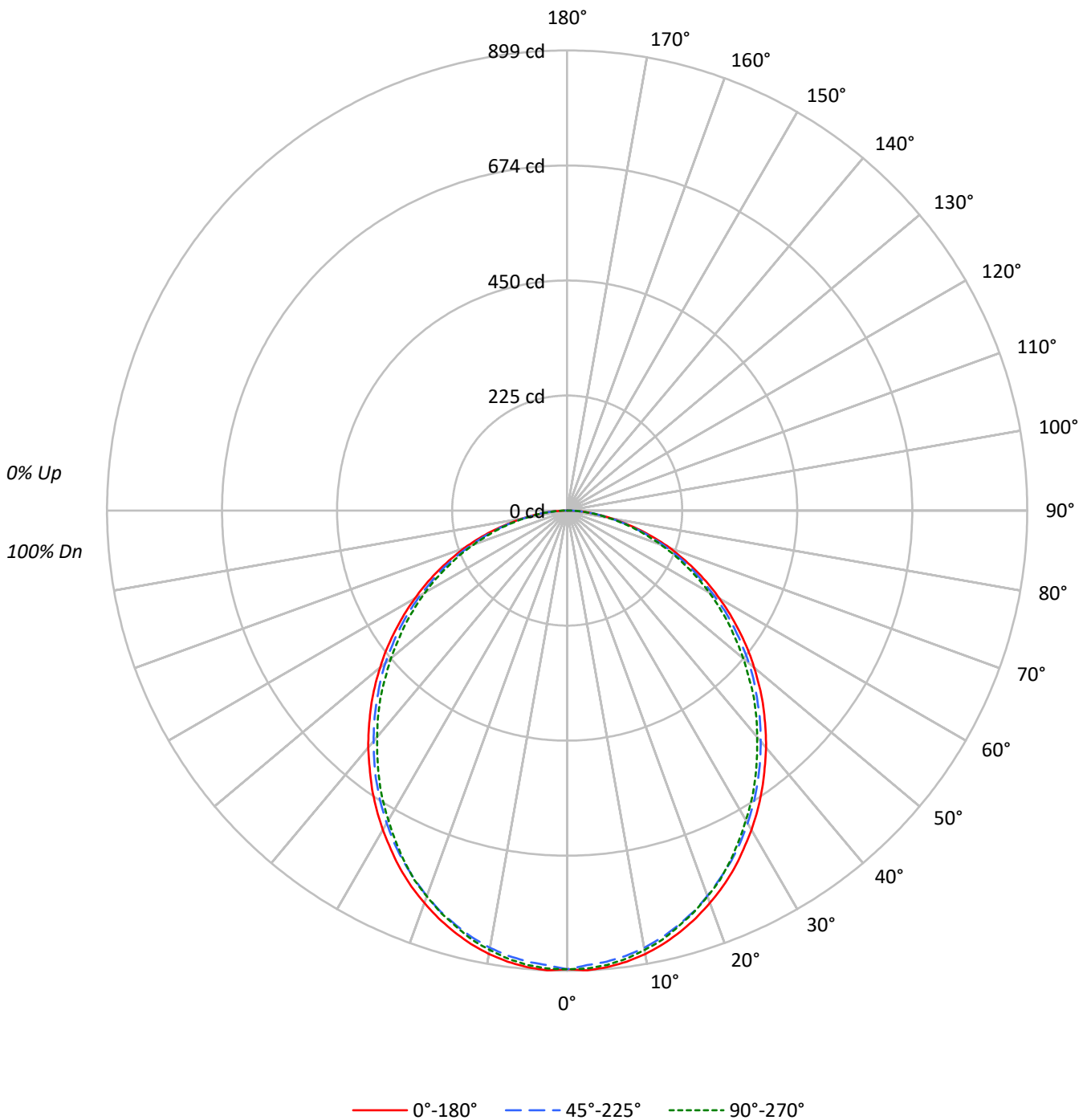
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2300.0 lumens  
Efficiency: N/A  
Efficacy: 122.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.8  
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	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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																												
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70																												
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60																												
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51																												
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44																												
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39																												
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31																												
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28																												
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25																												

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

	0°	45°	90°
0°	7965	7965	7965
5°	7990	7893	7951
10°	7939	7829	7868
15°	7843	7718	7737
20°	7716	7580	7586
25°	7571	7423	7401
30°	7392	7237	7170
35°	7207	7044	6950
40°	7016	6824	6699
45°	6815	6607	6480
50°	6594	6414	6216
55°	6354	6165	5965
60°	6114	5884	5707
65°	5845	5618	5391
70°	5544	5263	5058
75°	5079	4832	4709
80°	4520	4336	4228
85°	3957	3804	3733

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6815 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.5	3.7
10°-20°	238.0	10.3
20°-30°	350.2	15.2
30°-40°	407.1	17.7
40°-50°	407.0	17.7
50°-60°	356.0	15.5
60°-70°	264.3	11.5
70°-80°	150.0	6.5
80°-90°	42.9	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°	672.6	29.2
0°-40°	1079.7	46.9
0°-60°	1842.8	80.1
0°-90°	2300.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2300.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	895	892	885	892	891	85
15°	852	849	839	843	841	240
25°	772	767	757	758	755	355
35°	664	659	649	644	640	415
45°	542	537	526	518	516	418
55°	410	408	398	389	385	367
65°	278	274	267	260	256	275
75°	148	144	141	138	137	157
85°	39	39	37	37	37	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	896.1	896.1	896.1	896.1	896.1
2.5°	899.0	896.8	888.9	896.1	895.4
5°	895.4	892.5	884.6	892.5	891.1
7.5°	888.9	886.0	877.4	883.9	883.2
10°	879.6	876.7	867.4	873.1	871.7
12.5°	867.4	864.5	854.5	860.9	858.8
15°	852.3	849.4	838.7	843.0	840.8
17.5°	835.1	831.5	821.4	824.3	822.9
20°	815.7	812.1	801.3	803.5	802.0
22.5°	794.9	789.8	779.1	783.4	780.5
25°	771.9	766.9	756.8	757.5	754.6
27.5°	746.0	741.0	731.7	730.2	726.6
30°	720.2	714.4	705.1	702.2	698.6
32.5°	692.9	687.9	677.8	674.2	670.6
35°	664.2	659.1	649.1	644.1	640.5
37.5°	634.0	629.7	618.9	613.9	608.9
40°	604.6	598.8	588.1	580.9	577.3
42.5°	573.0	570.1	557.9	549.3	547.1
45°	542.1	537.1	525.6	517.7	515.5
47.5°	509.8	506.2	495.4	486.8	481.1
50°	476.8	473.9	463.8	453.8	449.5
52.5°	444.5	440.9	430.1	421.5	415.7
55°	410.0	407.8	397.8	389.2	384.9
57.5°	377.7	375.5	365.5	356.9	352.6
60°	343.9	340.3	331.0	324.5	321.0
62.5°	310.9	308.0	298.0	292.2	288.6
65°	277.9	274.3	267.1	259.9	256.3
67.5°	244.1	241.3	234.1	226.9	226.2
70°	213.3	208.2	202.5	196.7	194.6
72.5°	180.2	175.2	170.9	166.6	164.4
75°	147.9	144.3	140.7	137.9	137.1
77.5°	116.3	114.9	111.3	110.6	108.4
80°	88.3	86.2	84.7	83.3	82.6
82.5°	61.0	60.3	60.3	59.6	58.9
85°	38.8	38.8	37.3	37.3	36.6
87.5°	18.7	18.0	17.2	17.2	17.2
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	18.51	20.12	18.87	20.44	20.75	18.13	19.75	18.50	20.06	20.38
	3H	20.27	21.73	20.65	22.05	22.41	19.84	21.30	20.22	21.63	21.99
	4H	20.92	22.30	21.32	22.64	23.02	20.49	21.86	20.89	22.21	22.59
	6H	21.40	22.67	21.81	23.03	23.43	20.96	22.24	21.38	22.60	22.99
	8H	21.55	22.76	21.97	23.15	23.55	21.12	22.34	21.55	22.73	23.13
	12H	21.65	22.82	22.08	23.20	23.63	21.23	22.40	21.66	22.78	23.21
4H	2H	19.08	20.45	19.48	20.80	21.18	18.78	20.16	19.18	20.50	20.88
	3H	21.06	22.21	21.47	22.61	23.01	20.71	21.86	21.12	22.26	22.66
	4H	21.84	22.88	22.27	23.29	23.73	21.48	22.52	21.91	22.93	23.37
	6H	22.44	23.35	22.90	23.79	24.25	22.08	22.99	22.53	23.43	23.89
	8H	22.64	23.49	23.10	23.94	24.40	22.29	23.14	22.75	23.58	24.04
	12H	22.79	23.56	23.27	24.03	24.50	22.44	23.20	22.92	23.68	24.15
8H	4H	22.12	22.97	22.58	23.41	23.88	21.80	22.65	22.26	23.09	23.55
	6H	22.84	23.55	23.33	24.03	24.51	22.52	23.23	23.01	23.72	24.19
	8H	23.11	23.74	23.62	24.25	24.74	22.80	23.44	23.31	23.94	24.43
	12H	23.34	23.90	23.85	24.39	24.95	23.03	23.59	23.54	24.09	24.65
12H	4H	22.15	22.91	22.63	23.39	23.85	21.83	22.60	22.31	23.07	23.54
	6H	22.89	23.52	23.40	24.03	24.52	22.58	23.22	23.09	23.72	24.21
	8H	23.22	23.78	23.72	24.27	24.83	22.92	23.48	23.43	23.97	24.53