

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: P243464

Luminaire Tested: S124DRP-H350D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243464
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-H350D835-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

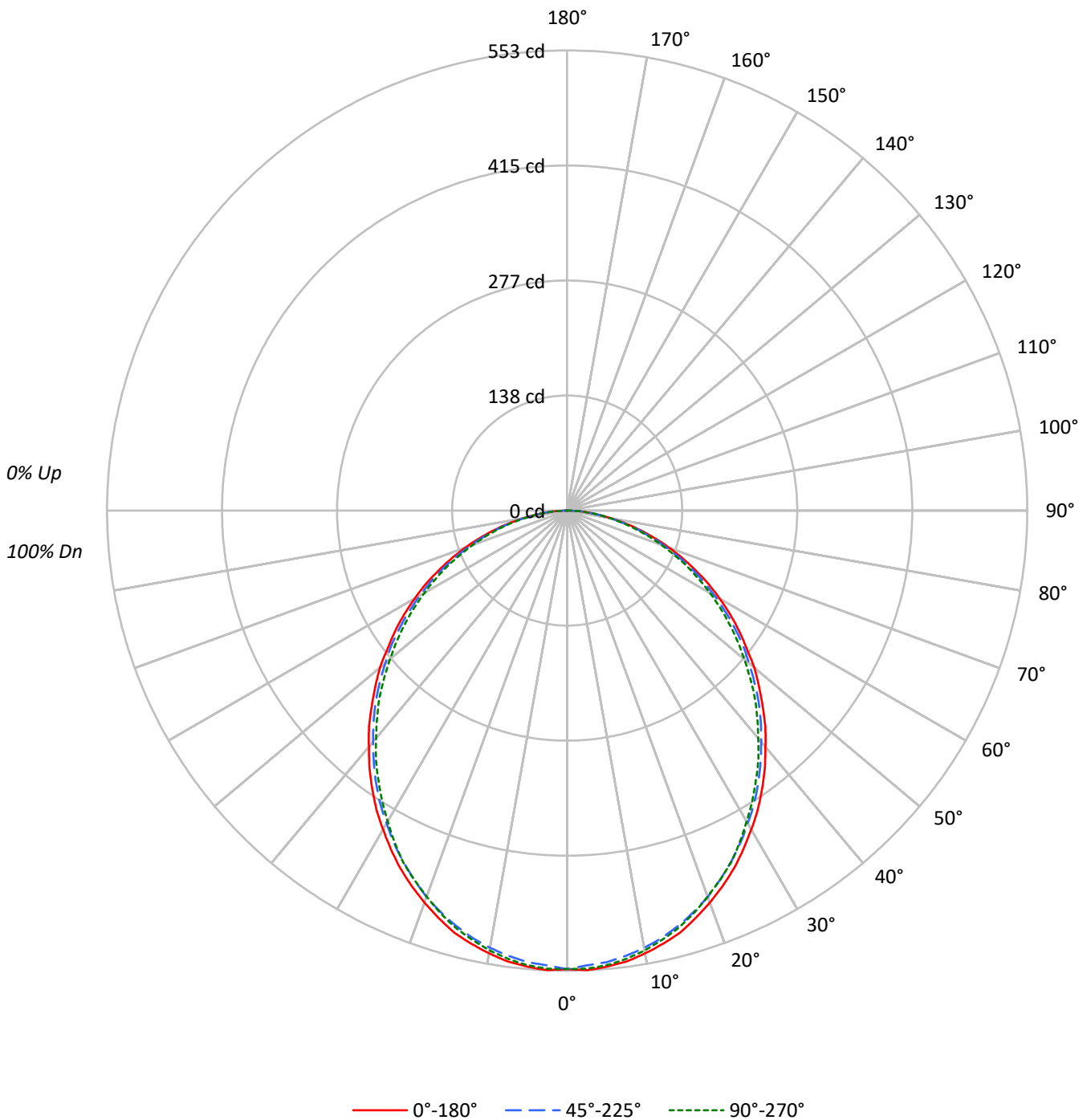
Lumens per Lamp: N/A
Luminaire Lumens: 1418.6 lumens
Efficiency: N/A
Efficacy: 126.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
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	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	46	41	52	46	41	39																												
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	33	46	38	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	27	39	32	27	38	32	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4898	4898	4898
5°	4908	4861	4893
10°	4877	4816	4844
15°	4831	4753	4774
20°	4742	4674	4670
25°	4653	4569	4573
30°	4542	4455	4427
35°	4433	4345	4292
40°	4303	4209	4146
45°	4176	4092	4013
50°	4061	3944	3844
55°	3912	3808	3690
60°	3762	3636	3524
65°	3584	3462	3348
70°	3392	3238	3134
75°	3125	3002	2909
80°	2754	2708	2641
85°	2427	2427	2376

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4176 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.0	3.7
10°-20°	146.5	10.3
20°-30°	215.7	15.2
30°-40°	251.0	17.7
40°-50°	251.1	17.7
50°-60°	219.6	15.5
60°-70°	163.1	11.5
70°-80°	92.9	6.5
80°-90°	26.8	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°	414.1	29.2
0°-40°	665.1	46.9
0°-60°	1135.8	80.1
0°-90°	1418.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1418.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	551	551	551	551	551	
5°	550	549	545	549	548	52
15°	525	522	516	520	519	148
25°	474	472	466	467	466	218
35°	408	405	400	397	396	255
45°	332	331	326	321	319	257
55°	252	251	246	240	238	226
65°	170	169	165	161	159	169
75°	91	89	87	86	85	97
85°	24	23	24	23	23	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	551.0	551.0	551.0	551.0	551.0
2.5°	552.8	551.5	547.0	551.5	551.0
5°	550.1	549.2	544.8	548.8	548.4
7.5°	546.6	544.8	539.8	543.9	543.4
10°	540.3	538.9	533.6	537.6	536.7
12.5°	533.1	531.8	525.9	529.1	528.2
15°	525.0	522.3	516.5	519.7	518.8
17.5°	513.4	511.6	505.8	508.4	507.1
20°	501.3	499.0	494.1	494.5	493.7
22.5°	488.3	486.0	480.2	482.0	480.2
25°	474.4	472.1	465.9	467.2	466.3
27.5°	458.7	456.4	450.6	451.1	449.3
30°	442.5	439.8	434.0	433.6	431.3
32.5°	426.4	423.7	417.9	416.1	413.8
35°	408.5	404.9	400.4	396.8	395.5
37.5°	390.1	388.3	381.6	379.3	377.5
40°	370.8	369.0	362.7	359.6	357.3
42.5°	352.4	350.2	344.3	339.9	338.1
45°	332.2	330.9	325.5	320.6	319.2
47.5°	312.5	312.1	305.3	300.4	298.2
50°	293.7	291.0	285.2	280.7	278.0
52.5°	271.7	271.3	266.3	260.5	258.3
55°	252.4	250.6	245.7	240.3	238.1
57.5°	232.3	231.4	225.1	220.6	218.4
60°	211.6	209.8	204.5	200.4	198.2
62.5°	191.9	189.7	184.7	180.7	178.5
65°	170.4	169.0	164.6	161.0	159.2
67.5°	150.2	148.4	143.9	140.8	139.0
70°	130.5	127.8	124.6	122.0	120.6
72.5°	110.7	108.5	105.8	104.0	102.2
75°	91.0	89.2	87.4	85.6	84.7
77.5°	72.2	70.4	69.5	69.0	68.2
80°	53.8	52.9	52.9	52.5	51.6
82.5°	38.1	37.2	37.2	37.2	36.8
85°	23.8	23.3	23.8	22.9	23.3
87.5°	11.2	11.2	11.7	11.2	11.7
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	16.82	18.43	17.18	18.75	19.06	16.47	18.09	16.84	18.40	18.71
	3H	18.57	20.03	18.95	20.36	20.72	18.18	19.64	18.56	19.97	20.33
	4H	19.23	20.60	19.63	20.95	21.33	18.83	20.20	19.23	20.55	20.93
	6H	19.70	20.98	20.11	21.34	21.73	19.32	20.59	19.73	20.96	21.35
	8H	19.86	21.07	20.28	21.46	21.86	19.48	20.70	19.91	21.09	21.49
	12H	19.96	21.13	20.39	21.51	21.94	19.59	20.76	20.02	21.14	21.57
4H	2H	17.39	18.77	17.79	19.11	19.49	17.11	18.49	17.51	18.84	19.21
	3H	19.37	20.52	19.77	20.91	21.31	19.05	20.20	19.46	20.60	21.00
	4H	20.15	21.19	20.58	21.60	22.04	19.82	20.86	20.25	21.28	21.71
	6H	20.75	21.66	21.21	22.10	22.56	20.44	21.35	20.89	21.79	22.25
	8H	20.95	21.80	21.41	22.25	22.71	20.65	21.50	21.11	21.94	22.41
	12H	21.10	21.87	21.58	22.34	22.81	20.81	21.57	21.29	22.05	22.52
8H	4H	20.43	21.28	20.89	21.73	22.19	20.14	20.99	20.60	21.44	21.90
	6H	21.15	21.86	21.65	22.35	22.82	20.88	21.59	21.38	22.08	22.56
	8H	21.42	22.06	21.93	22.57	23.05	21.17	21.81	21.68	22.31	22.80
	12H	21.65	22.21	22.16	22.70	23.26	21.40	21.97	21.91	22.46	23.02
12H	4H	20.46	21.23	20.94	21.70	22.17	20.18	20.94	20.66	21.42	21.89
	6H	21.20	21.84	21.71	22.35	22.83	20.94	21.58	21.45	22.09	22.57
	8H	21.53	22.10	22.04	22.59	23.15	21.29	21.85	21.80	22.34	22.90