

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: P243483

Luminaire Tested: S124DRP-H350D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243483
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-H350D940-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

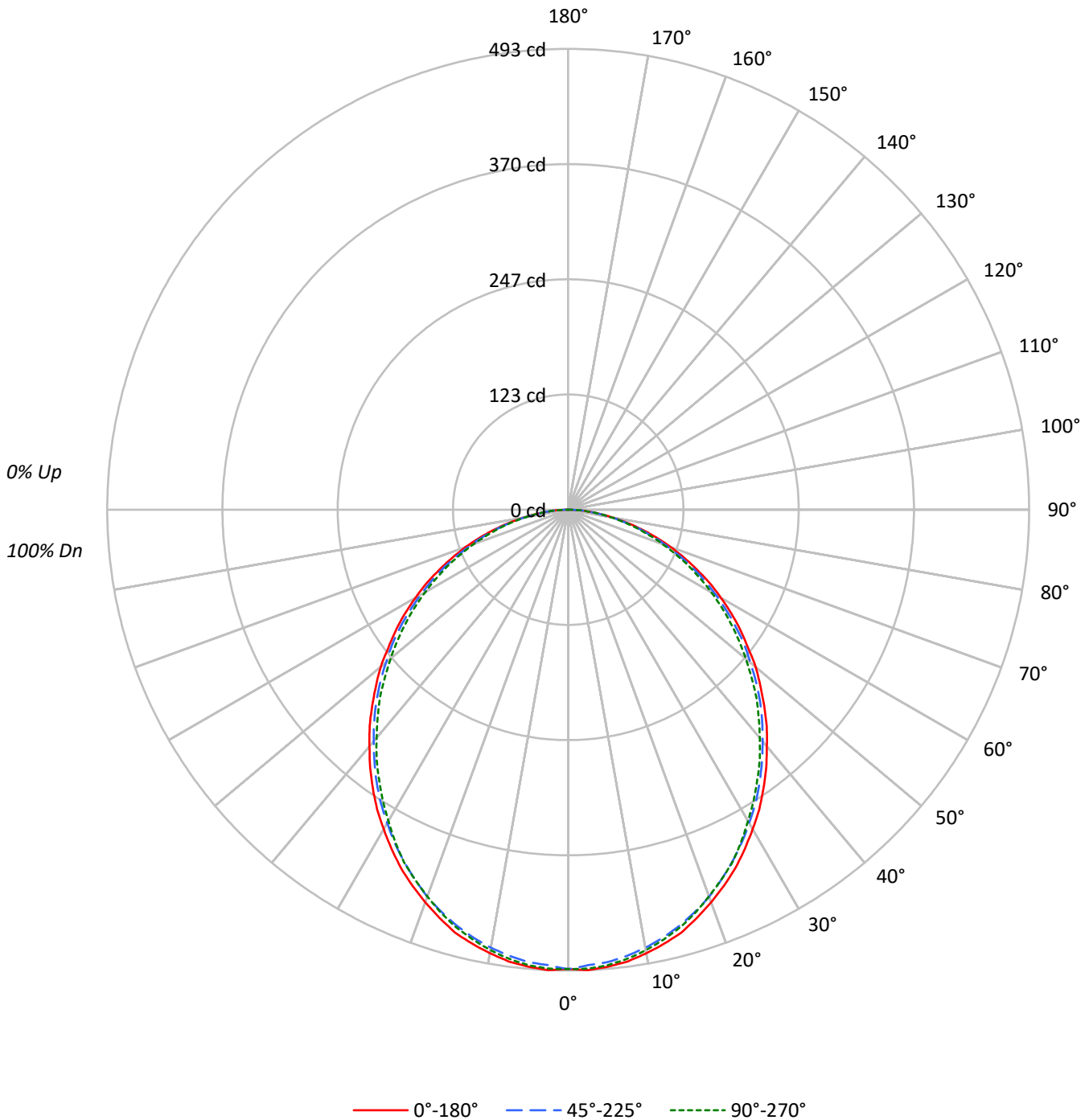
Lumens per Lamp: N/A
Luminaire Lumens: 1265.0 lumens
Efficiency: N/A
Efficacy: 112.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	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°	4368	4368	4368
5°	4378	4335	4363
10°	4349	4295	4320
15°	4309	4239	4257
20°	4228	4168	4164
25°	4149	4074	4078
30°	4050	3972	3948
35°	3952	3874	3826
40°	3836	3753	3698
45°	3725	3649	3579
50°	3622	3517	3428
55°	3488	3395	3290
60°	3355	3241	3141
65°	3195	3086	2985
70°	3023	2887	2794
75°	2789	2679	2596
80°	2457	2416	2355
85°	2162	2162	2121

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3725 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.3	3.7
10°-20°	130.6	10.3
20°-30°	192.4	15.2
30°-40°	223.8	17.7
40°-50°	223.9	17.7
50°-60°	195.8	15.5
60°-70°	145.4	11.5
70°-80°	82.9	6.6
80°-90°	23.9	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°	369.3	29.2
0°-40°	593.1	46.9
0°-60°	1012.8	80.1
0°-90°	1265.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1265.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	491	491	491	491	491	
5°	491	490	486	489	489	47
15°	468	466	461	463	463	132
25°	423	421	415	417	416	195
35°	364	361	357	354	353	228
45°	296	295	290	286	285	229
55°	225	224	219	214	212	201
65°	152	151	147	144	142	151
75°	81	80	78	76	76	86
85°	21	21	21	20	21	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	491.4	491.4	491.4	491.4	491.4
2.5°	493.0	491.8	487.8	491.8	491.4
5°	490.6	489.8	485.8	489.4	489.0
7.5°	487.4	485.8	481.4	485.0	484.6
10°	481.8	480.6	475.8	479.4	478.6
12.5°	475.4	474.2	469.0	471.8	471.0
15°	468.2	465.8	460.6	463.4	462.6
17.5°	457.8	456.2	451.0	453.4	452.2
20°	447.0	445.0	440.6	441.0	440.2
22.5°	435.4	433.4	428.2	429.8	428.2
25°	423.0	421.0	415.4	416.6	415.8
27.5°	409.0	407.0	401.8	402.2	400.6
30°	394.6	392.2	387.0	386.6	384.6
32.5°	380.2	377.8	372.6	371.0	369.0
35°	364.2	361.0	357.0	353.8	352.6
37.5°	347.8	346.2	340.2	338.2	336.6
40°	330.6	329.0	323.4	320.7	318.7
42.5°	314.3	312.3	307.1	303.1	301.5
45°	296.3	295.1	290.3	285.9	284.7
47.5°	278.7	278.3	272.3	267.9	265.9
50°	261.9	259.5	254.3	250.3	247.9
52.5°	242.3	241.9	237.5	232.3	230.3
55°	225.1	223.5	219.1	214.3	212.3
57.5°	207.1	206.3	200.7	196.7	194.7
60°	188.7	187.1	182.3	178.7	176.7
62.5°	171.1	169.1	164.7	161.1	159.1
65°	151.9	150.7	146.7	143.5	141.9
67.5°	133.9	132.3	128.3	125.5	123.9
70°	116.3	113.9	111.1	108.7	107.5
72.5°	98.8	96.8	94.4	92.8	91.2
75°	81.2	79.6	78.0	76.4	75.6
77.5°	64.4	62.8	62.0	61.6	60.8
80°	48.0	47.2	47.2	46.8	46.0
82.5°	34.0	33.2	33.2	33.2	32.8
85°	21.2	20.8	21.2	20.4	20.8
87.5°	10.0	10.0	10.4	10.0	10.4
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	16.42	18.04	16.78	18.35	18.66	16.07	17.69	16.44	18.00	18.31
	3H	18.17	19.63	18.55	19.96	20.32	17.78	19.24	18.16	19.57	19.93
	4H	18.83	20.20	19.23	20.55	20.93	18.43	19.81	18.83	20.15	20.53
	6H	19.30	20.58	19.72	20.94	21.33	18.92	20.20	19.33	20.56	20.95
	8H	19.46	20.67	19.88	21.06	21.46	19.08	20.30	19.51	20.69	21.09
	12H	19.56	20.73	19.99	21.11	21.54	19.20	20.36	19.63	20.74	21.17
4H	2H	16.99	18.37	17.39	18.71	19.09	16.72	18.09	17.11	18.44	18.81
	3H	18.97	20.12	19.37	20.51	20.91	18.65	19.80	19.06	20.20	20.60
	4H	19.75	20.79	20.18	21.21	21.64	19.42	20.46	19.85	20.88	21.31
	6H	20.35	21.26	20.81	21.70	22.16	20.04	20.95	20.50	21.39	21.85
	8H	20.55	21.41	21.01	21.85	22.31	20.25	21.10	20.71	21.54	22.01
	12H	20.71	21.47	21.19	21.95	22.42	20.41	21.17	20.89	21.65	22.12
8H	4H	20.03	20.89	20.50	21.33	21.79	19.74	20.60	20.20	21.04	21.50
	6H	20.76	21.46	21.25	21.95	22.43	20.49	21.20	20.98	21.68	22.16
	8H	21.03	21.66	21.54	22.17	22.66	20.77	21.41	21.28	21.91	22.40
	12H	21.25	21.82	21.76	22.31	22.87	21.01	21.57	21.51	22.06	22.62
12H	4H	20.06	20.83	20.54	21.30	21.77	19.78	20.54	20.26	21.02	21.49
	6H	20.81	21.44	21.32	21.95	22.44	20.55	21.18	21.06	21.69	22.18
	8H	21.14	21.70	21.64	22.19	22.75	20.89	21.45	21.40	21.94	22.50