

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: P243543

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243543
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-55)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H575D930-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

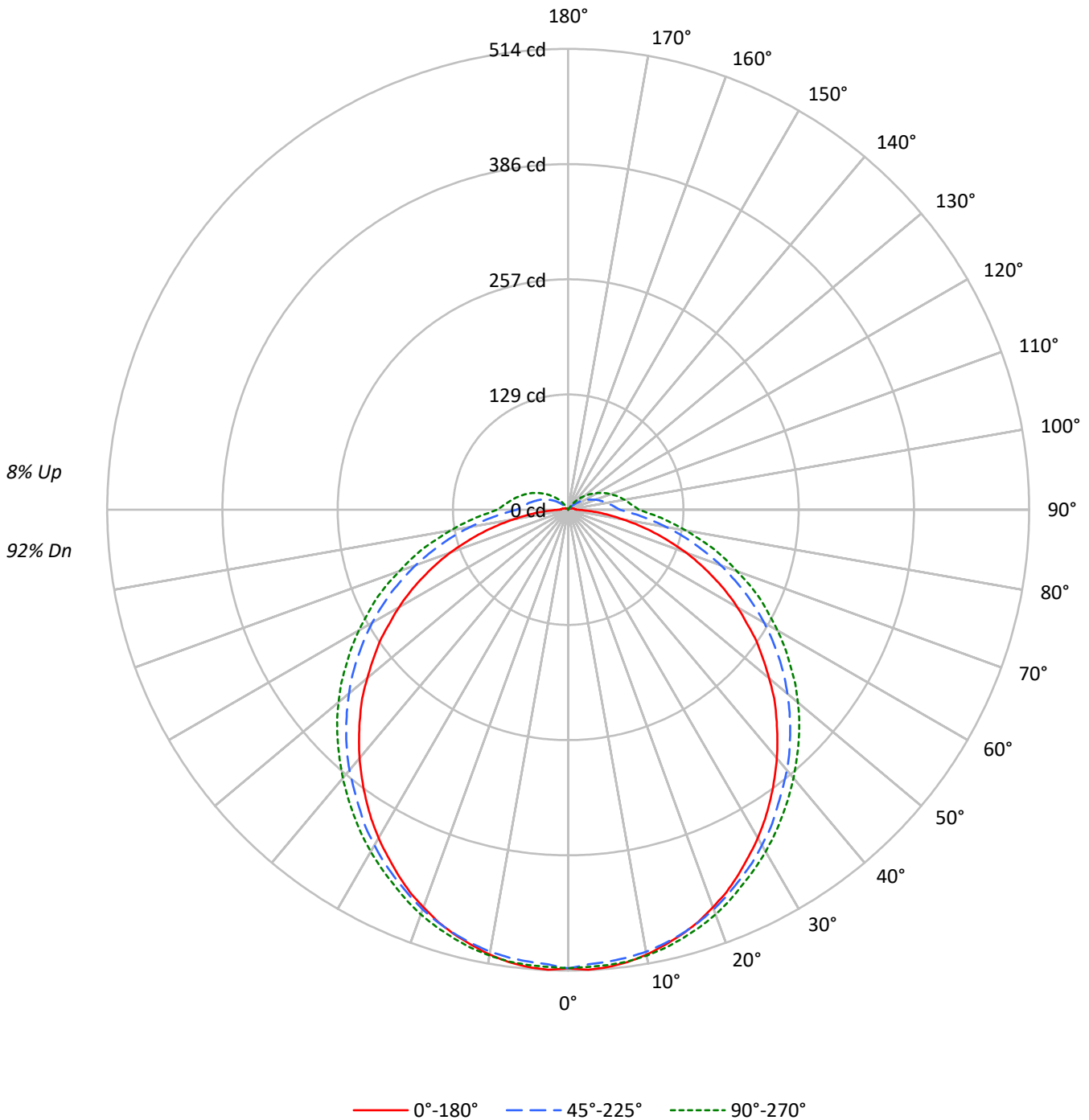
Lumens per Lamp: N/A
Luminaire Lumens: 1748.3 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (A_{in}): 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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	60
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	46	55	49	45	43
5	72	59	50	43	70	58	49	42	55	47	41	52	45	40	49	43	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4547	4547	4547
5°	4560	4436	4445
10°	4531	4362	4353
15°	4486	4273	4248
20°	4428	4179	4143
25°	4360	4070	4021
30°	4287	3968	3916
35°	4207	3856	3808
40°	4126	3760	3706
45°	4040	3655	3609
50°	3942	3551	3508
55°	3858	3438	3392
60°	3736	3314	3279
65°	3595	3175	3163
70°	3428	3016	3000
75°	3163	2821	2882
80°	2801	2634	2714
85°	2538	2482	2615

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4040 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.4	2.8
10°-20°	138.8	7.9
20°-30°	210.2	12.0
30°-40°	254.5	14.6
40°-50°	269.2	15.4
50°-60°	253.6	14.5
60°-70°	210.7	12.1
70°-80°	148.1	8.5
80°-90°	83.4	4.8
90°-100°	49.5	2.8
100°-110°	36.6	2.1
110°-120°	24.5	1.4
120°-130°	13.8	0.8
130°-140°	5.9	0.3
140°-150°	1.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	397.4	22.7
0°-40°	651.9	37.3
0°-60°	1174.7	67.2
0°-90°	1616.9	92.5
90°-120°	110.6	6.3
90°-150°	131.4	7.5
90°-180°	131.0	7.5
0°-180°	1748.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	512	512	512	512	512	
5°	512	510	506	510	510	49
15°	490	491	490	495	495	138
25°	449	453	454	461	461	207
35°	394	400	406	415	416	246
45°	328	339	350	360	364	253
55°	257	270	286	299	302	229
65°	179	197	217	230	236	177
75°	100	121	145	161	167	105
85°	31	55	81	98	104	32
90°	9	32	58	73	79	6
95°	8	26	50	66	70	6
105°	5	17	38	52	57	6
115°	4	9	27	39	44	4
125°	2	2	16	27	30	2
135°	1	1	5	14	17	1
145°	0	0	0	3	5	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	511.5	511.5	511.5	511.5	511.5
2.5°	513.6	512.0	507.7	510.9	510.4
5°	512.0	509.8	506.0	510.4	509.8
7.5°	508.8	507.1	503.9	508.8	508.2
10°	503.9	502.8	500.6	505.0	505.0
12.5°	497.3	497.3	495.7	500.6	500.6
15°	490.3	491.4	489.7	495.2	494.6
17.5°	482.1	483.2	482.7	488.1	488.1
20°	471.8	473.4	474.5	480.5	480.5
22.5°	461.5	463.6	464.7	471.3	471.3
25°	449.0	452.8	454.4	460.9	460.9
27.5°	435.9	440.8	444.1	450.1	451.1
30°	422.9	428.3	432.1	438.6	440.3
32.5°	408.7	414.2	420.2	426.7	428.9
35°	393.5	400.0	406.0	414.7	416.4
37.5°	377.8	385.4	392.4	401.7	403.9
40°	362.0	371.2	379.4	388.1	390.8
42.5°	345.2	354.4	365.3	374.5	377.2
45°	328.3	338.6	350.0	360.4	363.6
47.5°	311.5	322.3	334.8	345.7	349.5
50°	292.4	304.4	319.1	329.9	334.3
52.5°	273.9	287.0	303.3	314.2	319.1
55°	256.6	270.1	286.4	298.9	302.2
57.5°	236.4	251.7	269.6	283.2	286.4
60°	218.0	233.2	252.2	265.8	269.6
62.5°	198.9	215.2	234.8	248.4	252.2
65°	178.8	196.8	216.9	230.5	236.4
67.5°	159.3	177.2	198.4	213.6	218.5
70°	139.7	158.2	181.0	196.2	200.0
72.5°	119.0	139.1	162.5	178.3	183.7
75°	99.5	120.7	144.6	160.9	167.4
77.5°	80.4	102.7	127.7	144.6	148.9
80°	61.4	85.9	110.9	127.7	133.2
82.5°	46.2	69.0	95.1	113.1	117.4
85°	31.0	54.9	81.0	98.4	103.8
87.5°	18.5	42.9	67.9	84.2	89.7
90°	9.2	32.1	57.6	73.4	78.8
92.5°	8.2	28.8	53.3	69.0	74.5
95°	7.6	26.1	50.0	65.8	70.1
97.5°	7.1	23.9	46.7	62.0	66.9
100°	6.5	21.2	44.0	58.7	63.6
102.5°	6.0	19.0	40.8	55.4	60.3
105°	5.4	16.8	38.0	52.2	57.1
107.5°	4.9	14.7	35.3	48.9	53.8
110°	4.3	12.5	32.6	45.7	50.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.8	10.9	29.4	42.4	47.3
115°	3.8	8.7	26.6	39.1	44.0
117.5°	3.3	6.5	23.9	35.9	40.2
120°	3.3	4.9	21.2	32.6	37.0
122.5°	2.7	3.3	18.5	29.9	33.7
125°	2.2	1.6	15.8	26.6	30.4
127.5°	2.2	1.6	13.0	23.4	27.2
130°	1.6	1.6	10.3	20.1	23.9
132.5°	1.6	1.1	7.6	17.4	20.7
135°	1.1	1.1	4.9	14.1	17.4
137.5°	1.1	0.5	3.3	11.4	14.7
140°	1.1	0.5	1.1	8.7	11.4
142.5°	0.5	0.5	0.0	6.0	8.2
145°	0.5	0.0	0.0	3.3	5.4
147.5°	0.5	0.0	0.0	0.5	2.7
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	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	15.05	16.58	15.53	17.04	17.54	16.63	18.16	17.11	18.62	19.12
	3H	16.70	18.09	17.19	18.57	19.10	18.94	20.33	19.43	20.81	21.35
	4H	17.27	18.59	17.78	19.08	19.63	20.01	21.33	20.52	21.82	22.37
	6H	17.65	18.88	18.18	19.39	19.95	21.06	22.29	21.58	22.79	23.36
	8H	17.76	18.94	18.30	19.47	20.04	21.57	22.75	22.11	23.28	23.85
	12H	17.82	18.95	18.37	19.47	20.08	22.13	23.25	22.67	23.78	24.38
4H	2H	15.91	17.23	16.42	17.72	18.27	17.13	18.45	17.64	18.94	19.49
	3H	17.80	18.92	18.32	19.45	20.03	19.67	20.79	20.19	21.32	21.90
	4H	18.51	19.53	19.05	20.08	20.68	20.89	21.92	21.44	22.46	23.07
	6H	19.02	19.93	19.59	20.50	21.12	22.12	23.02	22.68	23.59	24.21
	8H	19.18	20.03	19.75	20.60	21.23	22.72	23.57	23.29	24.15	24.78
	12H	19.28	20.05	19.87	20.65	21.29	23.38	24.16	23.98	24.76	25.39
8H	4H	19.09	19.94	19.66	20.51	21.14	21.15	22.00	21.71	22.57	23.20
	6H	19.78	20.50	20.38	21.11	21.75	22.53	23.25	23.13	23.86	24.50
	8H	20.03	20.68	20.65	21.30	21.95	23.27	23.92	23.88	24.54	25.19
	12H	20.22	20.80	20.84	21.41	22.13	24.10	24.67	24.71	25.28	26.00
12H	4H	19.22	19.99	19.81	20.59	21.23	21.16	21.93	21.75	22.53	23.17
	6H	19.99	20.64	20.61	21.27	21.92	22.58	23.23	23.19	23.85	24.50
	8H	20.33	20.91	20.95	21.52	22.24	23.39	23.96	24.00	24.58	25.29