

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: P243534

Luminaire Tested: S124DRP-H575D835-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243534
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-H575D835-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

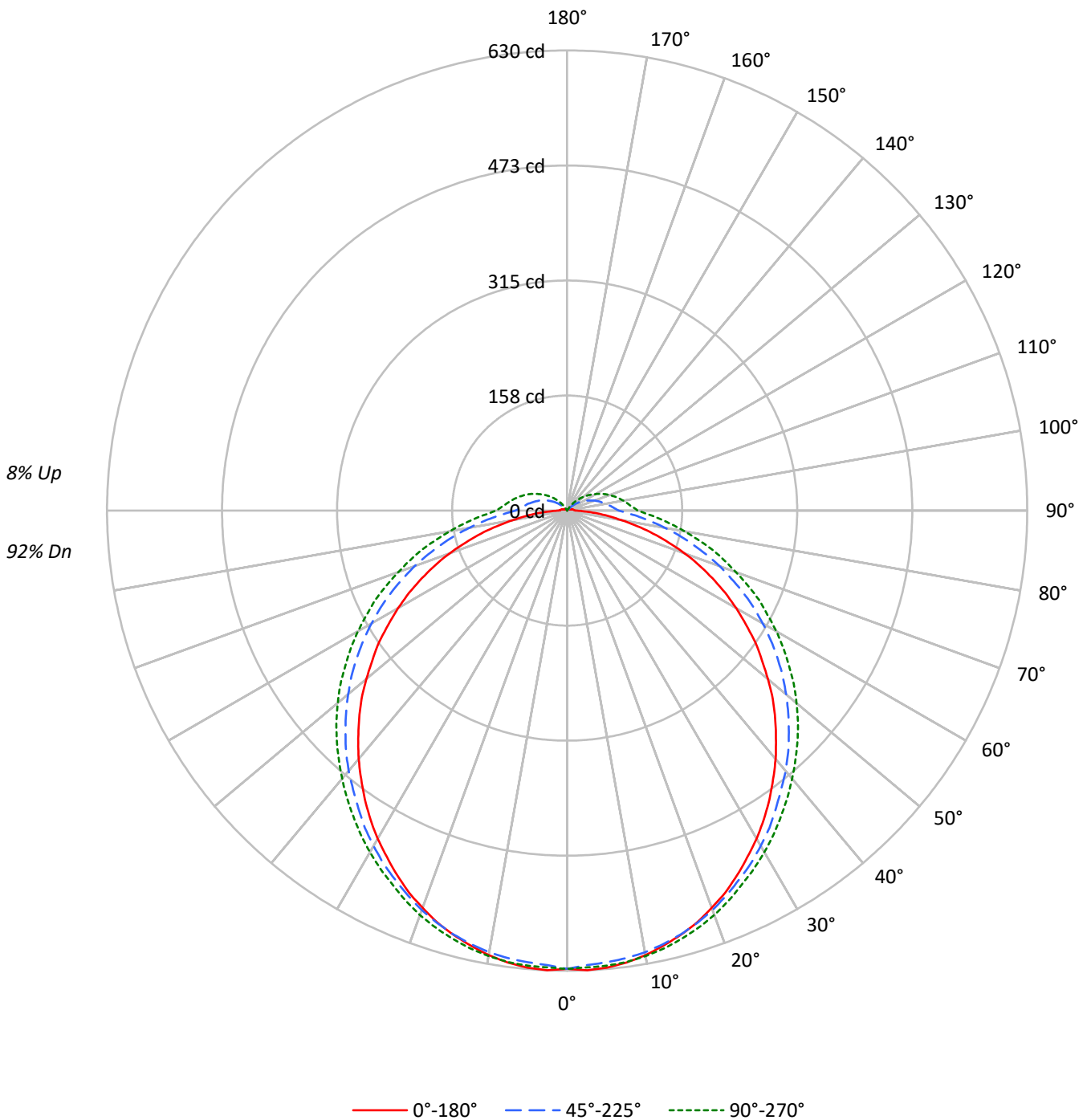
Lumens per Lamp: N/A
Luminaire Lumens: 2144.4 lumens
Efficiency: N/A
Efficacy: 124.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')
CIE Type: Direct

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°	5576	5576	5576
5°	5593	5441	5452
10°	5557	5350	5339
15°	5502	5242	5211
20°	5432	5125	5081
25°	5348	4992	4931
30°	5259	4867	4803
35°	5160	4729	4670
40°	5061	4611	4545
45°	4956	4483	4426
50°	4836	4354	4302
55°	4732	4217	4160
60°	4581	4064	4022
65°	4409	3893	3881
70°	4204	3699	3679
75°	3879	3459	3534
80°	3436	3230	3327
85°	3111	3042	3207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4956 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.4	2.8
10°-20°	170.3	7.9
20°-30°	257.8	12.0
30°-40°	312.1	14.6
40°-50°	330.1	15.4
50°-60°	311.0	14.5
60°-70°	258.4	12.1
70°-80°	181.7	8.5
80°-90°	102.3	4.8
90°-100°	60.7	2.8
100°-110°	44.9	2.1
110°-120°	30.0	1.4
120°-130°	16.9	0.8
130°-140°	7.2	0.3
140°-150°	1.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	487.5	22.7
0°-40°	799.6	37.3
0°-60°	1440.8	67.2
0°-90°	1983.2	92.5
90°-120°	135.6	6.3
90°-150°	161.2	7.5
90°-180°	161.0	7.5
0°-180°	2144.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	627	627	627	627	627	
5°	628	625	621	626	625	60
15°	601	603	601	607	607	170
25°	551	555	557	565	565	254
35°	483	491	498	509	511	302
45°	403	415	429	442	446	311
55°	315	331	351	367	371	280
65°	219	241	266	283	290	217
75°	122	148	177	197	205	129
85°	38	67	99	121	127	39
90°	11	39	71	90	97	8
95°	9	32	61	81	86	7
105°	7	21	47	64	70	7
115°	5	11	33	48	54	4
125°	3	2	19	33	37	3
135°	1	1	6	17	21	1
145°	1	0	0	4	7	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°	627.3	627.3	627.3	627.3	627.3
2.5°	630.0	628.0	622.7	626.7	626.0
5°	628.0	625.3	620.7	626.0	625.3
7.5°	624.0	622.0	618.0	624.0	623.3
10°	618.0	616.7	614.0	619.3	619.3
12.5°	610.0	610.0	608.0	614.0	614.0
15°	601.3	602.7	600.7	607.3	606.7
17.5°	591.3	592.7	592.0	598.7	598.7
20°	578.7	580.7	582.0	589.3	589.3
22.5°	566.0	568.7	570.0	578.0	578.0
25°	550.7	555.3	557.3	565.3	565.3
27.5°	534.7	540.7	544.7	552.0	553.3
30°	518.7	525.3	530.0	538.0	540.0
32.5°	501.3	508.0	515.3	523.3	526.0
35°	482.7	490.7	498.0	508.7	510.7
37.5°	463.3	472.7	481.3	492.7	495.3
40°	444.0	455.3	465.3	476.0	479.3
42.5°	423.3	434.7	448.0	459.3	462.7
45°	402.7	415.3	429.3	442.0	446.0
47.5°	382.0	395.3	410.7	424.0	428.7
50°	358.7	373.3	391.3	404.7	410.0
52.5°	336.0	352.0	372.0	385.3	391.3
55°	314.7	331.3	351.3	366.7	370.7
57.5°	290.0	308.7	330.7	347.3	351.3
60°	267.3	286.0	309.3	326.0	330.7
62.5°	244.0	264.0	288.0	304.7	309.3
65°	219.3	241.3	266.0	282.7	290.0
67.5°	195.3	217.3	243.3	262.0	268.0
70°	171.3	194.0	222.0	240.7	245.3
72.5°	146.0	170.7	199.3	218.7	225.3
75°	122.0	148.0	177.3	197.3	205.3
77.5°	98.7	126.0	156.7	177.3	182.7
80°	75.3	105.3	136.0	156.7	163.3
82.5°	56.7	84.7	116.7	138.7	144.0
85°	38.0	67.3	99.3	120.7	127.3
87.5°	22.7	52.7	83.3	103.3	110.0
90°	11.3	39.3	70.7	90.0	96.7
92.5°	10.0	35.3	65.3	84.7	91.3
95°	9.3	32.0	61.3	80.7	86.0
97.5°	8.7	29.3	57.3	76.0	82.0
100°	8.0	26.0	54.0	72.0	78.0
102.5°	7.3	23.3	50.0	68.0	74.0
105°	6.7	20.7	46.7	64.0	70.0
107.5°	6.0	18.0	43.3	60.0	66.0
110°	5.3	15.3	40.0	56.0	62.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.7	13.3	36.0	52.0	58.0
115°	4.7	10.7	32.7	48.0	54.0
117.5°	4.0	8.0	29.3	44.0	49.3
120°	4.0	6.0	26.0	40.0	45.3
122.5°	3.3	4.0	22.7	36.7	41.3
125°	2.7	2.0	19.3	32.7	37.3
127.5°	2.7	2.0	16.0	28.7	33.3
130°	2.0	2.0	12.7	24.7	29.3
132.5°	2.0	1.3	9.3	21.3	25.3
135°	1.3	1.3	6.0	17.3	21.3
137.5°	1.3	0.7	4.0	14.0	18.0
140°	1.3	0.7	1.3	10.7	14.0
142.5°	0.7	0.7	0.0	7.3	10.0
145°	0.7	0.0	0.0	4.0	6.7
147.5°	0.7	0.0	0.0	0.7	3.3
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	15.76	17.29	16.24	17.75	18.25	17.34	18.87	17.82	19.33	19.83
	3H	17.41	18.80	17.90	19.27	19.81	19.65	21.04	20.14	21.52	22.05
	4H	17.98	19.30	18.49	19.79	20.34	20.72	22.04	21.23	22.53	23.08
	6H	18.36	19.59	18.89	20.10	20.66	21.77	23.00	22.29	23.50	24.07
	8H	18.47	19.65	19.01	20.18	20.75	22.28	23.46	22.82	23.99	24.56
	12H	18.53	19.66	19.08	20.18	20.79	22.84	23.96	23.38	24.49	25.09
4H	2H	16.62	17.94	17.13	18.43	18.98	17.84	19.16	18.35	19.65	20.20
	3H	18.50	19.63	19.03	20.16	20.73	20.38	21.50	20.90	22.03	22.61
	4H	19.22	20.24	19.76	20.79	21.39	21.60	22.63	22.14	23.17	23.78
	6H	19.73	20.64	20.30	21.21	21.83	22.82	23.73	23.39	24.30	24.92
	8H	19.89	20.74	20.46	21.31	21.94	23.43	24.28	24.00	24.85	25.49
	12H	19.99	20.76	20.58	21.36	22.00	24.09	24.86	24.68	25.46	26.10
8H	4H	19.80	20.65	20.37	21.22	21.85	21.85	22.70	22.42	23.28	23.91
	6H	20.49	21.21	21.09	21.82	22.46	23.24	23.96	23.84	24.57	25.21
	8H	20.74	21.39	21.35	22.01	22.66	23.98	24.63	24.59	25.25	25.90
	12H	20.93	21.51	21.54	22.12	22.84	24.80	25.38	25.42	25.99	26.71
12H	4H	19.93	20.70	20.52	21.30	21.94	21.87	22.64	22.46	23.24	23.88
	6H	20.70	21.35	21.32	21.98	22.63	23.29	23.94	23.90	24.56	25.21
	8H	21.04	21.62	21.66	22.23	22.95	24.10	24.67	24.71	25.28	26.00