

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: P242600

Luminaire Tested: S124DRP-S575D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242600
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-S575D830-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

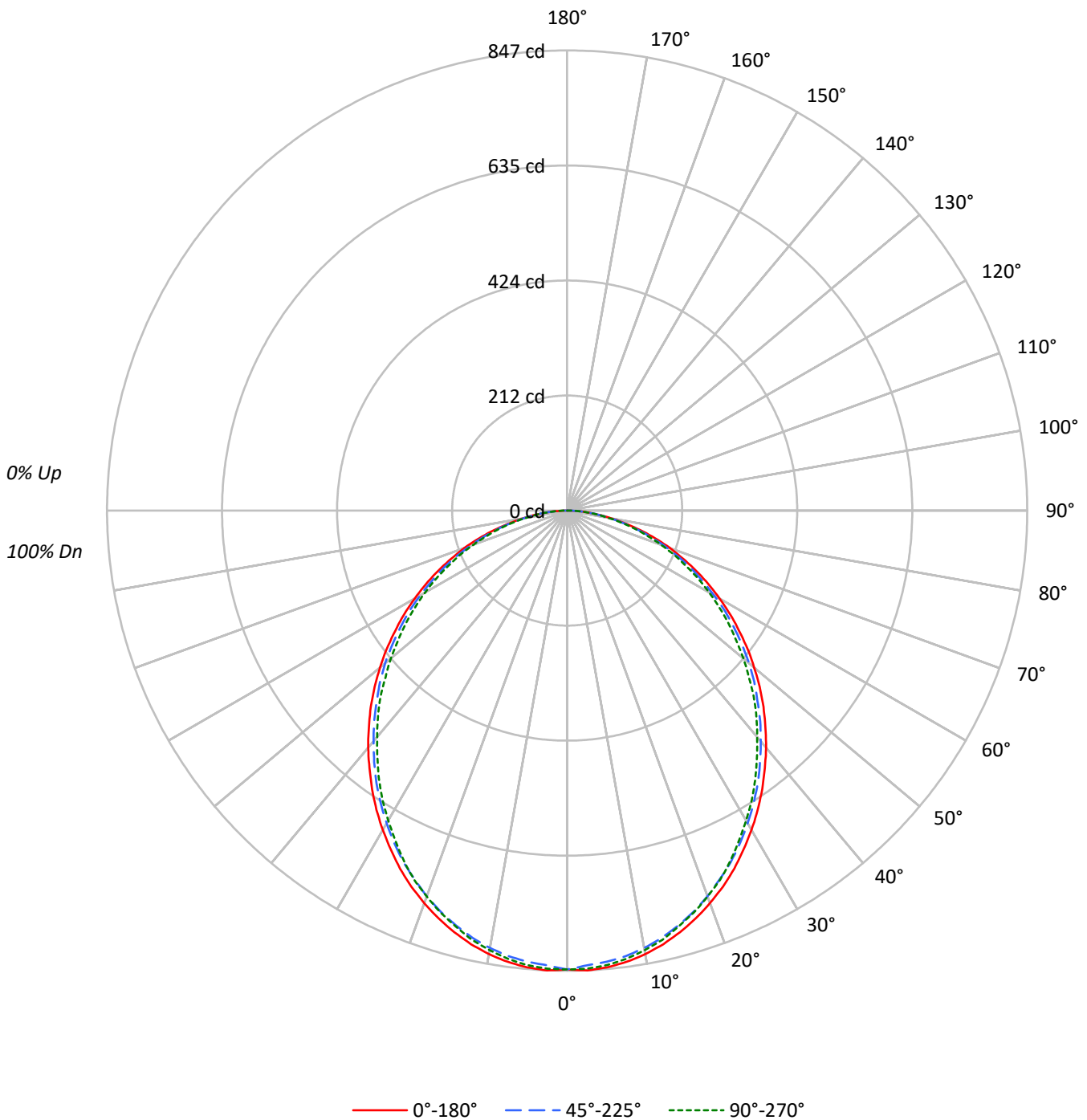
Lumens per Lamp: N/A
Luminaire Lumens: 2167.8 lumens
Efficiency: N/A
Efficacy: 115.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	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°	7508	7508	7508
5°	7530	7440	7494
10°	7483	7379	7416
15°	7392	7275	7293
20°	7272	7145	7151
25°	7135	6996	6976
30°	6967	6821	6759
35°	6793	6639	6551
40°	6612	6432	6314
45°	6424	6228	6108
50°	6215	6046	5859
55°	5988	5810	5621
60°	5764	5547	5378
65°	5509	5296	5082
70°	5224	4959	4766
75°	4788	4554	4441
80°	4259	4090	3983
85°	3723	3590	3519

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6424 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.6	3.7
10°-20°	224.3	10.3
20°-30°	330.1	15.2
30°-40°	383.7	17.7
40°-50°	383.7	17.7
50°-60°	335.6	15.5
60°-70°	249.1	11.5
70°-80°	141.3	6.5
80°-90°	40.5	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°	634.0	29.2
0°-40°	1017.7	46.9
0°-60°	1736.9	80.1
0°-90°	2167.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2167.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	845	845	845	845	845	
5°	844	841	834	841	840	80
15°	803	801	790	794	792	226
25°	728	723	713	714	711	335
35°	626	621	612	607	604	391
45°	511	506	495	488	486	394
55°	386	384	375	367	363	346
65°	262	258	252	245	242	259
75°	139	136	133	130	129	148
85°	36	36	35	35	34	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	844.6	844.6	844.6	844.6	844.6
2.5°	847.3	845.3	837.8	844.6	843.9
5°	843.9	841.2	833.8	841.2	839.9
7.5°	837.8	835.1	827.0	833.1	832.4
10°	829.0	826.3	817.5	823.0	821.6
12.5°	817.5	814.8	805.4	811.4	809.4
15°	803.3	800.6	790.5	794.5	792.5
17.5°	787.1	783.7	774.2	776.9	775.6
20°	768.8	765.4	755.3	757.3	756.0
22.5°	749.2	744.4	734.3	738.4	735.7
25°	727.5	722.8	713.3	714.0	711.3
27.5°	703.2	698.4	689.6	688.3	684.9
30°	678.8	673.4	664.6	661.9	658.5
32.5°	653.1	648.3	638.9	635.5	632.1
35°	626.0	621.3	611.8	607.1	603.7
37.5°	597.6	593.5	583.4	578.6	573.9
40°	569.8	564.4	554.3	547.5	544.1
42.5°	540.1	537.4	525.9	517.7	515.7
45°	511.0	506.2	495.4	488.0	485.9
47.5°	480.5	477.1	467.0	458.9	453.4
50°	449.4	446.7	437.2	427.7	423.7
52.5°	418.9	415.5	405.4	397.3	391.9
55°	386.4	384.4	374.9	366.8	362.7
57.5°	356.0	354.0	344.5	336.4	332.3
60°	324.2	320.8	312.0	305.9	302.5
62.5°	293.0	290.3	280.9	275.4	272.1
65°	261.9	258.5	251.8	245.0	241.6
67.5°	230.1	227.4	220.6	213.9	213.2
70°	201.0	196.3	190.8	185.4	183.4
72.5°	169.9	165.1	161.1	157.0	155.0
75°	139.4	136.0	132.6	129.9	129.3
77.5°	109.6	108.3	104.9	104.2	102.2
80°	83.2	81.2	79.9	78.5	77.8
82.5°	57.5	56.8	56.8	56.2	55.5
85°	36.5	36.5	35.2	35.2	34.5
87.5°	17.6	16.9	16.2	16.2	16.2
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	18.30	19.92	18.67	20.23	20.55	17.93	19.54	18.29	19.86	20.17
	3H	20.06	21.52	20.44	21.85	22.21	19.64	21.10	20.02	21.42	21.78
	4H	20.72	22.09	21.12	22.44	22.81	20.28	21.66	20.68	22.00	22.38
	6H	21.19	22.46	21.60	22.83	23.22	20.76	22.03	21.17	22.40	22.79
	8H	21.34	22.56	21.77	22.95	23.35	20.92	22.13	21.34	22.52	22.92
	12H	21.45	22.61	21.88	22.99	23.42	21.03	22.19	21.46	22.57	23.00
4H	2H	18.87	20.25	19.27	20.60	20.97	18.58	19.95	18.98	20.30	20.67
	3H	20.85	22.00	21.26	22.40	22.80	20.50	21.65	20.91	22.05	22.45
	4H	21.64	22.68	22.07	23.09	23.53	21.27	22.31	21.70	22.73	23.16
	6H	22.24	23.15	22.69	23.59	24.04	21.87	22.78	22.33	23.22	23.68
	8H	22.44	23.29	22.90	23.73	24.20	22.08	22.93	22.54	23.37	23.84
	12H	22.59	23.35	23.07	23.83	24.30	22.23	23.00	22.71	23.47	23.94
8H	4H	21.91	22.76	22.37	23.21	23.67	21.59	22.44	22.05	22.88	23.35
	6H	22.63	23.34	23.13	23.83	24.30	22.32	23.02	22.81	23.51	23.99
	8H	22.90	23.54	23.41	24.05	24.53	22.60	23.23	23.11	23.74	24.22
	12H	23.13	23.69	23.64	24.18	24.75	22.83	23.39	23.33	23.88	24.44
12H	4H	21.94	22.70	22.42	23.18	23.65	21.63	22.39	22.11	22.87	23.34
	6H	22.68	23.32	23.19	23.83	24.31	22.37	23.01	22.88	23.52	24.00
	8H	23.01	23.57	23.52	24.06	24.62	22.72	23.28	23.22	23.77	24.33