

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: P243484

Luminaire Tested: S124DRP-H575D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243484
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-H575D940-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

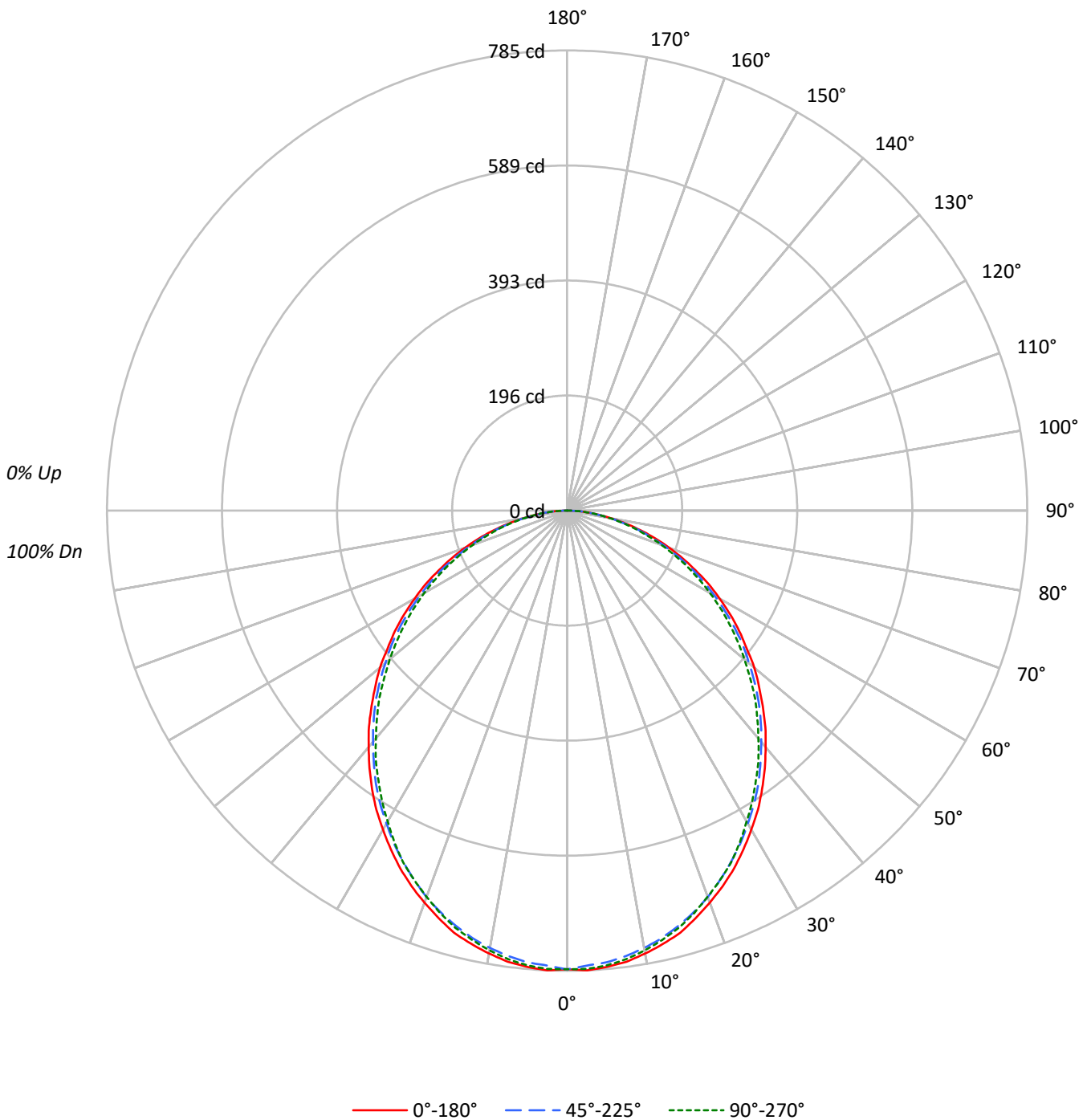
Lumens per Lamp: N/A
Luminaire Lumens: 2014.5 lumens
Efficiency: N/A
Efficacy: 117.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
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

TEST NUMBER: P243484

CATALOG NUMBER: S124DRP-H575D940-X4F0-XX-UDD-F-W

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	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°	6956	6956	6956
5°	6971	6903	6948
10°	6925	6839	6879
15°	6861	6750	6779
20°	6733	6638	6631
25°	6607	6488	6495
30°	6450	6326	6287
35°	6294	6170	6094
40°	6110	5977	5889
45°	5931	5811	5698
50°	5767	5601	5460
55°	5556	5407	5240
60°	5342	5161	5003
65°	5090	4915	4753
70°	4816	4600	4452
75°	4441	4266	4132
80°	3911	3844	3747
85°	3437	3437	3376

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5931 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.8	3.7
10°-20°	208.0	10.3
20°-30°	306.3	15.2
30°-40°	356.4	17.7
40°-50°	356.6	17.7
50°-60°	311.8	15.5
60°-70°	231.6	11.5
70°-80°	132.0	6.6
80°-90°	38.0	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°	588.1	29.2
0°-40°	944.5	46.9
0°-60°	1612.9	80.1
0°-90°	2014.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2014.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	782	782	782	782	782	
5°	781	780	774	779	779	74
15°	746	742	734	738	737	210
25°	674	670	662	664	662	310
35°	580	575	569	564	562	363
45°	472	470	462	455	453	364
55°	358	356	349	341	338	320
65°	242	240	234	229	226	240
75°	129	127	124	122	120	137
85°	34	33	34	32	33	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	782.5	782.5	782.5	782.5	782.5
2.5°	785.1	783.2	776.8	783.2	782.5
5°	781.2	780.0	773.6	779.3	778.7
7.5°	776.2	773.6	766.6	772.3	771.7
10°	767.2	765.3	757.7	763.4	762.1
12.5°	757.1	755.1	746.9	751.3	750.0
15°	745.6	741.8	733.5	738.0	736.7
17.5°	729.0	726.5	718.2	722.0	720.1
20°	711.8	708.7	701.7	702.3	701.0
22.5°	693.4	690.2	681.9	684.5	681.9
25°	673.6	670.5	661.5	663.5	662.2
27.5°	651.4	648.2	639.9	640.5	638.0
30°	628.4	624.6	616.3	615.7	612.5
32.5°	605.5	601.7	593.4	590.9	587.7
35°	580.0	575.0	568.6	563.5	561.6
37.5°	553.9	551.4	541.8	538.7	536.1
40°	526.6	524.0	515.1	510.6	507.5
42.5°	500.5	497.3	489.0	482.6	480.1
45°	471.8	469.9	462.3	455.3	453.3
47.5°	443.8	443.2	433.6	426.6	423.4
50°	417.0	413.2	405.0	398.6	394.8
52.5°	385.8	385.2	378.2	369.9	366.7
55°	358.5	355.9	348.9	341.3	338.1
57.5°	329.8	328.5	319.6	313.3	310.1
60°	300.5	298.0	290.3	284.6	281.4
62.5°	272.5	269.3	262.3	256.6	253.4
65°	242.0	240.0	233.7	228.6	226.0
67.5°	213.3	210.8	204.4	199.9	197.4
70°	185.3	181.5	177.0	173.2	171.3
72.5°	157.3	154.1	150.3	147.7	145.2
75°	129.3	126.7	124.2	121.6	120.3
77.5°	102.5	100.0	98.7	98.1	96.8
80°	76.4	75.1	75.1	74.5	73.2
82.5°	54.1	52.8	52.8	52.8	52.2
85°	33.7	33.1	33.7	32.5	33.1
87.5°	15.9	15.9	16.6	15.9	16.6
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	18.04	19.65	18.40	19.97	20.28	17.69	19.30	18.05	19.62	19.93
	3H	19.79	21.25	20.17	21.58	21.94	19.40	20.86	19.78	21.19	21.55
	4H	20.45	21.82	20.84	22.17	22.54	20.05	21.42	20.45	21.77	22.15
	6H	20.92	22.19	21.33	22.56	22.95	20.54	21.81	20.95	22.18	22.57
	8H	21.07	22.29	21.50	22.68	23.08	20.70	21.92	21.12	22.30	22.70
	12H	21.18	22.34	21.61	22.72	23.15	20.81	21.98	21.24	22.36	22.79
4H	2H	18.61	19.98	19.01	20.33	20.71	18.33	19.71	18.73	20.06	20.43
	3H	20.58	21.73	20.99	22.13	22.53	20.27	21.42	20.68	21.81	22.21
	4H	21.37	22.41	21.80	22.82	23.26	21.04	22.08	21.47	22.49	22.93
	6H	21.97	22.88	22.42	23.32	23.78	21.66	22.57	22.11	23.01	23.46
	8H	22.17	23.02	22.63	23.46	23.93	21.87	22.72	22.33	23.16	23.63
	12H	22.32	23.09	22.80	23.56	24.03	22.03	22.79	22.51	23.27	23.74
8H	4H	21.65	22.50	22.11	22.95	23.41	21.36	22.21	21.82	22.66	23.12
	6H	22.37	23.08	22.86	23.57	24.04	22.10	22.81	22.60	23.30	23.77
	8H	22.64	23.28	23.15	23.78	24.27	22.39	23.02	22.90	23.53	24.02
	12H	22.87	23.43	23.38	23.92	24.48	22.62	23.18	23.13	23.68	24.24
12H	4H	21.68	22.45	22.16	22.92	23.39	21.40	22.16	21.88	22.64	23.11
	6H	22.42	23.06	22.93	23.57	24.05	22.16	22.80	22.67	23.31	23.79
	8H	22.75	23.31	23.26	23.80	24.36	22.51	23.07	23.01	23.56	24.12