

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: P243468

Luminaire Tested: S124DRP-H350D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243468
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-H350D840-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

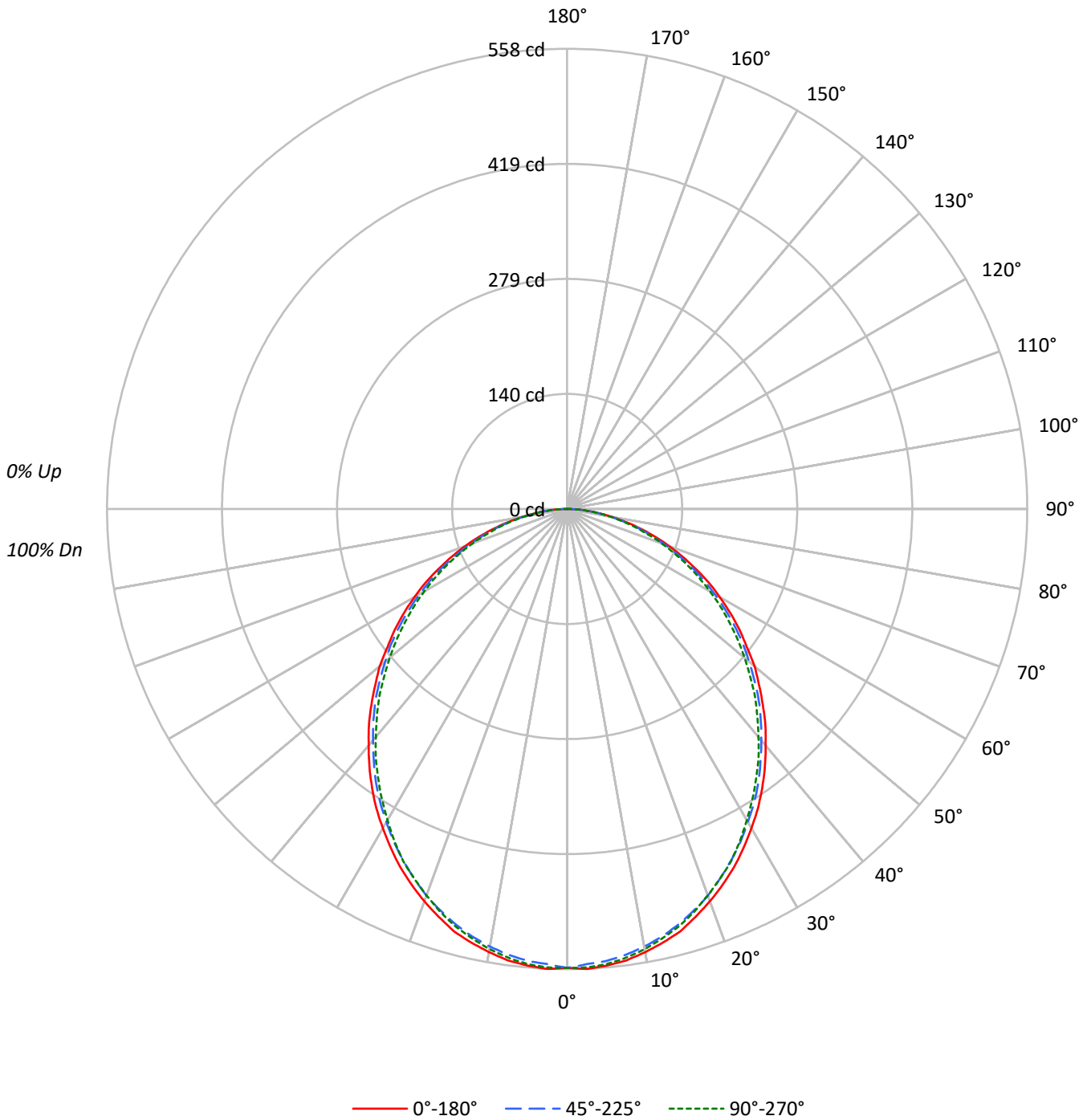
Lumens per Lamp: N/A
Luminaire Lumens: 1432.5 lumens
Efficiency: N/A
Efficacy: 127.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (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	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					100			
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70					70			
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60					60			
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51					51			
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44					44			
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4947	4947	4947
5°	4958	4908	4941
10°	4925	4863	4892
15°	4879	4800	4821
20°	4788	4720	4716
25°	4699	4614	4619
30°	4587	4499	4471
35°	4476	4387	4334
40°	4346	4250	4188
45°	4218	4132	4053
50°	4102	3983	3882
55°	3950	3845	3726
60°	3799	3671	3557
65°	3620	3496	3380
70°	3425	3272	3166
75°	3156	3033	2940
80°	2780	2734	2667
85°	2448	2448	2397

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4218 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.5	3.7
10°-20°	147.9	10.3
20°-30°	217.8	15.2
30°-40°	253.4	17.7
40°-50°	253.6	17.7
50°-60°	221.8	15.5
60°-70°	164.7	11.5
70°-80°	93.8	6.6
80°-90°	27.0	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°	418.2	29.2
0°-40°	671.7	46.9
0°-60°	1147.0	80.1
0°-90°	1432.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1432.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	556	556	556	556	556	
5°	556	555	550	554	554	53
15°	530	528	522	525	524	149
25°	479	477	470	472	471	220
35°	412	409	404	401	399	258
45°	336	334	329	324	322	259
55°	255	253	248	243	240	228
65°	172	171	166	163	161	171
75°	92	90	88	86	86	97
85°	24	24	24	23	24	27
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	556.5	556.5	556.5	556.5	556.5
2.5°	558.3	556.9	552.4	556.9	556.5
5°	555.6	554.7	550.1	554.2	553.8
7.5°	552.0	550.1	545.2	549.2	548.8
10°	545.6	544.3	538.8	542.9	542.0
12.5°	538.4	537.0	531.1	534.3	533.4
15°	530.2	527.5	521.6	524.8	523.9
17.5°	518.4	516.6	510.7	513.5	512.1
20°	506.2	504.0	499.0	499.4	498.5
22.5°	493.1	490.8	484.9	486.7	484.9
25°	479.1	476.8	470.4	471.8	470.9
27.5°	463.2	460.9	455.1	455.5	453.7
30°	446.9	444.2	438.3	437.8	435.6
32.5°	430.6	427.9	422.0	420.2	417.9
35°	412.5	408.9	404.3	400.7	399.4
37.5°	393.9	392.1	385.3	383.1	381.2
40°	374.5	372.6	366.3	363.1	360.9
42.5°	355.9	353.6	347.7	343.2	341.4
45°	335.5	334.2	328.7	323.7	322.4
47.5°	315.6	315.1	308.4	303.4	301.1
50°	296.6	293.9	288.0	283.4	280.7
52.5°	274.4	273.9	269.0	263.1	260.8
55°	254.9	253.1	248.1	242.7	240.4
57.5°	234.5	233.6	227.3	222.8	220.5
60°	213.7	211.9	206.5	202.4	200.1
62.5°	193.8	191.5	186.5	182.5	180.2
65°	172.1	170.7	166.2	162.6	160.7
67.5°	151.7	149.9	145.3	142.2	140.4
70°	131.8	129.0	125.9	123.2	121.8
72.5°	111.8	109.6	106.9	105.0	103.2
75°	91.9	90.1	88.3	86.5	85.6
77.5°	72.9	71.1	70.2	69.7	68.8
80°	54.3	53.4	53.4	53.0	52.1
82.5°	38.5	37.6	37.6	37.6	37.1
85°	24.0	23.5	24.0	23.1	23.5
87.5°	11.3	11.3	11.8	11.3	11.8
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	16.85	18.47	17.22	18.78	19.09	16.51	18.12	16.87	18.43	18.75
	3H	18.60	20.06	18.98	20.39	20.75	18.22	19.68	18.59	20.00	20.36
	4H	19.26	20.64	19.66	20.98	21.36	18.87	20.24	19.26	20.59	20.96
	6H	19.74	21.01	20.15	21.37	21.76	19.35	20.63	19.77	20.99	21.38
	8H	19.89	21.10	20.31	21.49	21.89	19.52	20.73	19.94	21.12	21.52
	12H	19.99	21.16	20.42	21.54	21.97	19.63	20.79	20.06	21.17	21.60
4H	2H	17.42	18.80	17.82	19.15	19.52	17.15	18.52	17.55	18.87	19.25
	3H	19.40	20.55	19.81	20.95	21.35	19.08	20.23	19.49	20.63	21.03
	4H	20.18	21.22	20.62	21.64	22.07	19.86	20.90	20.29	21.31	21.75
	6H	20.79	21.70	21.24	22.14	22.59	20.47	21.38	20.93	21.82	22.28
	8H	20.99	21.84	21.45	22.28	22.74	20.68	21.53	21.14	21.98	22.44
	12H	21.14	21.90	21.62	22.38	22.85	20.84	21.61	21.32	22.08	22.55
8H	4H	20.47	21.32	20.93	21.76	22.23	20.18	21.03	20.64	21.47	21.94
	6H	21.19	21.89	21.68	22.38	22.86	20.92	21.63	21.41	22.12	22.59
	8H	21.46	22.09	21.97	22.60	23.09	21.20	21.84	21.71	22.35	22.83
	12H	21.68	22.25	22.19	22.74	23.30	21.44	22.00	21.95	22.49	23.05
12H	4H	20.50	21.26	20.98	21.74	22.21	20.21	20.98	20.69	21.45	21.92
	6H	21.24	21.87	21.75	22.38	22.87	20.98	21.62	21.49	22.12	22.61
	8H	21.57	22.13	22.07	22.62	23.18	21.32	21.89	21.83	22.38	22.94