

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: P242623

Luminaire Tested: S124DRP-S350D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242623
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-S350D940-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

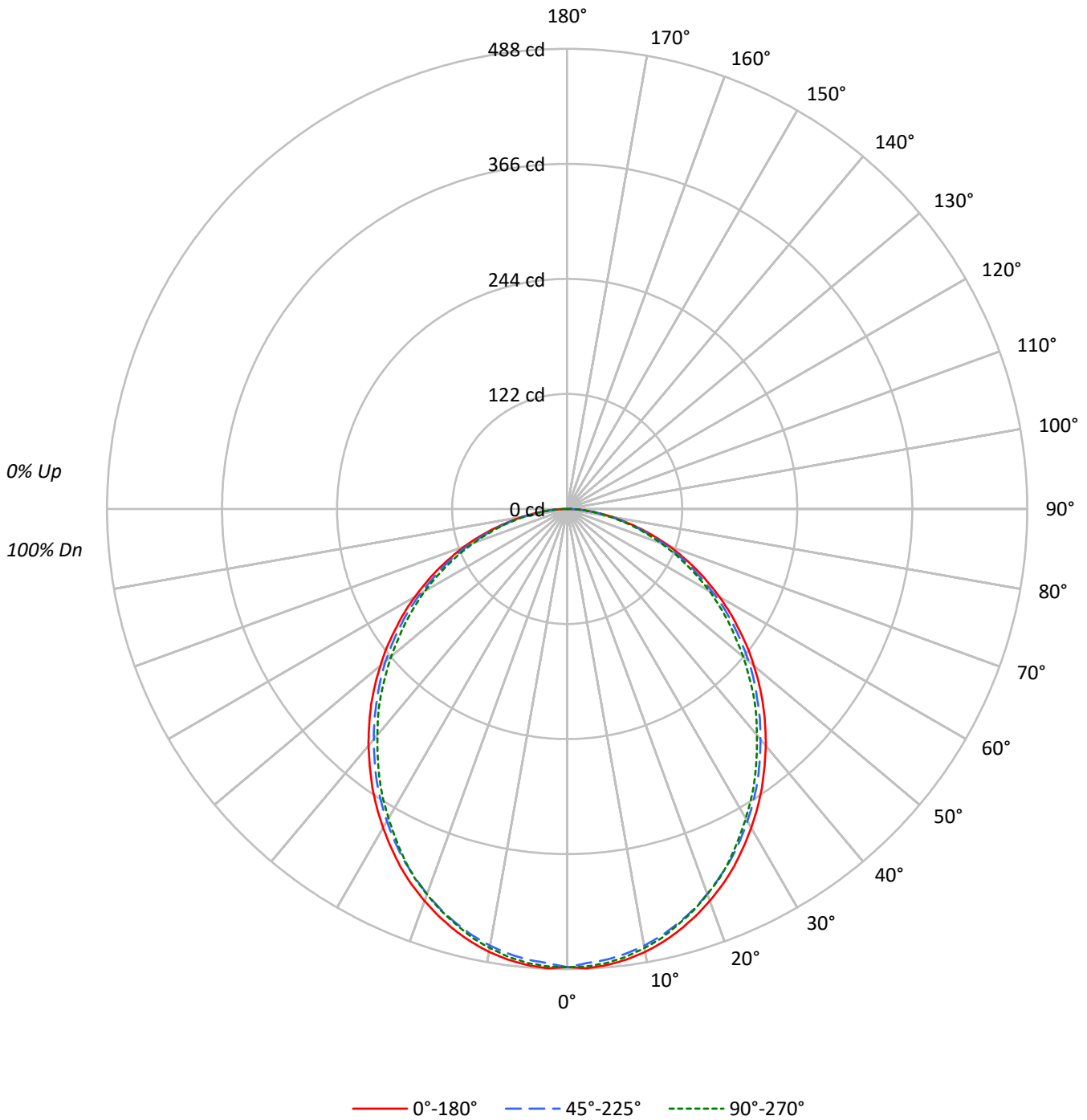
Lumens per Lamp: N/A
Luminaire Lumens: 1247.1 lumens
Efficiency: N/A
Efficacy: 107.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
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	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	47	41	52	46	41	39					39			
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	34	46	39	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	28	39	32	27	38	32	27	37	31	27	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4319	4319	4319
5°	4332	4280	4312
10°	4305	4245	4267
15°	4252	4185	4195
20°	4184	4110	4114
25°	4105	4025	4013
30°	4008	3924	3888
35°	3908	3820	3769
40°	3804	3700	3632
45°	3696	3583	3514
50°	3575	3478	3370
55°	3445	3343	3234
60°	3316	3191	3093
65°	3170	3046	2924
70°	3004	2854	2742
75°	2754	2620	2555
80°	2452	2350	2293
85°	2142	2060	2030

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3696 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.8	3.7
10°-20°	129.0	10.3
20°-30°	189.9	15.2
30°-40°	220.7	17.7
40°-50°	220.7	17.7
50°-60°	193.0	15.5
60°-70°	143.3	11.5
70°-80°	81.3	6.5
80°-90°	23.3	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°	364.7	29.2
0°-40°	585.5	46.9
0°-60°	999.2	80.1
0°-90°	1247.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1247.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	486	484	480	484	483	46
15°	462	461	455	457	456	130
25°	418	416	410	411	409	193
35°	360	357	352	349	347	225
45°	294	291	285	281	280	227
55°	222	221	216	211	209	199
65°	151	149	145	141	139	149
75°	80	78	76	75	74	85
85°	21	21	20	20	20	24
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	485.9	485.9	485.9	485.9	485.9
2.5°	487.5	486.3	482.0	485.9	485.5
5°	485.5	484.0	479.7	484.0	483.2
7.5°	482.0	480.4	475.8	479.3	478.9
10°	476.9	475.4	470.3	473.4	472.7
12.5°	470.3	468.8	463.3	466.8	465.7
15°	462.1	460.6	454.8	457.1	455.9
17.5°	452.8	450.9	445.4	447.0	446.2
20°	442.3	440.3	434.5	435.7	434.9
22.5°	431.0	428.3	422.4	424.8	423.2
25°	418.5	415.8	410.4	410.8	409.2
27.5°	404.5	401.8	396.7	396.0	394.0
30°	390.5	387.4	382.3	380.8	378.8
32.5°	375.7	373.0	367.5	365.6	363.6
35°	360.1	357.4	352.0	349.2	347.3
37.5°	343.8	341.5	335.6	332.9	330.2
40°	327.8	324.7	318.9	315.0	313.0
42.5°	310.7	309.1	302.5	297.8	296.7
45°	294.0	291.2	285.0	280.7	279.5
47.5°	276.4	274.5	268.6	264.0	260.9
50°	258.5	257.0	251.5	246.1	243.7
52.5°	241.0	239.1	233.2	228.5	225.4
55°	222.3	221.1	215.7	211.0	208.7
57.5°	204.8	203.6	198.2	193.5	191.2
60°	186.5	184.5	179.5	176.0	174.0
62.5°	168.6	167.0	161.6	158.5	156.5
65°	150.7	148.7	144.8	140.9	139.0
67.5°	132.4	130.8	126.9	123.0	122.6
70°	115.6	112.9	109.8	106.7	105.5
72.5°	97.7	95.0	92.7	90.3	89.2
75°	80.2	78.3	76.3	74.8	74.4
77.5°	63.1	62.3	60.3	60.0	58.8
80°	47.9	46.7	45.9	45.2	44.8
82.5°	33.1	32.7	32.7	32.3	31.9
85°	21.0	21.0	20.2	20.2	19.9
87.5°	10.1	9.7	9.3	9.3	9.3
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	16.38	18.00	16.75	18.31	18.62	16.01	17.62	16.37	17.93	18.25
	3H	18.14	19.60	18.52	19.93	20.29	17.72	19.18	18.09	19.50	19.86
	4H	18.80	20.17	19.19	20.52	20.89	18.36	19.74	18.76	20.08	20.46
	6H	19.27	20.54	19.68	20.91	21.30	18.84	20.11	19.25	20.48	20.87
	8H	19.42	20.64	19.85	21.03	21.42	19.00	20.21	19.42	20.60	21.00
	12H	19.53	20.69	19.96	21.07	21.50	19.11	20.27	19.54	20.65	21.08
4H	2H	16.95	18.33	17.35	18.67	19.05	16.65	18.03	17.05	18.38	18.75
	3H	18.93	20.08	19.34	20.48	20.88	18.58	19.73	18.99	20.13	20.53
	4H	19.71	20.75	20.15	21.17	21.60	19.35	20.39	19.78	20.81	21.24
	6H	20.32	21.23	20.77	21.67	22.12	19.95	20.86	20.41	21.30	21.76
	8H	20.52	21.37	20.98	21.81	22.28	20.16	21.01	20.62	21.45	21.92
	12H	20.67	21.43	21.15	21.91	22.38	20.31	21.08	20.79	21.55	22.02
8H	4H	19.99	20.84	20.45	21.28	21.75	19.67	20.52	20.13	20.96	21.43
	6H	20.71	21.42	21.21	21.91	22.38	20.40	21.10	20.89	21.59	22.07
	8H	20.98	21.62	21.49	22.13	22.61	20.68	21.31	21.19	21.82	22.30
	12H	21.21	21.77	21.72	22.26	22.83	20.91	21.47	21.41	21.96	22.52
12H	4H	20.02	20.78	20.50	21.26	21.73	19.71	20.47	20.19	20.95	21.41
	6H	20.76	21.40	21.27	21.90	22.39	20.45	21.09	20.96	21.60	22.08
	8H	21.09	21.65	21.60	22.14	22.70	20.79	21.36	21.30	21.85	22.41