

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: P242604

Luminaire Tested: S124DRP-S350D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242604
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-S350D835-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

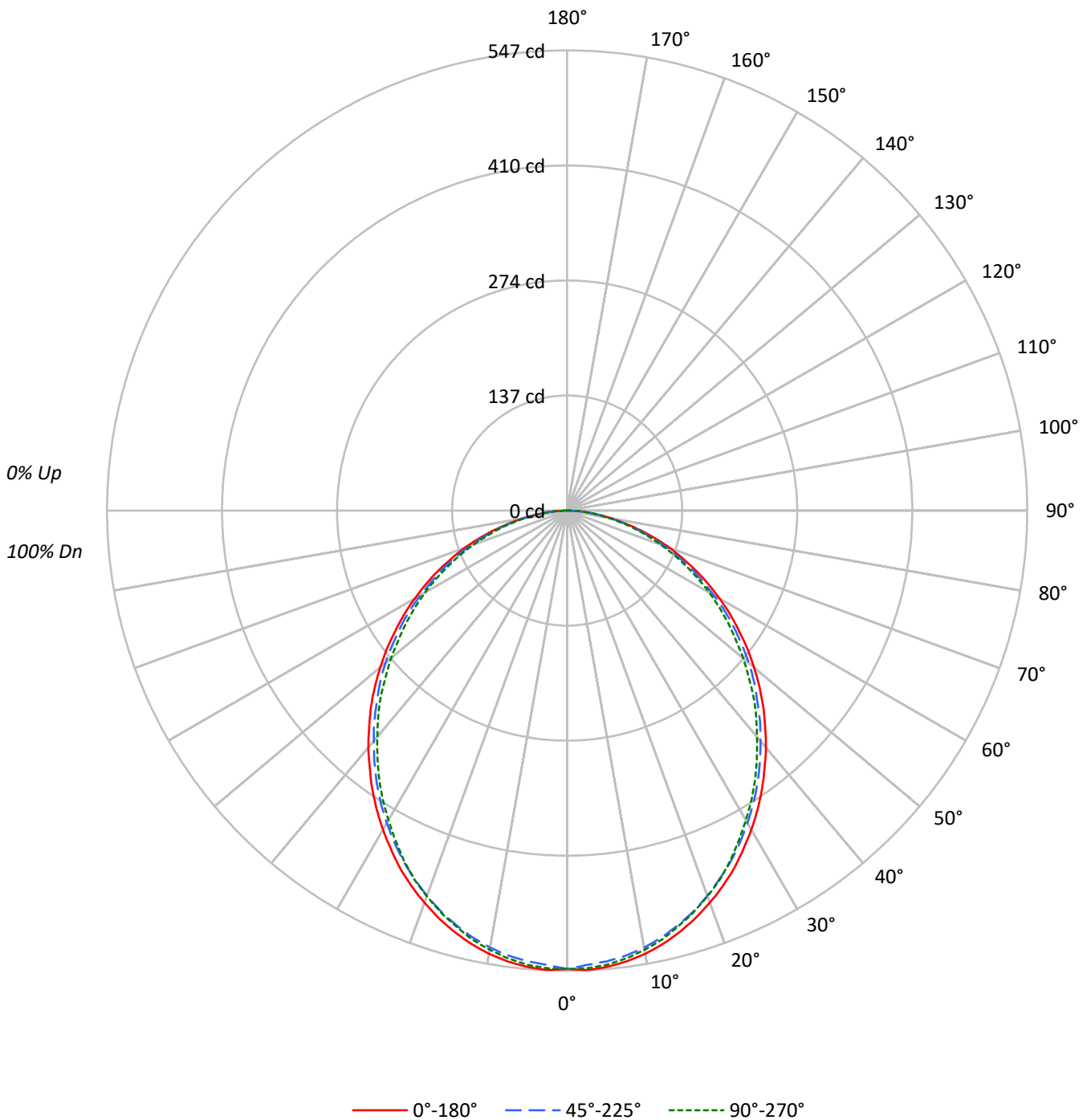
Lumens per Lamp: N/A
Luminaire Lumens: 1398.6 lumens
Efficiency: N/A
Efficacy: 120.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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°	4844	4844	4844
5°	4858	4800	4835
10°	4828	4760	4785
15°	4770	4693	4705
20°	4692	4610	4613
25°	4604	4514	4501
30°	4495	4401	4360
35°	4383	4283	4227
40°	4266	4149	4073
45°	4145	4018	3941
50°	4009	3901	3779
55°	3863	3749	3626
60°	3717	3579	3470
65°	3555	3416	3279
70°	3371	3199	3075
75°	3088	2940	2864
80°	2749	2636	2570
85°	2407	2315	2274

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4145 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.4	3.7
10°-20°	144.7	10.3
20°-30°	213.0	15.2
30°-40°	247.5	17.7
40°-50°	247.5	17.7
50°-60°	216.5	15.5
60°-70°	160.7	11.5
70°-80°	91.2	6.5
80°-90°	26.1	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°	409.0	29.2
0°-40°	656.6	46.9
0°-60°	1120.6	80.1
0°-90°	1398.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1398.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	545	545	545	545	545	
5°	544	543	538	543	542	52
15°	518	516	510	513	511	146
25°	469	466	460	461	459	216
35°	404	401	395	392	390	253
45°	330	327	320	315	314	254
55°	249	248	242	237	234	223
65°	169	167	162	158	156	167
75°	90	88	86	84	83	95
85°	24	24	23	23	22	27
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	544.9	544.9	544.9	544.9	544.9
2.5°	546.7	545.3	540.5	544.9	544.5
5°	544.5	542.7	537.9	542.7	541.9
7.5°	540.5	538.8	533.6	537.5	537.0
10°	534.9	533.1	527.4	530.9	530.1
12.5°	527.4	525.7	519.6	523.5	522.2
15°	518.3	516.5	510.0	512.6	511.3
17.5°	507.8	505.6	499.5	501.2	500.4
20°	496.0	493.8	487.3	488.6	487.7
22.5°	483.3	480.3	473.7	476.4	474.6
25°	469.4	466.3	460.2	460.6	458.9
27.5°	453.7	450.6	444.9	444.0	441.9
30°	437.9	434.4	428.8	427.0	424.8
32.5°	421.3	418.3	412.2	410.0	407.8
35°	403.9	400.8	394.7	391.7	389.5
37.5°	385.5	382.9	376.4	373.3	370.3
40°	367.6	364.1	357.6	353.2	351.0
42.5°	348.4	346.7	339.3	334.0	332.7
45°	329.7	326.6	319.6	314.8	313.5
47.5°	310.0	307.8	301.3	296.0	292.5
50°	289.9	288.2	282.1	275.9	273.3
52.5°	270.3	268.1	261.5	256.3	252.8
55°	249.3	248.0	241.9	236.7	234.0
57.5°	229.7	228.4	222.2	217.0	214.4
60°	209.1	207.0	201.3	197.4	195.2
62.5°	189.1	187.3	181.2	177.7	175.5
65°	169.0	166.8	162.4	158.1	155.9
67.5°	148.5	146.7	142.3	138.0	137.5
70°	129.7	126.6	123.1	119.6	118.3
72.5°	109.6	106.5	103.9	101.3	100.0
75°	89.9	87.8	85.6	83.8	83.4
77.5°	70.7	69.9	67.7	67.2	65.9
80°	53.7	52.4	51.5	50.6	50.2
82.5°	37.1	36.7	36.7	36.2	35.8
85°	23.6	23.6	22.7	22.7	22.3
87.5°	11.4	10.9	10.5	10.5	10.5
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	16.78	18.40	17.15	18.71	19.02	16.40	18.02	16.77	18.33	18.65
	3H	18.54	20.00	18.92	20.33	20.69	18.12	19.57	18.49	19.90	20.26
	4H	19.20	20.57	19.59	20.92	21.29	18.76	20.13	19.16	20.48	20.86
	6H	19.67	20.94	20.08	21.31	21.70	19.24	20.51	19.65	20.87	21.26
	8H	19.82	21.04	20.24	21.42	21.82	19.39	20.61	19.82	21.00	21.40
	12H	19.93	21.09	20.35	21.47	21.90	19.50	20.67	19.93	21.05	21.48
4H	2H	17.35	18.72	17.75	19.07	19.45	17.05	18.43	17.45	18.77	19.15
	3H	19.33	20.48	19.74	20.88	21.28	18.98	20.13	19.39	20.53	20.93
	4H	20.11	21.15	20.54	21.57	22.00	19.75	20.79	20.18	21.20	21.64
	6H	20.72	21.63	21.17	22.07	22.52	20.35	21.26	20.80	21.70	22.16
	8H	20.92	21.77	21.38	22.21	22.67	20.56	21.41	21.02	21.85	22.31
	12H	21.07	21.83	21.55	22.31	22.78	20.71	21.47	21.19	21.95	22.42
8H	4H	20.39	21.24	20.85	21.68	22.15	20.07	20.92	20.53	21.36	21.83
	6H	21.11	21.82	21.61	22.31	22.78	20.79	21.50	21.28	21.99	22.46
	8H	21.38	22.02	21.89	22.52	23.01	21.07	21.71	21.58	22.21	22.70
	12H	21.61	22.17	22.12	22.66	23.22	21.30	21.86	21.81	22.36	22.92
12H	4H	20.42	21.18	20.90	21.66	22.13	20.10	20.87	20.58	21.34	21.81
	6H	21.16	21.80	21.67	22.30	22.79	20.85	21.49	21.36	21.99	22.48
	8H	21.49	22.05	22.00	22.54	23.10	21.19	21.75	21.70	22.24	22.80