

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: P243243

Luminaire Tested: S122RDRP-H485D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243243
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-H485D940-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

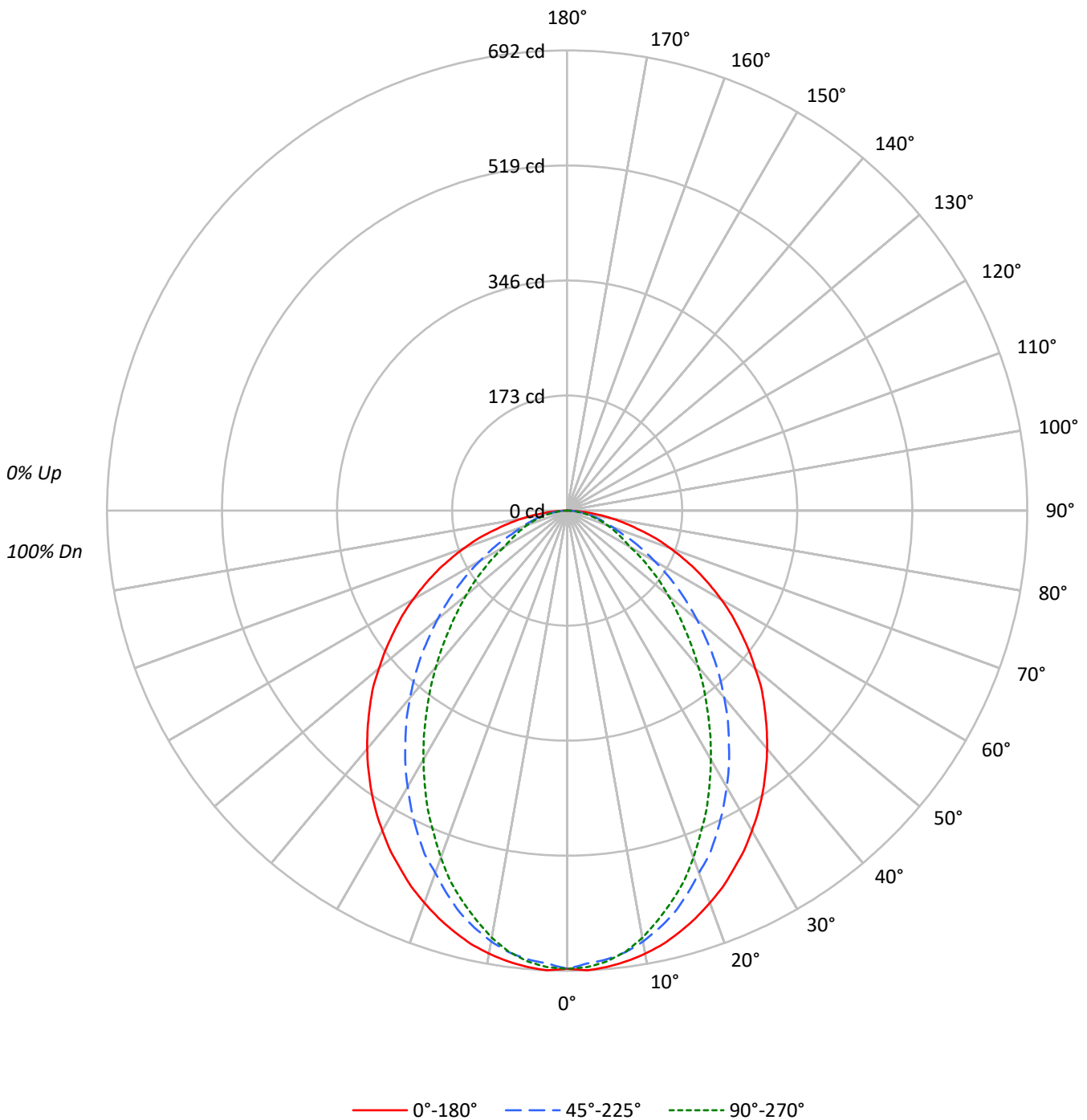
Lumens per Lamp: N/A
Luminaire Lumens: 1413.1 lumens
Efficiency: N/A
Efficacy: 82.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88					86				
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76					74				
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66					64				
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57					55				
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51					49				
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45					43				
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41					39				
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37					35				
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34					32				
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31					29				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13124	13124	13124
5°	13174	12958	13015
10°	13085	12729	12615
15°	12930	12333	11993
20°	12726	11749	11256
25°	12482	11219	10420
30°	12224	10553	9506
35°	11943	9857	8557
40°	11634	9135	7629
45°	11306	8375	6710
50°	10940	7539	5885
55°	10564	6711	5074
60°	10213	5775	4145
65°	9753	4877	3831
70°	9172	4038	3575
75°	8353	3672	3282
80°	7503	3258	2940
85°	6229	2732	2601

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11306 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.5	4.6
10°-20°	176.9	12.5
20°-30°	248.1	17.6
30°-40°	270.3	19.1
40°-50°	248.4	17.6
50°-60°	194.9	13.8
60°-70°	127.2	9.0
70°-80°	65.8	4.7
80°-90°	17.0	1.2
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°	489.5	34.6
0°-40°	759.8	53.8
0°-60°	1203.1	85.1
0°-90°	1413.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1413.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	689	689	689	689	689	
5°	689	685	678	682	681	65
15°	656	648	625	613	608	185
25°	594	573	534	508	496	274
35°	514	480	424	385	368	321
45°	420	377	311	266	249	324
55°	318	270	202	164	153	285
65°	216	164	108	88	85	214
75°	114	71	50	46	45	121
85°	28	14	12	12	12	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	689.0	689.0	689.0	689.0	689.0
2.5°	692.0	689.0	681.9	688.4	687.2
5°	689.0	685.4	677.7	682.5	680.7
7.5°	683.7	680.1	670.0	672.4	669.4
10°	676.5	671.8	658.1	655.7	652.2
12.5°	667.6	661.1	642.6	635.5	630.8
15°	655.7	648.0	625.4	612.9	608.2
17.5°	642.6	631.3	603.4	589.1	584.4
20°	627.8	614.7	579.6	564.8	555.3
22.5°	612.3	595.7	559.4	536.2	524.9
25°	593.9	573.1	533.8	507.7	495.8
27.5°	576.1	551.7	507.1	476.8	463.7
30°	555.8	529.1	479.8	444.7	432.2
32.5°	535.6	504.7	453.0	415.0	400.7
35°	513.6	479.8	423.9	384.6	368.0
37.5°	491.0	456.0	397.1	353.7	337.7
40°	467.9	428.6	367.4	322.2	306.8
42.5°	444.1	404.3	339.5	293.1	278.2
45°	419.7	376.9	310.9	265.7	249.1
47.5°	396.5	350.2	281.8	239.0	222.9
50°	369.2	323.4	254.4	211.0	198.6
52.5°	344.2	296.6	227.7	186.1	175.4
55°	318.1	270.5	202.1	164.1	152.8
57.5°	293.7	243.1	176.6	142.1	131.4
60°	268.1	217.0	151.6	120.1	108.8
62.5°	241.4	190.2	129.6	99.9	96.3
65°	216.4	164.1	108.2	88.0	85.0
67.5°	189.6	139.7	86.2	77.3	74.3
70°	164.7	115.9	72.5	66.0	64.2
72.5°	140.3	93.3	61.2	55.9	54.1
75°	113.5	70.7	49.9	45.8	44.6
77.5°	90.4	49.9	39.8	36.9	35.7
80°	68.4	36.3	29.7	27.9	26.8
82.5°	47.0	24.4	20.8	19.6	19.0
85°	28.5	13.7	12.5	11.9	11.9
87.5°	11.3	5.4	5.4	4.8	4.8
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	20.19	21.71	20.56	22.03	22.34	16.08	17.60	16.44	17.91	18.23
	3H	21.96	23.32	22.33	23.65	24.01	17.37	18.74	17.75	19.06	19.43
	4H	22.62	23.90	23.02	24.25	24.63	17.88	19.16	18.28	19.51	19.89
	6H	23.11	24.29	23.52	24.66	25.05	18.26	19.45	18.67	19.81	20.20
	8H	23.27	24.40	23.70	24.79	25.19	18.38	19.51	18.81	19.90	20.30
	12H	23.38	24.46	23.81	24.84	25.27	18.47	19.54	18.90	19.93	20.36
4H	2H	20.29	21.57	20.69	21.92	22.30	16.78	18.06	17.18	18.41	18.79
	3H	22.23	23.29	22.64	23.69	24.09	18.26	19.32	18.67	19.72	20.12
	4H	22.97	23.93	23.41	24.35	24.78	18.86	19.82	19.30	20.24	20.67
	6H	23.57	24.40	24.02	24.84	25.30	19.36	20.19	19.81	20.63	21.09
	8H	23.78	24.56	24.24	25.00	25.47	19.52	20.29	19.98	20.74	21.20
	12H	23.94	24.64	24.42	25.12	25.59	19.63	20.33	20.12	20.81	21.28
8H	4H	23.00	23.78	23.46	24.22	24.69	19.22	20.00	19.69	20.45	20.91
	6H	23.64	24.28	24.13	24.77	25.25	19.82	20.46	20.31	20.95	21.43
	8H	23.89	24.46	24.40	24.97	25.46	20.04	20.62	20.55	21.13	21.61
	12H	24.10	24.61	24.61	25.10	25.67	20.22	20.73	20.73	21.22	21.79
12H	4H	22.98	23.68	23.47	24.16	24.63	19.27	19.96	19.75	20.44	20.91
	6H	23.62	24.20	24.13	24.70	25.19	19.88	20.46	20.39	20.97	21.46
	8H	23.90	24.41	24.41	24.90	25.47	20.16	20.67	20.67	21.16	21.72