

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P930436

Luminaire Tested: DFN2DS-PN2F0-030DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930436
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN2F0-030DS830-RLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

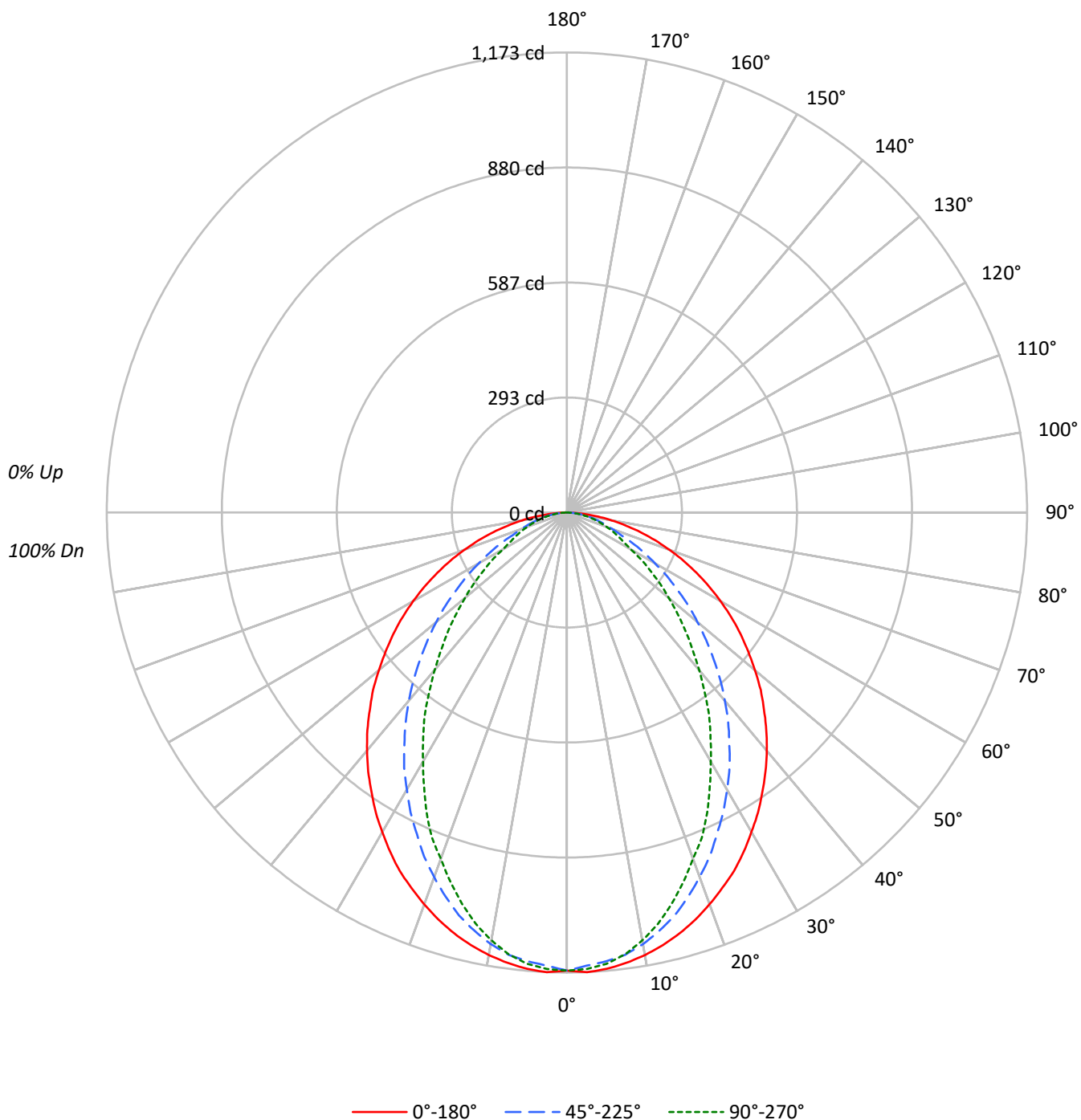
Lumens per Lamp: N/A
Luminaire Lumens: 2402.1 lumens
Efficiency: N/A
Efficacy: 78.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 30.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2530	2530	2530
5°	2539	2498	2512
10°	2520	2457	2436
15°	2491	2384	2316
20°	2451	2280	2166
25°	2410	2162	2021
30°	2353	2041	1834
35°	2297	1909	1671
40°	2242	1772	1482
45°	2176	1619	1311
50°	2109	1464	1143
55°	2039	1297	982
60°	1959	1122	815
65°	1869	942	742
70°	1760	776	683
75°	1627	708	637
80°	1437	632	580
85°	1128	499	499

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2176 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.5	4.6
10°-20°	300.5	12.5
20°-30°	421.9	17.6
30°-40°	459.9	19.1
40°-50°	422.7	17.6
50°-60°	332.0	13.8
60°-70°	216.1	9.0
70°-80°	111.2	4.6
80°-90°	28.4	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°	831.9	34.6
0°-40°	1291.8	53.8
0°-60°	2046.4	85.2
0°-90°	2402.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2402.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1168	1168	1168	1168	1168	
5°	1168	1163	1149	1158	1155	111
15°	1111	1099	1063	1043	1033	313
25°	1008	974	905	862	846	464
35°	869	815	722	655	632	544
45°	710	639	529	453	428	549
55°	540	458	344	280	260	483
65°	365	279	184	148	145	362
75°	194	120	85	77	76	206
85°	45	23	20	20	20	54
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1168.0	1168.0	1168.0	1168.0	1168.0
2.5°	1173.3	1168.0	1156.3	1166.9	1164.9
5°	1168.0	1162.7	1149.0	1158.5	1155.3
7.5°	1158.5	1152.2	1137.4	1141.5	1136.2
10°	1145.8	1138.4	1117.3	1114.0	1107.8
12.5°	1129.9	1120.4	1091.9	1085.6	1073.9
15°	1110.9	1099.2	1063.3	1043.3	1032.7
17.5°	1088.7	1071.8	1027.3	1004.2	987.2
20°	1063.3	1042.1	989.3	963.0	939.6
22.5°	1035.9	1011.5	950.2	914.3	898.5
25°	1008.4	974.5	904.8	861.5	845.5
27.5°	975.6	939.6	862.5	812.9	788.5
30°	940.8	900.6	816.0	762.2	733.5
32.5°	906.9	858.3	771.7	708.2	681.7
35°	868.9	814.9	721.9	655.3	632.1
37.5°	831.9	773.7	675.4	602.4	576.1
40°	792.8	729.4	626.8	551.7	524.3
42.5°	752.6	685.0	578.2	499.9	473.5
45°	710.4	639.4	528.6	453.4	428.0
47.5°	670.1	595.2	481.0	405.8	382.6
50°	625.8	550.7	434.5	361.4	339.3
52.5°	582.3	503.1	390.1	320.3	300.2
55°	540.0	457.6	343.5	280.2	260.1
57.5°	496.8	412.2	302.4	243.1	226.2
60°	452.3	367.9	259.0	205.1	188.2
62.5°	409.1	324.5	221.9	171.3	162.9
65°	364.6	279.0	183.9	148.0	144.8
67.5°	322.4	236.7	148.0	130.0	126.8
70°	278.0	195.6	122.6	112.0	107.8
72.5°	235.7	157.4	102.5	94.1	91.9
75°	194.4	120.5	84.6	77.1	76.1
77.5°	153.3	85.5	66.6	62.4	60.2
80°	115.2	61.3	50.7	46.5	46.5
82.5°	80.3	41.3	34.9	32.8	32.8
85°	45.4	23.2	20.1	20.1	20.1
87.5°	17.0	8.4	8.4	7.4	7.4
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	14.46	15.98	14.82	16.29	16.61	10.42	11.94	10.78	12.25	12.57
	3H	16.22	17.59	16.60	17.92	18.28	11.68	13.05	12.06	13.38	13.74
	4H	16.89	18.17	17.29	18.52	18.90	12.19	13.47	12.59	13.82	14.19
	6H	17.38	18.56	17.79	18.93	19.32	12.57	13.75	12.98	14.12	14.51
	8H	17.54	18.67	17.97	19.06	19.46	12.69	13.82	13.12	14.21	14.61
	12H	17.65	18.73	18.08	19.11	19.54	12.77	13.85	13.20	14.23	14.66
4H	2H	14.56	15.84	14.96	16.19	16.57	11.11	12.40	11.51	12.74	13.12
	3H	16.50	17.56	16.91	17.96	18.36	12.56	13.62	12.97	14.02	14.42
	4H	17.25	18.20	17.68	18.62	19.06	13.16	14.11	13.59	14.53	14.97
	6H	17.84	18.67	18.29	19.11	19.57	13.65	14.48	14.10	14.92	15.38
	8H	18.05	18.83	18.52	19.27	19.74	13.81	14.58	14.27	15.03	15.50
	12H	18.21	18.90	18.69	19.38	19.85	13.92	14.62	14.41	15.10	15.57
8H	4H	17.27	18.05	17.73	18.49	18.96	13.51	14.29	13.97	14.73	15.20
	6H	17.91	18.55	18.40	19.04	19.52	14.10	14.74	14.59	15.23	15.71
	8H	18.16	18.73	18.67	19.24	19.73	14.32	14.90	14.83	15.41	15.89
	12H	18.36	18.87	18.87	19.36	19.93	14.50	15.01	15.01	15.50	16.07
12H	4H	17.25	17.95	17.74	18.43	18.90	13.55	14.25	14.04	14.73	15.20
	6H	17.89	18.47	18.40	18.98	19.46	14.16	14.74	14.67	15.25	15.74
	8H	18.17	18.68	18.68	19.17	19.74	14.43	14.94	14.94	15.44	16.00