

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: P931318

Luminaire Tested: DFN2DS-TR3F0-030DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931318
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-TR3F0-030DS830-RLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

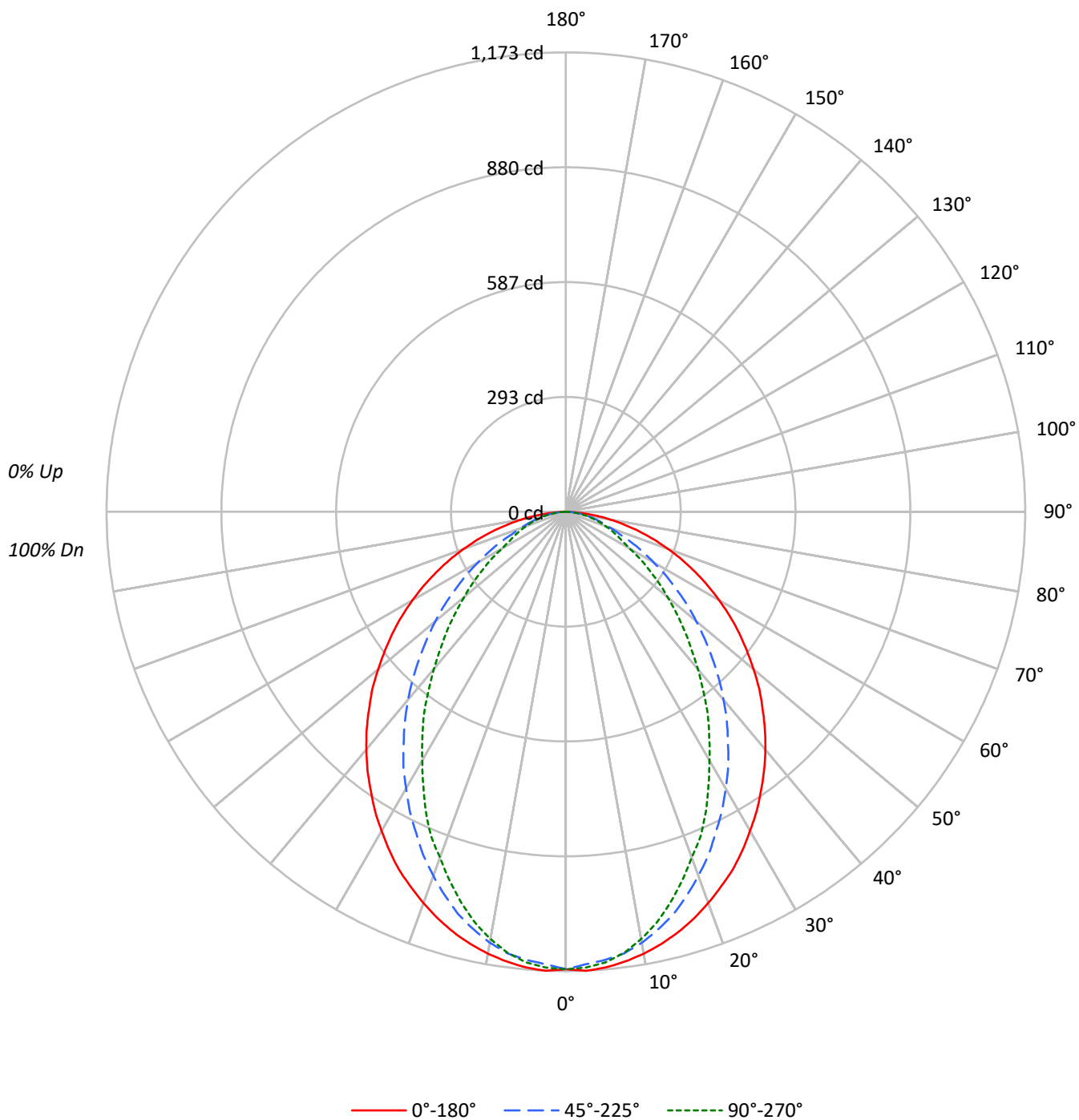
Lumens per Lamp: N/A
Luminaire Lumens: 2402.1 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 28.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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°	1455	1455	1455
5°	1461	1437	1445
10°	1450	1414	1402
15°	1433	1372	1332
20°	1410	1312	1246
25°	1386	1244	1162
30°	1354	1174	1055
35°	1322	1098	962
40°	1290	1020	853
45°	1252	932	754
50°	1213	842	658
55°	1173	746	565
60°	1127	645	469
65°	1075	542	427
70°	1013	447	393
75°	936	407	366
80°	827	364	334
85°	649	287	287

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1252 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	12.54	14.06	12.90	14.37	14.69	8.50	10.02	8.86	10.33	10.65
	3H	14.30	15.67	14.68	16.00	16.36	9.76	11.13	10.14	11.46	11.82
	4H	14.97	16.25	15.37	16.60	16.98	10.27	11.55	10.66	11.89	12.27
	6H	15.46	16.64	15.87	17.01	17.40	10.65	11.83	11.06	12.20	12.59
	8H	15.62	16.75	16.05	17.14	17.54	10.77	11.90	11.20	12.29	12.69
	12H	15.73	16.81	16.16	17.19	17.62	10.85	11.93	11.28	12.31	12.74
4H	2H	12.64	13.92	13.04	14.27	14.65	9.19	10.47	9.59	10.82	11.20
	3H	14.58	15.64	14.99	16.04	16.44	10.64	11.70	11.05	12.10	12.50
	4H	15.33	16.28	15.76	16.70	17.14	11.24	12.19	11.67	12.61	13.05
	6H	15.92	16.75	16.37	17.19	17.65	11.72	12.56	12.18	13.00	13.46
	8H	16.13	16.91	16.59	17.35	17.82	11.89	12.66	12.35	13.11	13.58
	12H	16.28	16.98	16.77	17.46	17.93	12.00	12.70	12.49	13.18	13.65
8H	4H	15.35	16.13	15.81	16.57	17.04	11.59	12.37	12.05	12.81	13.28
	6H	15.99	16.63	16.48	17.12	17.60	12.18	12.82	12.67	13.31	13.79
	8H	16.24	16.81	16.75	17.32	17.81	12.40	12.97	12.91	13.48	13.97
	12H	16.44	16.95	16.95	17.44	18.01	12.58	13.09	13.09	13.58	14.14
12H	4H	15.33	16.03	15.82	16.51	16.98	11.63	12.33	12.12	12.81	13.28
	6H	15.97	16.55	16.48	17.05	17.54	12.24	12.82	12.75	13.33	13.82
	8H	16.25	16.76	16.76	17.25	17.82	12.51	13.02	13.02	13.52	14.08